

Contract Documents
and
Specifications

PRINCE AVENUE IMPROVMENTS

for

The City of Tuscaloosa



Prepared by



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City of Tuscaloosa Project No. A15-0257
BKI Project No. TU.13.045

PRINCE AVENUE IMPROVEMENTS
CITY OF TUSCALOOSA

TABLE OF CONTENTS

I. - TABLE OF CONTENTS

II - BIDDING REQUIREMENTS AND CONTRACT DOCUMENTS

CITY OF TUSCALOOSA CONTRACT REQUIREMENTS

III. - SPECIAL PROVISIONS

IV. - AMENDED SPECIFICATIONS

V. - CITY OF TUSCALOOSA SANITARY SEWER STANDARD SPECIFICATIONS

VI. - SOIL SURVEY AND MATERIALS REPORT

CITY OF TUSCALOOSA, ALABAMA
PUBLIC WORKS CONTRACT DOCUMENTS

WALTER MADDOX, MAYOR

CITY COUNCIL OF TUSCALOOSA

Council Members:

**Phyllis Odom
Harrison Taylor
Cynthia Almond
Matthew Calderone
Kip Tyner
Edwin Pugh
Sonya McKinstry**

Glenda Webb, City Attorney

PROJECT: Prince Avenue Improvements

PROJECT NUMBER: A15-0257

FOR: Office of the City Engineer
(CITY DEPARTMENT)

(2015)

TABLE OF CONTENTS

SECTION	PAGE
TITLE PAGE	i
TABLE OF CONTENTS	ii-vii
SECTION ONE: ADVERTISEMENT AND NOTICE FOR BIDS	1-3
SECTION TWO: INSTRUCTION TO BIDDERS	
Intention	4
Definitions	4-5
Work to be Performed	5
Bidding, Generally	5-6
Responsible, Responsive Bidders	6
Bid Bonds	6-7
Return of Bid Bonds	7
Forfeiture of Bid Bonds	7
Consideration of Bid Proposals	7-8
Materials and Work	8-9
Execution of Contract, Notice to Proceed	9
Labor, Material and Performance Bonds	9
Surety and Insurer Qualifications	9
Power-of-Attorney	9-10
Insurance	10
Examination of Contract Documents and of the Site of the Project	10
Subsurface Reports	10
Interpretation of Plans and Specifications	10-11
General Contractor's Permit or License	11
U. S. Products Preference	11
Use of Domestic Steel	11
In State Bidder Preference	11-12
Applicable Laws	12
SRF/DWSRF Special Requirements	12
Special Conditions for Federally Funded Contracts	12

TABLE OF CONTENTS		
SECTION		PAGE
Agent's Verification of Insurance		12
Compliance with Immigration Law		12
Compliance with Affordable Health Care Act		12
Compliance with the City of Tuscaloosa Minority Enterprise / Disadvantage Business Enterprise (MBE/DBE/WBE) Policy for Public Works Projects Over \$50,000		13
SECTION THREE: PROPOSAL (BID)		14-19
SECTION FOUR: BID BOND TO THE CITY OF TUSCALOOSA, ALABAMA		20-21
SECTION FIVE: CONTRACT AGREEMENT		
<u>Article I. Generally</u>		
Contract Documents		22
Independent Contractor		22
Order of Precedence		22-23
Integration; Contract Terms and Construction		23
Rules of Construction		23-24
Construction Manager - Multiple Trade Contracts		24
Coordination of Plans, Specifications, etc.		24
Corrections of Plans, etc.		24
Taxes and Charges		24
Shop Drawings and Submittals		24-25
Alabama Immigration Law		25
Compliance with Affordable Health Care Act		25
<u>Article II. Payments, Claims, and Charges, Etc.</u>		
Contract Price		25
Estimated Quantities and Unit Prices		25
Overtime Work by Contractor		25-26
Payments on Account/Payments Withheld/Retainage		26-27
Claims for Extra Cost		27
Differing Site Conditions		27
Change Orders		27-28

TABLE OF CONTENTS		
SECTION		PAGE

Determination of Adjustment of the Contract Sum		28
Construction Schedule and Periodical Estimates		28
Sales and Use Tax Savings		28-29
<u>Article III. Time</u>		
Time for Completion/Delays		29
Extensions of Time		29
Right of the City to Terminate Contract		30
Liquidated Damages		30
<u>Article IV. Work and Materials</u>		
Cooperation of Contractor		30-31
Coordination - Trade Contractors		31
Superintendence		31
Contractor's Tools and Equipment		31
Furnishing Labor and Equipment		31
Employees		31
Materials and Appliances		31
Asbestos and Hazardous Materials		32
Protection of Work and Property		32
Protection of Existing Utilities		33
Limiting Exposures		34
Safety		34-35
Traffic Control		35
Responsibility to Act in Emergency		35
Sanitary Regulations		35
Cutting and Patching, etc.		35-36
Trailers		36
Construction Staking		36
Periodic Cleanup		36-37

TABLE OF CONTENTS		
SECTION		PAGE
Termite Control		37-38
Erosion Control		38
Wastewater Containment and Management Plan		38
Environmental Clause/Covenant		39
<u>Article V. Insurance, Liability, Etc.</u>		
Contractor's Insurance (Generally)		39-40
Insurance		40-42
No Personal Liability of Public Officials		42
Indemnity		42
Errors and Omissions		42
Exclusion of Contractor Claims		42
Inadequate Surety/Insurance		42-43
Changes		43
<u>Article VI. Observation of the Project</u>		
Generally		43
Observation of the Project		43-44
Authority and Duties of Observers		44
Defective Work/Correction of Work by the City		44-45
Disagreement		45
Stop Work Orders		45
Progress Meetings		45
<u>Article VII. Project Completion</u>		
Substantial Completion		45
Final Inspection		46
"As Built" Drawings		46
Final Cleanup		46
Notice of Completion		46-47
Final Payment		47

SECTION	TABLE OF CONTENTS	PAGE
Acceptance of Final Payment Constitutes Release		47-48
<u>Article VIII. Warranty and Guarantees</u>		
Warranty and Guarantee		48
Correction of Defective Work During Warranty/Guarantee Period		48-49
<u>Article IX. Laws, Permits, Etc.</u>		
Laws and Regulations/Royalties, Patents, Copyrights and Permits and Rights-of-Way		49-50
Alabama Department of Transportation Rights-of-Way		50
Tuscaloosa County Right-of-Way		50
Storm Water Permit and Monitoring		50-51
<u>Article X. Miscellaneous Clauses</u>		
Notice and Service Thereof		52
City Representative		52
Contractor Representative		52
Capacity		52-53
Ownership of Contract Documents		53
No Waiver of Rights		53
Subletting or Assigning of Contract		53
Third Party Beneficiaries		54
Final Integration		54
Force Majeure		54
Amendment in Writing		54
Binding Effect		54
Captions		54
Construction		54
Mandatory and Permissive		54
Governing Laws		54
Liability of the City of City Officials		54-55
Non Discrimination		55

SECTION	TABLE OF CONTENTS	PAGE
Fines and Penalties		55
Agreement Date/Counterparts		55
Use of Words and Phrases		55
Severability		56
SECTION SIX. PERFORMANCE BOND		57
SECTION SEVEN. LABOR AND MATERIAL BOND		58-59
CONTRACTOR'S RELEASE OF LIENS AND CLAIMS		60
ROOFING GUARANTEE		61
ASBESTOS AFFIDAVIT		62
AGENT'S VERIFICATION OF CONTRACTOR'S INSURANCE		63
NOTICE OF CONDITIONAL BID AWARD		64
NOTICE TO PROCEED WITH PUBLIC WORKS PROJECT		65
CONTRACT CHANGE ORDER		66
CONTRACT CHANGE ORDER REQUEST		67-68
NOTICE OF COMPLETION OF PUBLIC WORKS PROJECT		69
SPECIAL CONDITIONS FOR FEDERALLY FUNDED CONTRACTS		70-89
APPLICATION FOR SALES & USE TAX CERTIFICATE OF EXEMPTION		90-92
EXHIBIT A MINORITY ENTERPRISE / DISADVANTAGED BUSINESS ENTERPRISE (MBE/DBE/WBE) POLICY FOR PUBLIC WORKS PROJECTS OVER \$50,000		93-107

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

SECTION ONE
ADVERTISEMENT AND NOTICE FOR BIDS
(2015)

Sealed bids will be received by the City of Tuscaloosa, Alabama, a Municipal Corporation, in the Council Chamber in the City Hall, 2201 University Boulevard, on the 3rd day of December, 20 15, until 10:00, a. .m., o'clock, local time, and then publicly opened and read for the furnishing of all labor and material (where required) and equipment for performing a public works project according to the plans, details, specifications and Contract Documents.

Award of the contract will be made within forty-five (45) calendar days from the date of the bid opening.

1. The Project:

A. The Project shall be known as Prince Avenue Improvements and the general character of said public works project shall consist of the following:

Widening along Prince Avenue for approximately 1650 LF including grade, drain, base and pave, curb and gutter, sidewalk, sanitary sewer installation and water main installation.

B. The approximate quantities of said Project are as follows:

2500 CY of borrow excavation; 1500 CY of unclassified excavation; 2300 LF of curb and gutter; 2000 LF reinforced concrete pipe; 500 tons of asphalt wearing surface; 1000 tons of asphalt binder; 1500 SY of Crushed Aggregate Base (5" Compacted Thickness); 1000 LF of 8" PVC sanitary sewer; 1500 LF of 6" ductile iron water main and all other items required to complete the job as listed in the Bid Quantities.

C. Special instructions are as follows: N/A

D. The City will furnish the following: N/A

E. Time of Construction: From the date stated in the Notice to Proceed, the Project time of construction is 180 consecutive calendar days.

2. Plans and Specifications:

Plans and specifications and all related Contract Documents are open for public inspection at the office of Burk-Kleinpeter, Inc., located at Tuscaloosa, Alabama, and plans, specifications and other elements of the contract documents may be obtained from the office of the Engineer/Architect Burk-Kleinpeter, Inc., designated as the office of the awarding authority for this purpose, located at 600 Lurleen Wallace Blvd., Suite 180, Tuscaloosa, Alabama. The contact person for the project is Clay Randolph. They can be reached at (205) 759-3221.

- A. Plans, specifications and Contract Documents may be obtained at the above location upon the deposit of \$ 100.00, which amount does not exceed twice the cost of printing, reproduction, handling and distribution of each set of such documents. Deposits by prime Contractor bidders are refundable in full upon return of all documents in reusable condition within ten (10) days of bid opening. Additional sets of bid documents for prime Contractor bidders, subcontractors, vendors or dealers may be obtained upon payment of the same deposit. Such deposits will be refunded, less the cost of printing, reproduction, handling and distribution, if all the documents are returned in reusable condition within ten (10) days of bid opening.
- B. All eligible refunds of deposits for plans and specifications will be made by the City within twenty (20) days of bid opening.

3. **Qualification of Bidders:**

- A. All bidders must be responsible, meeting the criteria and requirements set forth in the Instructions to Bidders and bid proposal.
- B. Prequalification of Bidders IS ; IS NOT required.
If prequalification of bidders is indicated to be required by the preceding sentence, then written prequalification information is available for review at the same office where plans, specifications and Contract Documents are available.
- C. The attention of all bidders is called to the provisions of State law governing "general Contractors," as set forth in Ala. Code §34-8-1, et seq. (1975), and rules and regulations promulgated pursuant thereto.
- D. If a construction manager is being utilized and this contract is one of a multiple of trade contracts, then the bidder shall be fully licensed for the trade, as determined by applicable law.
- E. The City may not enter into a contract with a non-resident corporation or entity which is not qualified under State law to do business in the State of Alabama.
- F. All bidders shall possess all other licenses and/or permits required by applicable law, rule or regulation for the performance of the work.
- G. All bidders must submit with their proposal, Contractor's license number and a copy of the license. State law, Ala. Code §34-8-8(b), requires all bids to be rejected which do not contain the General Contractor's current license number.
- H. The City reserves the right to reject all bids and/or reject and rebid the Project should it determine the same is in the best interest of the City.

4. **Construction Manager:**

If the preceding blank is marked with an affirmative indication, it means that this contract involves the use of a construction manager and this contract is one of several multiple trade and/or multiple prime contracts for work on the Project. Bidders attention is called to the supplemental conditions attached to the General Conditions of the Contract Documents regarding this topic.

5. **Bid Bonds:** Each bidder must submit with its bid a cashier's check drawn on an Alabama bank or a fully executed bid bond on the form that is contained in the Contract Documents executed by a surety company duly authorized and qualified to make bond in the State of Alabama. All bonds, sureties and/or cashier checks will be made payable to the City for an amount not less than 5 percent of the City's or its engineers or architects estimated cost of the Project or of the total bid in the proposal, but in no event more than \$10,000.00.

6. **Sales and Use Tax Savings:** Alabama Department of Revenue Rule 810-6-3.69.02(2010) exempts certain payment of state, county, and municipal sales and use taxes by the contractor or subcontractor on tangible personal property to be incorporated into the realty pursuant to a contract with a municipal corporation such as the City of Tuscaloosa. All tax exempt purchases shall be in accordance with the laws of this state and the Alabama Department

of Revenue. It is the sole responsibility of the successful contractor to make the necessary inquiries and determinations as to what materials or items of tangible personal property to be incorporated into the project qualify as tax exempt in the opinion of the Alabama Department of Revenue. Unless otherwise noted, the project will be bid and administered in compliance with the State of Alabama Act 2013-205, Certificate of Exemption from Sales and Use Tax for Governmental Entities, regarding sales and use taxes. Sales and use taxes shall not be included in the bid. The Contractor shall be responsible for obtaining a certificate of exemption from the Alabama Department of Revenue for purchases of materials and other tangible property made part of the project. Any subcontractors purchasing materials or other tangible personal property as part of the project shall also be responsible for obtaining a certificate of exemption. The estimate sales and use tax saving must be accounted for on the bid proposal. Failure to provide the estimated sales and use tax savings may render the bid as non-responsive. Other than determining responsiveness of the bid, sales and use tax accounting shall not affect the bid pricing nor shall be considered in the determination of the lowest responsible and responsive bidder.

7. Pre-Bid Conference: A Pre-Bid Conference IS X IS NOT _____ required for this Project. The mandatory Pre-Bid conference will be held in the City of Tuscaloosa Narashino Room in City Hall at 11:00 a.m. CST on Thursday, November 19, 2015. Representatives of Burk-Kleinpeter, Inc. will be present to discuss the project and answer questions. Bidders, subcontractors, and suppliers are encouraged to attend and participate in the conference. Contractors and subcontractors shall be responsible for all matters discussed at the Pre-Bid conference as well as decisions made at that time.

NOTE: All bidders are advised to carefully read the Instructions to Bidders contained in the Contract Documents, which provisions and requirements are adopted herein by reference.

CITY OF TUSCALOOSA, ALABAMA,
A MUNICIPAL CORPORATION
Walter Maddox, Mayor

[END ADVERTISEMENT FOR BID—OFFICE OF THE CITY ATTORNEY]

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS
SECTION TWO
INSTRUCTION TO BIDDERS
(2015)

NOTE: THIS DOCUMENT CONTAINS IMPORTANT BIDDING AND CONTRACTING INFORMATION.
ALL POTENTIAL BIDDERS SHOULD READ IT THOROUGHLY

1. **Intention:** The Advertisement for Bids, Instruction to Bidders, Contract Agreement, any modifications or supplemental conditions to the Contract Agreement, Bid Proposal, and the Plans and Specifications are interrelated and apply to the complete work to which they relate.
2. **Definitions:** Where the following words, or the pronouns used in their stead, occur herein, they shall have the following meaning:

"Awarding Authority" shall mean the City of Tuscaloosa, Alabama.

"Bidder" shall mean any person, firm or corporation, that is responsible, submitting a responsive bid for the Project contemplated by the contract documents, who meets the requirements set forth in the contract documents, maintains a permanent place of business, has adequate forces and equipment to perform the work on the Project properly and within the time limit that is established, has sufficient experience in the type work provided for in the contract documents and has adequate financial status and resources to meet its obligations contingent to the work.

"City" or "Owner" shall mean the City of Tuscaloosa, Alabama, as the awarding authority or its authorized and legal representatives.

"Construction Manager" shall mean that person or entity employed by the City to provide Construction Manager services on the work or Project, who shall be the City's representative on the Project.

"Contractor" shall mean initially the successful or probable low bidder and then the party of the first part to the construction agreement or the legally authorized representatives of such party, including a trade contractor.

"Engineer/Architect" shall mean an Engineer or Architect responsible for design and related services on the Project, and if no Construction Manager is employed, then the Engineer is the representative of the City of Tuscaloosa, Alabama, on the Project. References to the "Engineer" shall mean the Construction Manager, if the City has employed such services, to the extent such services are applicable to construction management activity as set forth in the agreement between the City and the Construction Manager, and the context herein indicates that it would relate to services traditionally and customarily performed by a Construction Manager; otherwise, "Engineer" shall refer to the Engineer or Architect.

"Force Account Work" work paid for by reimbursing for the actual cost for labor, materials and equipment usage incurred in the performance of the work, as directed, including a percentage for overhead and profit where appropriate.

"Gender": a word importing one gender shall if appropriate extend to and be applied to the other gender. The masculine shall include the feminine and vice versa, unless the context clearly indicates otherwise.

"Inspector" shall mean a representative of the Engineer/Architect, Construction Manager or the City, as the case may be.

"Non-Resident Contractor" shall mean a contractor which is neither (a) organized and existing under the laws of the State of Alabama nor (b) maintains its principal place of business in the State of Alabama. A

non-resident contractor which has maintained a permanent branch office within the State of Alabama for at least five (5) continuous years shall not thereafter be deemed to be a non-resident contractor so long as the contractor continues to maintain a branch office within Alabama.

"Project" shall mean the Public Work to which these Contract Documents relate, including the labor, materials and all work to be done by Contractor that is the subject of the bid, plans, specifications and contract documents.

"Public Property" Real property which the awarding authority owns or has contractual right to own or purchase, including easements, rights-of-way, or otherwise.

"Public Work(s)" shall mean a Project consisting of the construction, repair, renovation, or maintenance of public buildings, structures, sewers, water works, roads, bridges, docks, underpasses and viaducts, as well as any other improvement to be constructed, repaired or renovated or maintained on public property to be paid, in whole or in part, with public funds or with financing to be retired with public funds in the form of lease payments or otherwise.

"Responsible Bidder" shall mean a bidder who, among other qualities determined necessary for performance, is competent, experienced and financially able to perform the contract.

"Responsive Bidder" shall mean a bidder who submits a bid that complies with the terms and conditions of the invitation for bids, including plans, drawings, specifications and other provisions of the contract documents.

"Retainage" shall mean that money belonging to the Contractor which has been retained by the awarding authority conditioned upon final completion and acceptance of all work in connection with the Project.

"Singular/Plural" the singular shall include the plural and vice versa, unless the context clearly indicates otherwise.

"Trade Contracts" "Trade contracts" or "multiple prime contracts" are multiple but separate contracts with the City on the same Project that represent significant construction activities performed concurrently with and closely coordinated with construction activities performed on the Project under other trade contracts.

"Unbalanced Bid" Unbalanced bids may be considered non-responsive and may be subject to rejection. An unbalanced bid includes but is not limited to one which results in a substantial advance payment to the contractor.

3. **Work to be Performed:** The City contemplates the construction of a public works project as generally described in the Advertisement for Bid and as more particularly described, shown and depicted on the plans, specifications, drawings and in the contract documents.

4. **Bidding, Generally:**

- A. All bids must be made upon the bid proposal forms contained in the contract documents, shall state the amount bid for each item as shown therein and all blanks shall be properly filled in and bid proposal executed as required.
- B. Any bidder may withdraw his or its bid, either personally or by telegraphic or written request (not by facsimile), at any time prior to the scheduled opening time for receipt of bids. Except as provided in Ala. Code §39-2-11(b)(c)(d), no bid may be withdrawn after opening of bids prior to the time of returning bid bonds as provided for herein.
- C. Any unauthorized conditions, limitations or provisos attached to the bid proposal, except as otherwise provided herein, will render a bid proposal informal and may cause its rejection. Unbalanced bids may

be subject to rejection. Bids without the General Contractor's license number and a copy of the license will be rejected.

- D. All bids will be opened in public at the time and date specified in the Notice of Advertisement for bids, unless otherwise altered by addendum. All bidders are invited to be present at the opening of bids. No bids will be received after the time established for the opening of bids.
- E. All bids are to be enclosed in a sealed envelope addressed to the City of Tuscaloosa, P. O. Box 2089, Tuscaloosa, Alabama and/or hand delivered to the City Clerk, 2201 University Boulevard, City Hall, Tuscaloosa, Alabama. All bids are to be marked to indicate clearly the Project to which it applies and include the following language: "Bid Enclosed" and "Attention City Clerk."

NOTE: Bidders current General Contractor's license number must be displayed on the bid and the sealed envelope.

5. **Responsible, responsive bidders:** The City reserves the right to reject any bid that is submitted by a bidder that is determined by the City to not be a responsible bidder or whose bid proposal is not responsive.

In determining whether a bidder or bid is responsible and/or responsive, the City reserves the right to also request and consider the following factors:

- A. Types or kinds of materials or items best suited to the City's needs for the Project.
- B. A current financial statement of the bidder and/ or bonding capability or limits.
- C. An accurate inventory of equipment to be used on the Project for a list of key personnel to be used on the Project and detailed histories of their experience.
- D. A list of similar work performed by any person, firm, or corporation with the same name as the name or any of the names in the bidder's proposal within the last five (5) years.
- E. A list of five (5) references familiar with the bidder's competence, experience, capabilities, skill and integrity.
- F. A statement of bidder pertaining to bankruptcies, judgments, liens or litigation within the last five (5) years. Such statement shall also apply to each company, officer and the key personnel on the Project.
- G. The General Contractor's State license number and class.
- H. Bidder's performance and prosecution of past projects for the City.
- I. An unbalanced bid.
- J. Other information supplied in the bid proposal.

The City may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the City all such information and data for this purpose as the City may request. The City reserves the right to reject any Proposal if the evidence submitted by, or investigation of, such Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligations of the Contract and complete the work contemplated therein.

6. **Bid Bonds:** Each bidder must submit with its bid, a cashiers check drawn on an Alabama bank, made payable to the City of Tuscaloosa or a fully executed bid bond on the form that is contained in the contract documents, executed by a surety company duly authorized and qualified to make bond in the State of Alabama. All bonds and/or cashiers check will be made payable to the City of Tuscaloosa for an amount not less than five (5) percent of the City's or its engineers or architects estimated cost of the Project or of the total bid in the proposal, but in no event more than \$10,000.00. The purpose of said bid bond is to insure that the successful bidder will enter into a written contract with the City for the Project on the form included in the contract documents and furnish a performance bond and payment bond executed by a surety company duly authorized and qualified to make such bond in the State of Alabama, in the amount required and provide evidence of insurance as required by the bid documents within time specified or if no time is specified, within thirty (30) days after the forms have been presented

to the successful bidder for signature. Provided; however, if extenuating circumstances prevail, the City may grant an extension of time not exceeding five (5) days for the return of the contract bonds and evidence of insurance.

The price or cost of all items bid shall remain in effect for a period of fifty (50) days after Notice of Award.

7. **Return of Bid Bonds:** All bid bonds, except those of the three lowest bona fide bidders, will be returned immediately after bids have been checked, tabulated and the relation of the bids established. The bid bonds of the three lowest bidders may be retained and if so will be returned as soon as the contract bonds and the contract documents of the successful bidder have been approved and properly executed.

In the event it is necessary to defer a contract award for longer than fifteen (15) days, after opening of bids, then all bid bonds, except that of the potential successful bidders will be returned.

Award of the contract will be made within the time specified after the opening of bids. In the event no award is made within such time, all bids may be rejected and all bonds returned.

Provided; however, the potentially successful bidder may enter into a written agreement with the City for an extension of time for consideration of its bid, in which case, the bidder's bond shall remain in full force and effect or the City may permit said bidder to substitute a satisfactory surety for the cashier's check if submitted as a guaranty to the bid bond.

8. **Forfeiture of Bid Bonds:** Should the successful bidder or bidders to whom a contract is awarded fail to execute a contract(s) and furnish acceptable contract securities and evidence of insurance, as required, within thirty (30) days after the prescribed forms have been presented to him/her, the City may retain from the proposal guaranty, if it is a cashier's check or recovered from the principal or the sureties, if the guaranty is a bid bond, the difference between the amount of the contract as awarded, and the amount of the proposals of the new lowest bidder. If no other bids are received, the full amount of the proposal guaranty may be so retained and recovered as liquidated damages for such default. Any sum so retained or recovered shall be the property of the awarding authority.

9. **Consideration of Bid Proposals:**

- A. Generally: The contract will be awarded to the lowest responsible and responsive bidder, unless the City determines that all the bids are unreasonable or that it is not in the best interest of the City to accept any of the bids. Award of the contract will be made on the basis of the lowest actual bid amount for the contract, which is defined as the total of the bid and/or extended total amounts for unit price items, plus requested and accepted additive or deductive alternates, pursuant to the provisions hereof. The City reserves the right to reject all bids and/or reject and rebid the Project should it determine the same is in the best interest of the City.
- B. Minor irregularities as determined by the City or its representatives, will not cause a bid to be non-responsive and may be waived by the City.
- C. Bidder must possess all licenses and permits required by applicable law, rule or regulation for the performance of the work prior to bidding.
- D. Where the City elects to prequalify contractors prior to bidding, it shall be understood that such prequalification may be general in nature and shall not limit the City's right to revoke such prequalification pursuant to Ala. Code §39-2-4(d) (1975).
- E. Joint ventures shall not generally be considered acceptable bids without special waiver from the City, which must be requested in writing at least thirty (30) days prior to bid opening.
- F. Additive and/or Deductive Alternates: If the City has elected to request bids for additive and/or deductive alternates, then the following procedure shall be the basis for calculating such bids:
 - 1) Deductive Alternates: Any deductive alternate from the base bid shall constitute cumulative deductions from the base bid; and in determining the lowest bidder, if the City elects to

consider any deductive alternates, the City will proceed to consider the bids upon the basis of the base bids of all qualified bidders minus the respective deduction stated for the first alternate. If the City determines that it wishes to proceed to consider additional deductive alternates, it may do so sequentially and in like manner throughout the deductive alternates the City elects, so that the base bids of all qualified bidders shall be calculated minus the respective number of deductive alternates in sequence the City has elected to consider. The lowest responsible responsive bid will be the lowest actual base bid of a qualified bidder less the selected sequential deductive alternates.

2) Additive Alternates: To determine additive alternates, any additive alternate shall constitute cumulative additions to the base bid; and in determining the lowest bidder if the City elects to consider any additive alternates, the City will proceed to consider the bids upon the basis of the base bid of all bidders plus the respective addition stated for the first alternate. If the City determines that it wishes to proceed to consider additional additive alternates it may do so sequentially, and in like manner, throughout the additive alternates, the City elects, so that the base bids of all qualified bidders shall be calculated plus the respective number of additive alternates in sequence the City has elected to consider. The lowest responsible responsive bid will be the lowest actual base bid of a qualified bidder plus the selected sequential additive alternates. Once the City has determined the lowest responsible responsive bidder as set forth herein, then it may award the contract on the basis of accepting and/or rejecting any additive and/or deductive alternates of that bid as it determines is in the best interest of the City.

G. No Bids or Only One Bid: In the event no bid proposals or only one bid proposal is received in response to the City's Advertisement for Bids at the time stated for the opening of bids, the City may elect at its discretion, any of the following options:

- 1) Advertise for and seek other competitive bids.
- 2) Direct that the work shall be done by force account under its direction and control.
- 3) Negotiate for the work through the receipt of informal bids. Provided; however, where only one responsible and responsive bid has been received, any negotiation for the work shall be for a price lower than that bid.

H. An unbalanced bid.

10. **Materials and Work:** All materials, which the engineering plans specify or are required, will be installed as they are shown on the drawings, plans and/or specs.

- A. Brand names, catalog numbers, weights, etc., are used to indicate levels of quality only and are not intended to restrict the bidding. If bidding on an item of another brand or manufacturer than that specified, bidder's proposal should be accompanied by brochures or other pertinent literature giving detailed specifications of the item(s) on which the proposal is being made. Bids or proposals received without sufficient literature to determine equal quality may not be considered. Final determination as to equal quality will be made by the City.
- B. Quantities: The quantities shown in the proposal shall be considered by the contractor as the quantities required to complete the work for the purpose of bidding. Should the actual quantities required in the construction of the work be greater or less than the quantities shown, an amount equal to the difference of quantities at the unit prices bid for the items will be added to or deducted from the contract total.
- C. Adjustment Items: During the course of work, the prices bid for adjustment items may be used by the City to increase or decrease the total cost for the work if the quantity of work exceeds or is less than the amount shown on plans.
- D. The attention of all bidders is called to the fact that all or a portion of this Project may be federally funded and if so, the special conditions of a federally funded contract including federal labor standard provisions, the minimum wage rates included in the contract documents, plans and specifications must be followed.

- E. **Construction Crews:** The Contractor will be required to furnish at least one separate construction crew during the work as set forth in the contract. Unless waived by the City, the Contractor shall perform on the sites and with his own organization and equipment, at least fifty percent of the total amount of the work to be performed under this Contract. The Contractor may only subcontract a maximum of fifty (50%) percent of the work without City consent. If, during the progress of the work hereunder, the Contractor requests a reduction of such percentage, and the City representative determines that it would be to the City's advantage, the percentage of the labor required to be performed by the Contractor's own organization may be reduced; PROVIDED prior written approval of such reduction is obtained by the Contractor from the City.

NOTE: Bidders are advised to carefully review all other elements of the contract documents for more details concerning requirements for performing work on the Project.

- F. In the event the City elects to utilize a Purchasing Agent Appointment agreement in conjunction with this contract, the Contractor will be required to execute such an agreement and perform in accordance therewith.

11. Execution of Contract, Notice to Proceed: Award of the contract will be made within the time specified after the opening of bids.

The bidder to whom award is made shall enter into a written contract for the Project with the City on the forms provided in the contract documents, furnish the required performance and labor and material bonds with proper surety and furnish the evidence of insurance as required, all within thirty (30) days of presentation of the prescribed forms to the bidder. If extenuating circumstances prevail, the City may grant an extension of time not exceeding five (5) days for the return of the contract, required bonds and evidence of insurance.

Within twenty (20) days after presentation by the bidder to the City, the City shall review the bonds, surety and evidence of insurance to ascertain whether they meet the requirements of the contract documents, and if such requirements have been met the City shall complete the execution of the contract.

A notice to proceed order will be issued by the City or its representatives within fifteen (15) days after final execution of the contract by the City. The Contractor shall begin work on the date specified in the Notice to Proceed.

12. Labor, Material and Performance Bonds: Within thirty (30) days after the prescribed forms have been presented, the successful bidder shall execute a performance bond with good and sufficient surety from a company duly authorized and qualified to make such bond in the State of Alabama, a performance bond made payable to the City of Tuscaloosa, with a penalty equal to 100 percent of the amount of the contract price and in addition thereto, another bond with good and sufficient surety by a surety company duly authorized and qualified to make such bond in the State of Alabama, payable to the City of Tuscaloosa, in an amount equal to 100 percent of the contract price with an obligation that such contractor shall promptly make payments to all persons supplying it or them with labor, materials or supplies for or in prosecution of the Project provided for in such contract and for the payment of reasonable attorneys fees incurred by any successful claimants or plaintiffs in civil actions on said bond, pursuant to the provisions of Ala. Code §39-1-1 (1975).

13. Surety and Insurer Qualifications: All certificates of insurance and bonds (furnished in connection with the work to be performed under this contract) shall be countersigned by a licensed agent residing and engaged in doing business in the State of Alabama. The surety and insurer shall be licensed and authorized to do business in the State of Alabama. The surety companies on bonds shall be rated A- or better by A. M. BEST and listed on the United States Treasury Department 570 list.

14. Power-of-Attorney: The attorney-in-fact (resident agent) who executes the performance bond and/or payment bond on behalf of the surety must attach a notarized copy of his or her power-of-attorney as evidence of his

authority to bind the surety of the date of execution of the bonds. Certification by a resident agent authorized to do business in Alabama is required.

15. **Insurance:** The successful contractor shall file with the City, at the time of delivery of the signed contract, satisfactory evidence of insurance, the requirements as set forth in the contract agreement. Satisfactory evidence of insurance shall include at a minimum, the insurers standard "Certificate of Insurance" (modified pursuant to insurance requirements of the contract agreement) and the agents verification of insurance as required by Section 26. If the City deems that additional evidence or clarification, etc., of insurance is appropriate, the bidder shall promptly furnish the same to the City upon request.

16. **Examination of Contract Documents and of the Site of the Project:** Before submitting a bid proposal for the Project, each bidder shall carefully examine the Contract Documents, including but not limited to plans, drawings, specifications, contract, etc., visit the site, and satisfy itself as to the nature and location of the Project, and the general and local conditions, including weather, the general character of the site or building, the character and extent of existing work within or adjacent to the site, any other work being performed or proposed thereon at the time of submission of their bids. It shall obtain full knowledge as to transportation, disposal, handling, and storage of materials, availability of water, electric power, and all other facilities in the area which will have a bearing on the performance of the Project for which they submit their proposals. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and visit and has judged for and satisfied himself as to conditions to be encountered regarding the character, difficulties, quality, and quantities of work to be performed and the material and equipment to be furnished, and as to the contract requirements and contingencies involved. It shall be the Bidder's obligation to verify for himself and to his complete satisfaction, all information concerning site and surface conditions.

17. **Subsurface Reports:** Prior to Bid opening, the City will make available to prospective Bidders, upon request, any information that it may have as to subsurface conditions and surface topography at the work site. Investigations of subsurface conditions were made for the purpose of study and design, and neither the City nor its consultants that performed such testing assume any responsibility whatsoever in respect to the sufficiency or accuracy of borings, or of the logs of test borings, or of other investigations that have been made, or of the interpretations made thereof, and there is no warranty or guarantee, either expressed or implied, that the conditions indicated by such investigations are representative of those existing throughout such area, or any part thereof, or that unforeseen developments may not occur.

Logs of test borings, geotechnical reports, or topographic maps showing a record of the data obtained by the investigations of surface and subsurface conditions that are made available shall not be considered a part of the Contract Documents, and are available only for the convenience of the Bidders. Such logs and reports represent only the opinion of the Engineer/Architect or Consultant as to the character of the materials encountered by him in his investigations of the test borings.

Information derived from inspection of logs of test borings, or pits, geotechnical reports, topographic maps, or from Drawings showing location of utilities and structures will not in any way relieve the Contractor from any risk, or from properly examining the site and making such additional investigations as he may elect, or from properly fulfilling all the terms of the Contract Documents.

The City shall not be responsible for any interpretations or conclusions drawn from any subsurface exploration reports or borings. Each bidder is to base his bid upon his determination of the subsurface conditions and of the types and quantities of material to be encountered or needed. Additional tests or other exploratory operations may be made at no cost to the City.

18. **Interpretation of Plans and Specifications:** If any bidder contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of plans, specifications, or other proposed contract documents,

he may submit to the Engineer/Architect or Construction Manager, as the case may be, a written request for an interpretation thereof at least ten (10) days prior to bid opening. The bidder submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by written addendum duly issued and a copy of such addendum will be mailed or delivered to each person receiving a set of such documents. The City, Construction Manager or Engineer/Architect will not be responsible for any other explanations or interpretations of the proposed documents.

19. **General Contractor's Permit or License:** The attention of all bidders is called to the provisions of the State law governing general contractors as set forth in Ala. Code §34-8-1 et seq. (1975), particularly in regard to the need for and evidence of a State general contractor's license. The provisions of said statute are adopted herein by reference and form a part of the Contract with the selected bidder should this Project be awarded.

Bidders are reminded that they will be governed by said statutes insofar as they are applicable. To summarize the above quoted statutes, Ala. Code §34-8-1, et seq. (1975) provides that no one is entitled to bid and no contract may be awarded to anyone who does not possess a valid general contractor's permit or license, including specialty classifications for the work, as provided by the foregoing sections of the State Code, and rules and regulations promulgated pursuant thereto and that said bid may not be considered without evidence being produced that he is so qualified. Trade contractors must be duly licensed in accordance with applicable law. The City may not enter into a contract with a nonresident corporation that is not qualified under the State law to do business in Alabama.

Bidder **MUST** include with proposal contractor's current license number and a copy of the license. State law, Ala. Code §34-8-8(b) (1975) requires all bids to be rejected which do not contain general contractor's license number.

20. **U. S. Products Preference:** The successful bidder (contractor) shall comply with Ala. Code §39-3-1 (1975), shall agree to utilize in the execution of the Project, materials, supplies and products manufactured, mined, processed or otherwise produced in the United States or its territories, if the same are available at reasonable and competitive prices and not contrary to any sole source specifications. It is further stipulated that a breach of the foregoing provision of this agreement by the contractor in failing to utilize domestic products shall result in a downward adjustment in the contract price equal to any realized savings or benefit to the Contractor.

21. **Use of Domestic Steel:** The attention of all bidders and that of the successful bidder (contractor) is drawn to Ala. Code §39-3-4 (1975), requiring the use of steel produced within the United States for municipal construction projects when specifications in the construction contract require the use of steel and do not limit its supply to a sole source. This provision is subject to waiver if the procurement of domestic steel products becomes impractical as a result of national emergency, national strike or other causes. Violations of the use of domestic steel requirements shall result in a downward adjustment in the contract price to equal any savings or benefit to the Contractor.

22. **In State Bidder Preference:** Pursuant to Ala. Code §39-3-5 (1975), in the letting of public contracts in which municipal funds are utilized, except those contracts funded in whole or in part with funds received from a federal agency, preference shall be given to resident contractors, and a nonresident bidder domiciled in a state having laws granting preference to local contractors shall be awarded Alabama public contracts only on the same basis as the nonresident bidders' state awards contracts to Alabama contractors bidding under similar circumstances; and resident contractors in Alabama, as defined in Ala. Code §39-2-12 (1975), be they corporate, individuals or partnerships, are to be granted preference over non residents in awarding of contracts in the same manner and to the same extent as provided by the laws of the state of the domicile of the nonresident.

Nonresident bidders must accompany any written bid documents with a written opinion of an attorney-at-law licensed to practice law in such nonresident bidder's state of domicile, as to the preferences, if any or none, granted

by the law of that state to its own business entities whose principal places of business are in that state in the letting of a public contract.

23. **Applicable Laws:** Each Bidder shall inform himself of, and the Bidder awarded a contract shall comply with, federal, state, and local laws, statutes, and ordinances relative to the execution of the work. This requirement includes, but is not limited to, applicable regulations concerning minimum wage rates, the use of domestic products, U.S. steel and resident labor, non-discrimination in the employment of labor, protection of public and employee safety and health, environmental protection, the protection of natural resources, fire protection, burning and non-burning requirements, permits, fees and similar subjects. Certain statutory requirements are summarized immediately hereinafter. The attention of all bidders is called to the fact that the work will be subject to compliance with all applicable City building and technical codes and will be subject, in addition to all other inspections, to inspection by a representative of the City of Tuscaloosa Building Inspections Department.

24. **SRF/DWSRF Special Requirements.** If all or any portion of the Project to which this contract applies is funded in whole or in part by the proceeds of a loan or loans from the Alabama Department of Environmental Management (ADEM) through either a State Revolving Fund for Wastewater or Water (SRF or DWSRF, respectively), additional requirements for the Contractor exist (Requirements). These Requirements relate to Project objectives for utilization of Minority Business Enterprises/Women Business Enterprises (MBE/WBE). The Contractor must document efforts made to utilize MBE/WBE firms and submit to ADEM, with a copy to the City within ten (10) days after contract execution, evidence of the positive steps in accordance with the requirements to utilize small minority and women businesses in the procurement of subcontracts.

Other Requirements relate to Federal Labor Standards, Title VI of the Civil Rights Act of 1964, Equal Employment Opportunity, Affirmative Action Equal Opportunity Clause, Goals and Timetables, compliance with Occupational Safety and Health Act of 1970 and Section 107 of Contract Work Hours and Safety Standards Act (PL91-54) which are adopted herein by reference to the extent applicable.

For DWSRF and SRF funded projects, special requirements are also set forth in Supplemental General Conditions. If not attached to the contract documents, Contractors should contact the City representative and/or the City's consulting engineer for a copy of all special requirements and conditions.

25. **Special Conditions for Federally Funded Contracts.** If all or any portion of the Project to which this contract applies is funded in whole or in part by the proceeds of a grant from an agency of the United States Government, additional requirements for the Contractor exist. A summary of these requirements entitled, "Special Conditions for Federally funded Contracts," is attached hereto and made a part hereof. Bidder should contact the Engineer or City Representative to confirm the applicability of these requirements to the Project.

26. **Agent's Verification of Insurance.** This form or a letter equivalent from the Insurance Agent should be submitted with each Contractor's Bid, or in the alternative, Contractor may provide a copy of the insurance policy or policies reflecting the coverages required herein.

27. **Compliance with Immigration Law.** By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom, to the extent allowed by Federal law.

28. **Compliance with Affordable Health Care Act.** By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal compliance laws pertaining to the Affordable Health Care Act. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom, to the extent allowed by Federal law.

29. Compliance with the City of Tuscaloosa Minority Enterprise / Disadvantage Business Enterprise (MBE/DBE/WBE) Policy for Public Works Projects Over \$50,000. The City of Tuscaloosa has voluntarily adopted a Minority / Disadvantaged Business Enterprise (“MBE/DBE/WBE”) Program designed to encourage the participation and development of minority and disadvantaged business enterprises and to promote equal business opportunities to the fullest extent allowed by state and federal law.

It is the intent of the City to foster competition among contractors, suppliers, and vendors that will result in better quality and more economical services rendered to the City. Under this policy, the City of Tuscaloosa has established a goal of ten to twenty percent (10-20%) inclusion of minority and disadvantaged business enterprises for all services required to deliver City projects. In no case shall the stated percentage be the determining factor in contract awards. Rather, contractors must demonstrate a good faith effort to attain the desired percentage goal.

The Policy as adopted is entitled THE CITY OF TUSCALOOSA MINORITY ENTERPRISE / DISADVANTAGED BUSINESS ENTERPRISE (MBE/DBE/WBE) POLICY FOR PUBLIC WORKS PROJECTS OVER \$50,000, and is attached hereto as “Exhibit A” (the “Policy”). Contractors are encouraged read the Policy in its entirety, and must follow the instructions contained therein. The Policy requires submission of various forms at specified times, and failure to do so may result in rejection of bid due to non-responsiveness. Contractors shall work in coordination with the City of Tuscaloosa’s Office of Resilience and Innovation Department.

Office of Resilience and Innovation contact information is as follows:
Robin Edgeworth, Chief Resilience Officer
Telephone: (205) 248-5725
redgeworth@tuscaloosa.com.

Questions about Policy requirements should be directed to the City of Tuscaloosa Office of the City Attorney at 205-248-5140.

[END INSTRUCTION TO BIDDERS—OFFICE OF THE CITY ATTORNEY]

CITY OF TUSCALOOSA PUBLIC WORKS
SECTION THREE
PROPOSAL (BID)
(2015)

NOTE TO BIDDER: Use BLACK ink for completing this Proposal form.

To: City of Tuscaloosa
Address: _____
Project Title: Prince Avenue Improvements
Project No.: A15-0275
Trade: The trade portion of the work for which this Proposal is submitted is:

(if applicable)
Trade Package No.: _____

BIDDER: The name of the Bidder submitting this Proposal is Cornerstone Civil Contractors doing business at 3101 Main Avenue Suite D Northport AL 35476
Street City State Zip

which is the address to which all communications concerned with this Proposal and with the Contract shall be sent.

Licensed, Class U, Alabama General Contractor No.: 39115 (Attach Copy)

Alabama General Contractor Specialty _____

Alabama General Contractor License Major Categories:

(1) MU (2) HS

Bidder's contact person for additional information on this Proposal:

Name: Patrick Shay Telephone: (205) 366-8788

ADDENDA: The Bidder hereby acknowledges that he has received Addenda No's. 1, _____, _____, _____ (Bidder shall Insert No. of each Addendum received) and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that his Proposal(s) includes all impacts resulting from said addenda.

LUMP SUM: The Bidder agrees to accept as full payment of the work proposed under this Project, as services are rendered, as herein specified and as shown on the Contract Documents, upon the undersigned's own estimate of quantities and costs, the following lump sum of: N/A Dollars and _____ cents (\$ _____). (Amount written in words has precedence)

ALTERNATES: Attach additional sheets for additive or deductive alternates, if in contract documents.

UNIT PRICES: Where the Project is bid in unit prices then Bidder agrees to perform the work in the stated quantities of the materials at the unit prices so bid, the cumulative total of which constitutes the base bid set forth below, and to accept as final payment for the work performed under this Project as herein specified the extension of each such unit price for the quantities actually installed in accordance with the following or attached unit price schedule.

An unbalanced bid, as herein defined, may be considered non-responsive. A bid resulting in a substantial advance payment on an item that is for a single lump sum payment may be considered non responsive.

Prices for mobilization and demobilization combined shall not exceed 5% of the total base bid unless a reasonable explanation is provided in writing with the bid and accepted by the Owner. Lump sum payments and unit price bids for a single or lump sum payment may be spread over the course of the period of work until the line item is complete at owner's option.

The Bidder's unit price for materials listed is as including the payment of taxes (See Page 3) where applicable: (Attach additional sheets if required)

	<u>Material</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>TOTAL</u>
1.	<u>See Attachment A</u>			
2.	_____			
3.	_____			
			TOTAL BASE BID	\$ _____

SALES AND USE TAX SAVINGS ACCOUNTING:

Pursuant to State of Alabama Act 2013-205, Section 1(g) the Contractor accounts for the sales tax NOT included in the bid proposal form as follows:

ESTIMATED SALES AND USE TAX

BASE BID: \$ N/A

Additive Alternate (if applicable): \$ _____

Failure to provide an accounting of sales tax may render the bid non-responsive. Other than determining responsiveness, sales tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive bidder.

AS BUILT DRAWINGS: The Bidder's Proposal contains \$ 0 for "as built drawings."

BIDDER'S DECLARATION AND UNDERSTANDING: The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein, that this Proposal is, in all respects, fair and without fraud, that it is made without collusion with any official of the City, and that the Proposal is made without any connection or collusion with any person submitting another Proposal on this Contract.

The Bidder further agrees that he has checked and verified the completeness of the Contract Documents and that he has exercised his own judgment regarding the interpretation of subsurface information utilizing all pertinent data in arriving at his conclusions. The Bidder shall be fully responsible for any damages or liability arising out of his or his subcontractors prebid investigations.



City of Tuscaloosa
PRINCE AVE IMPROVEMENTS

November 30, 2015

PREPARED BY: BURK-KLEINPETER, INC.

The following items shall be constructed in accordance with the 2012 Alabama Department of Transportation Standard Specifications for Highway Construction, except as modified in this contract:

ITEM NO.	APPROX. QTY.	UNIT	ITEM DESCRIPTION	UNIT PRICE	AMOUNT
General, Demolition, Clearing, Grubbing, and Earthwork					
1	1	LS	Mobilization and Demobilization (ALDOT 600)	\$100,000.00	\$100,000.00
2	1	LS	Demolition, Clearing & Grubbing (Approx. 2.0 Acres)	\$125,000.00	\$125,000.00
3	40	SY	Remove Concrete Sidewalk (ALDOT 206)	\$20.00	\$800.00
4	9	Each	Remove Existing Storm / Sanitary Structure (ALDOT 206)	\$575.00	\$5,175.00
5	1	Each	Remove Headwalls (ALDOT 206)	\$400.00	\$400.00
6	510	LF	Remove Existing Pipe (ALDOT 206)	\$12.00	\$6,120.00
7	21	Each	Reset Mailbox, Single (ALDOT 209)	\$150.00	\$3,150.00
8	11	Each	Reset Existing Sign	\$75.00	\$825.00
9	45	LF	Reset Fence (ALDOT 637)	\$18.00	\$810.00
10	10	CY	Grout Fill of Abandoned Pipe	\$275.00	\$2,750.00
11	2570	SY	Remove Existing Pavement (Asphalt & Concrete)	\$4.50	\$11,565.00
12	1500	CY	Unclassified Excavation (ALDOT 210A)	\$8.75	\$13,125.00
13	2500	CY	Borrow Excavation (ALDOT 210D)	\$14.50	\$36,250.00
14	355	CY	Topsoil - Offsite Borrow (4" Thickness) (ALDOT 650)	\$28.00	\$9,940.00
Base, Pave, and Curb and Gutter Improvements					
15	4	Sta	Roadbed Processing (ALDOT 230)	\$500.00	\$2,000.00
16	3505	SY	Crushed Aggregate Base Course, 825B, Plant Mixed, 5" Compacted Thickness (ALDOT 301A)	\$9.00	\$31,545.00
17	1875	SY	Bituminous Treatment A (ALDOT 401A)	\$0.80	\$1,500.00
18	840	Gal	Tack Coat (ALDOT 405)	\$4.00	\$3,360.00
19	1340	SY	Planing Existing Pavement (Approx. 1.5" Thickness) (ALDOT 408)	\$5.75	\$7,705.00
20	460	Ton	Superpave Bituminous Concrete Wearing Surface Layer, 1/2" Maximum Aggregate Size Mix, ESAL Range A/B (ALDOT 424A)	\$105.00	\$48,300.00
21	200	Ton	Superpave Bituminous Concrete Upper Binder Layer, 1" Maximum Aggregate Size Mix, ESAL Range A/B (ALDOT 424B)	\$100.00	\$20,000.00
22	200	Ton	Superpave Bituminous Concrete Lower Binder Layer, 1" Maximum Aggregate Size Mix, ESAL Range A/B (ALDOT 424B)	\$100.00	\$20,000.00
23	550	Ton	Superpave Bituminous Concrete Upper Binder Layer, Leveling, 1" Maximum Aggregate Size Mix, ESAL Range A/B (ALDOT 424B)	\$100.00	\$55,000.00
24	50	Ton	Superpave Bituminous Concrete Upper Binder Layer, Patching, 1" Maximum Aggregate Size Mix, ESAL Range A/B (ALDOT 424B)	\$150.00	\$7,500.00
25	580	SY	Concrete Driveway, 6" Thick (ALDOT 618)	\$65.00	\$37,700.00
26	2340	LF	Combination Curb & Gutter (2.0' Width) (ALDOT 623)	\$15.00	\$35,100.00
27	85	LF	Standup Curb (6" Width) (ALDOT 623)	\$18.00	\$1,530.00
28	620	LF	4' Valley Gutter (ALDOT 623)	\$28.00	\$17,360.00
29	1740	SY	Concrete Sidewalk, 4" Thick	\$40.00	\$69,600.00
Storm Drain System Improvements					
30	439	LF	15" R.C. Pipe, Class 3 (ALDOT 530)	\$44.00	\$19,316.00
31	654	LF	18" R.C. Pipe, Class 3 (ALDOT 530)	\$48.00	\$31,392.00
32	833	LF	24" R.C. Pipe, Class 3 (ALDOT 530)	\$54.00	\$44,982.00
33	3	Each	Junction Box (Typical) (ALDOT 621)	\$2,000.00	\$6,000.00
34	15	Each	S Inlet (1 Wing) (ALDOT 621)	\$3,400.00	\$51,000.00
35	3	Each	S Inlet (2 Wing) (ALDOT 621)	\$3,800.00	\$11,400.00
36	1	Each	Tie to Existing Storm Structure	\$1,500.00	\$1,500.00
37	9	Each	15" Slope Paved Headwall (ALDOT 619)	\$775.00	\$6,975.00
38	1	Each	24" Slope Paved Headwall (ALDOT 619)	\$895.00	\$895.00
39	104	LF	6" PVC Pipe, SDR 26, Storm Drain (ALDOT 535)	\$14.00	\$1,456.00
40	84	LF	Driveway Trench Drain	\$165.00	\$13,860.00
41	25	Ton	Class 2 Riprap, 24" Thick (ALDOT 610)	\$40.00	\$1,000.00
42	6	Each	6" CIP Headwall (Single) (ALDOT 619)	\$275.00	\$1,650.00
43	2	Each	6" CIP Headwall (Double) (ALDOT 619)	\$325.00	\$650.00
44	4	Each	6" CIP Headwall (Triple) (ALDOT 619)	\$375.00	\$1,500.00

ITEM NO.	APPROX. QTY.	UNIT	ITEM DESCRIPTION	UNIT PRICE	AMOUNT
Sanitary Sewer System Improvements					
45	1088	LF	8" PVC Pipe, SDR 26, Sanitary Sewer		
46	122	VF	48" Dia. Stan. Precast Manhole	\$118.00	\$128,384.00
47	354	LF	4" Sanitary Sewer Service Lateral	\$310.00	\$37,820.00
48	13	Each	8"x4" PVC Wye, including all transition materials	\$43.00	\$15,222.00
49	1	Each	Replace and Adjust Existing Manhole Cover	\$240.00	\$3,120.00
50	13	Each	Video Camera Lateral Inspection	\$407.00	\$407.00
				\$228.00	\$2,964.00
Water System Improvements					
51	14	Each	Water Meter Relocation	\$285.00	\$3,990.00
52	51	Each	Backflow Preventer (Includes Meter Reset or Relocation)	\$350.00	\$17,850.00
53	1750	LF	2" PVC Water Main	\$25.00	\$43,750.00
54	20	LF	2" Brass Water Main	\$73.00	\$1,460.00
55	20	LF	4" Class 52 Ductile Iron Water Main	\$51.00	\$1,020.00
56	1435	LF	6" Class 52 Ductile Iron Water Main	\$32.50	\$46,637.50
57	2	Each	Fire Hydrant with Valve	\$3,400.00	\$6,800.00
58	2	Each	Fire Hydrant and Valve Removal	\$400.00	\$800.00
59	5	Each	2" Resilient Seat Gate Valve With Box	\$625.00	\$3,125.00
60	1	Each	4" Resilient Seat Gate Valve With Box	\$710.00	\$710.00
61	5	Each	6" Resilient Seat Gate Valve With Box	\$915.00	\$4,575.00
62	1	Each	6" X 4" Tee	\$580.00	\$580.00
63	1	Each	6" X 6" Tee	\$630.00	\$630.00
64	2	Each	6" X 6" Cross	\$470.00	\$940.00
65	4	Each	6" Plug With 2" Tap	\$222.00	\$888.00
66	2	Each	2" 11.25° Bend	\$225.00	\$450.00
67	3	Each	2" 22.5° Bend	\$215.00	\$645.00
68	2	Each	2" 45° Bend	\$200.00	\$400.00
69	2	Each	2" 90° Bend	\$212.00	\$424.00
70	23	Each	6" 11.25° Bend	\$425.00	\$9,775.00
71	3	Each	6" 22.5° Bend	\$425.00	\$1,275.00
72	4	Each	6" 45° Bend	\$430.00	\$1,720.00
73	3	Each	6" 90° Bend	\$450.00	\$1,350.00
74	1	Each	24" X 6" Tapping Sleeve and Valve	\$11,500.00	\$11,500.00
75	2	Each	6" X 2" Tapping Sleeve and Valve	\$1,500.00	\$3,000.00
76	1	Each	6" X 6" Tapping Sleeve and Valve	\$3,100.00	\$3,100.00
77	16	Each	Saddle Tap	\$480.00	\$7,680.00
78	16	Each	Saddle Tap (Road Bore)	\$1,180.00	\$18,880.00
79	9	Each	Direct Tap	\$450.00	\$4,050.00
80	10	Each	Direct Tap (Road Bore)	\$1,350.00	\$13,500.00
81	1	Each	1.5" Cut and Cap of Existing Main	\$330.00	\$330.00
82	3	Each	2" Cut and Cap of Existing Main	\$370.00	\$1,110.00
83	1	Each	4" Cut and Cap of Existing Main	\$540.00	\$540.00
84	3	Each	6" Cut and Cap of Existing Main	\$600.00	\$1,800.00
Erosion Control and Site Maintenance					
85	3895	LF	Silt Fence (ALDOT 665)		
86	1755	LF	Wattle (ALDOT 665)	\$2.85	\$11,100.75
87	2	Acre	Temporary Seeding (ALDOT 665)	\$4.75	\$8,336.25
88	6	Ton	Temporary Mulching (ALDOT 665)	\$1,000.00	\$2,000.00
				\$300.00	\$1,800.00
Traffic Control, Permanent Signing and Striping					
89	659	Square Foot	Construction Signs (ALDOT 740)		
90	75	Each	Channelizing Drums (ALDOT 740)	\$10.75	\$7,084.25
91	25	Each	Cones (36 Inches High) (ALDOT 740)	\$54.00	\$4,050.00
92	25	Each	Ballast for Cone (ALDOT 740)	\$18.00	\$450.00
93	6	Each	Barricades, Type III (ALDOT 740)	\$12.00	\$300.00
94	3	Each	Warning Lights, Type B (ALDOT 740)	\$300.00	\$1,800.00
95	2	Each	Portable Sequential Arrow Unit (ALDOT 741)	\$100.00	\$300.00
96	2940	LF	Solid Temporary Traffic Stripe (ALDOT 701)	\$2,500.00	\$5,000.00
97	210	SF	Temporary Traffic Control Markings (ALDOT 703)	\$0.30	\$882.00
98	2940	LF	Solid Yellow, Class 2, Type A Traffic Stripe (5" Wide) (ALDOT 701)	\$1.25	\$262.50
99	600	SF	Solid White Traffic Control Markings, Class 2, Type A (ALDOT 703)	\$1.25	\$3,675.00
				\$6.50	\$3,900.00

ITEM NO.	APPROX. QTY.	UNIT	ITEM DESCRIPTION	UNIT PRICE	AMOUNT
Traffic Signal					
100	2	Each	Pedestrian Signal Head, Type LED (ALDOT 730)	\$2,400.00	\$4,800.00
101	2	Each	Pedestrian Push Button (ALDOT 890)	\$550.00	\$1,100.00
102	2	Each	R10-3b Pedestrian Sign (ALDOT 710)	\$230.00	\$460.00
Miscellaneous Items					
103	3180	SY	Solid Sodding (ALDOT 654)	\$4.75	\$15,105.00
104	500	Ton	ALDOT No. 57 Stone (Only as Directed by the Owner's Representative)	\$20.00	\$10,000.00
105	250	Ton	Crushed Aggregate, Section 825, For Miscellaneous Use	\$20.00	\$5,000.00
106	1000	CY	Utility Trench Foundation Material (ALDOT No. 57 Stone) (Only as Directed by the Owner's Representative)	\$1.00	\$1,000.00
107	1000	SY	Geosynthetic Reinforcement for Soft Soil Stabilization, Type 3 (ALDOT 243)	\$3.00	\$3,000.00
108	1	LS	Geometric Controls (ALDOT 680)	\$20,000.00	\$20,000.00
TOTAL BASE BID				\$1,382,293.25	
Alternate No. 1 - Sanitary Sewer System Improvements					
201	777	LF	General Pipe Lining, 8" CIPP	\$45.00	\$34,965.00
202	1	Each	Chemical Grout Manhole	\$3,000.00	\$3,000.00
203	1	Each	Chimney Seal	\$350.00	\$350.00
204	12	VF	Epoxy Line Manhole	\$525.00	\$6,300.00
205	777	LF	CCTV Inspection	\$7.25	\$5,633.25
TOTAL ALTERNATE NO. 1				\$50,248.25	
TOTAL BASE BID + ALTERNATE NO. 1				\$1,432,541.50	
Alternate No. 2 - Sanitary Sewer System Improvements					
301	893	LF	8" PVC Pipe, SDR 26, Sanitary Sewer	\$118.00	\$105,374.00
302	34	VF	48" Dia. Stan. Precast Manhole	\$310.00	\$10,540.00
303	1000	LF	4" Sanitary Sewer Service Lateral	\$43.00	\$43,000.00
304	40	Each	8"x4" PVC Wye, including all transition materials	\$250.00	\$10,000.00
305	1	Each	DEDUCT - Replace and Adjust Existing Manhole Cover	-\$400.00	(\$400.00)
306	777	LF	DEDUCT - General Pipe Lining, 8" CIPP	-\$45.00	(\$34,965.00)
307	1	Each	DEDUCT - Chemical Grout Manhole	-\$3,000.00	(\$3,000.00)
308	1	Each	DEDUCT - Chimney Seal	-\$350.00	(\$350.00)
309	12	VF	DEDUCT - Epoxy Line Manhole	-\$525.00	(\$6,300.00)
310	40	Each	Video Camera Lateral Inspection	\$225.00	\$9,000.00
TOTAL ALTERNATE NO. 2				\$132,899.00	
TOTAL BASE BID + ALTERNATE NO. 1 + ALTERNATE NO. 2				\$1,565,440.50	

The Bidder understands and agrees that if a Contract is awarded, the City may elect to award all schedules under one Contract, lump sum, separately, or in any combination that best serves the interests of the City.

The Bidder further declares that he has carefully examined the Contract documents for the construction of the Project and has checked and verified the completeness of the Contract Documents, that he has personally inspected the site, that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved. Bidder further declares that he is fully aware of the fact that the description of the work, quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents. Bidder also declares that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal.

The Bidder declares that he understands and agrees that the quantities shown in the Advertisement for Bids and in the Proposal are approximate only and are subject to either increase or decrease; and that should quantities be decreased, he also understands and agrees that payment will be made on actual quantities installed at the unit bid prices, and will make no claim for anticipated profits for any decreases in the quantities. Actual quantities will be determined upon completion of the work.

START OF CONSTRUCTION AND CONTRACT COMPLETION TIME: The Bidder further agrees to begin work on the date stated in the Notice to Proceed and to fully complete the work, in all respects, within the time specified in the contract documents for completion.

EXPERIENCE OF BIDDER: Unless advised by the awarding authority in the Advertisement for Bids that the same is not required, the Bidder submits the following list of at least three clients for whom projects involving construction of similar projects have been performed within the past 5 years.

1. ALDOT
Name of Client _____ Telephone Number _____

Street _____ Montgomery
City _____

9th Avenue - Jasper \$1.2M
Facility _____ Size _____ Date July 2015

Goodwyn, Mills, and Cawood
Name of Engineer/Architect /Engineering Firm _____ Telephone Number _____

2. City of Tuscaloosa
Name of Client _____ Telephone Number _____

Street _____ Tuscaloosa
City _____

25th Ave East \$900k
Facility _____ Size _____ Date 2013

BKI
Name of Engineer/Architect /Engineering Firm _____ Telephone Number _____

3. City of Tuscaloosa
 Name of Client _____ Telephone Number _____

 Street Tuscaloosa
 City _____
Veterans Memorial Sewer \$300k
 Facility _____ Size _____ Date 2014
BKI
 Name of Engineer/Architect/Engineering Firm _____ Telephone Number _____

PERFORMANCE OF WORK BY CONTRACTOR: The Bidder shall perform at least 50 percent of the work with his own forces (refer to the INSTRUCTIONS TO BIDDERS).

SUBCONTRACTORS: Unless the same information has been provided in the prequalification statement, the Bidder further certifies that if his bid is accepted, the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work:

Description of Work Asphalt Paving
Central Alabama Asphalt
 Name _____

 Street Tuscaloosa AL
 City State Zip

Description of Work Striping
Wesley Burkhalter
 Name _____

 Street Tuscaloosa AL
 City State Zip

Description of Work CIPP
Gulf Coast Technologies
 Name _____

 Street Mobile AL
 City State Zip

Description of Work _____

Name _____

Street _____ City _____ State _____ Zip _____

SURETY: If the Bidder is awarded a construction contract on this Proposal, the Surety who provides the Performance Bond and Payment Bond will be:

Travelers Casualty and Surety Company of America whose address is

One Tower Square, Hartford CT, 06183-6014
Street City State Zip

Single Job Bond Limit \$3M Aggregate Job Bond Limit \$6M

If Sole Proprietor or Partnership:

IN WITNESS hereto the undersigned has set his (its) hand this _____ day of _____, 20____.

Signature of Bidder

Title

If Corporation:

IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers, this 3rd day of December, 2015.

Cornerstone Civil Contractors
Name of Corporation

(seal)

By [Signature]

Owner / Manager
Title

Attest [Signature]
Secretary

The Bidder declares that he understands and agrees that the quantities shown in the Advertisement for Bids and in the Proposal are approximate only and are subject to either increase or decrease; and that should quantities be decreased, he also understands and agrees that payment will be made on actual quantities installed at the unit bid prices, and will make no claim for anticipated profits for any decreases in the quantities. Actual quantities will be determined upon completion of the work.

Attached hereto is a (Bid Bond) or (Check) for the sum of Five percent of
bid amount NTE \$10,000.00 according
to the conditions under "Instructions to Bidders" and provisions therein.

Dated this 3rd day of December, 20 15.

BY: 
Owner / Manager
Title

(NOTE) If the Bidder is a corporation, the Proposal shall be signed by an officer of the corporation; if a partnership it shall be signed by a partner. If signed by others, authority for signature shall be attached.

[END OF BID PROPOSAL—OFFICE OF THE CITY ATTORNEY]

STATE OF ALABAMA)
TUSCALOOSA COUNTY)

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

SECTION FOUR
BID BOND TO THE CITY OF TUSCALOOSA, ALABAMA
(2015)

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____
Cornerstone Civil Contractors, LLC _____ as Principal; and _____
Travelers Casualty and Surety Company of America _____ as Surety, (NOTE: If cashier's check drawn on an
Alabama Bank utilized in lieu of corporate surety, attach check as required by bid documents) are hereby held and
firmly bound unto the City of Tuscaloosa, Alabama, a Municipal Corporation, as obligee, hereinafter called the City,
in the sum of Five Percent of Bid Amount not to Exceed Ten Thousand _____ Dollars
(\$ 5% NTE \$10,000 _____) for the payment of which sum, well and truly to be made, the said Principal and
Surety hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the City a certain
Bid (Proposal), attached hereto and made a part hereof, to enter into a contract in writing with the City, for the
following Project or portion thereof:

Project: Prince Avenue Improvements _____

Location: Tuscaloosa, AL _____

Architect or Engineer: Burk-Kleinpeter, Inc. _____

Project Number: A15-0275 _____

NOW, THEREFORE,

(a) If said Bid shall be rejected, or in the alternate,

(b) If said Bid shall be awarded and the Principal shall execute and deliver a contract in the Form of
Agreement as included in the Contract Documents for the Project, and shall execute and deliver Performance Bond
and Payment Bond in the Forms as attached to the Contract Documents executed by a surety company authorized
and qualified to make such bonds in the State of Alabama and in the amounts as required by the Instructions to
Bidders and submit the insurance certifications as required by the bid document and fulfill all other qualifications and
requirements of the Contract Documents and bid specifications (all properly completed in accordance with said Bid),
and shall in all other respects perform the agreement created by the acceptance of said Bid within thirty (30) days
after the prescribed forms have been presented to Bidder for execution;

Then, this obligation shall be void, otherwise, the same shall remain in full force and effect; it being
expressly understood and agreed that the liability of the Surety for any and all default of the Principal hereunder shall
be the amount of this obligation as herein stated.

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

IN WITNESS WHEREOF, the above-bonded parties have executed this instrument under their several seals, this the 3rd day of December, 2015 the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WITNESS:

[Handwritten Signature]

PRINCIPAL:

Cornerstone Civil Contractors, LLC (SEAL)

By: [Handwritten Signature]

Title: Owner / Manager

Address: 1268 James Road

Gallion, AL 36742

SURETY:

Travelers Casualty and Surety Company of America (SEAL)

One Tower Square

(Business Address)

Hartford, CT 06183-6014

ATTEST:

[Handwritten Signature]
Julie Tubbs

By: [Handwritten Signature]

Title: Cheryl Camak
Attorney in Fact

NOTE: Surety must be qualified and duly authorized to make bonds in the state. All Bonds and Sureties are subject to review and approval by the City Attorney. Valid current Power of Attorney for Corporate Surety must be attached.

NOTE: Bidder may submit a cashier's check drawn on an Alabama bank to the order of the City of Tuscaloosa equal to 5% of the amount bid, in lieu of a Corporate Surety, under the same terms.

[END DOCUMENT—OFFICE OF THE CITY ATTORNEY]



POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No. 229634

Certificate No. 006206185

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Timothy L. Donahue, T. Gary Fitts, J. David Fitts, Charles F. Horton Jr., R. Forrest Fitts, Cheryl Camak, and Julie Tubbs

of the City of Tuscaloosa, State of Alabama, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

The authority granted hereunder to sign, execute, seal and acknowledge any individual bond, recognizance, conditional undertaking, and other writing obligatory in the nature thereof is limited to the sum of TEN MILLION (\$10,000,000.00) DOLLARS per bond.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 7th day of July, 2015.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

By: [Signature]
Robert L. Raney, Senior Vice President

On this the 7th day of July, 2015, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.
My Commission expires the 30th day of June, 2016.



[Signature]
Marie C. Tetreault, Notary Public

STATE OF ALABAMA



LICENSE NO.: 39115
TYPE: RENEWAL

BID LIMIT: U
AMOUNT: UNLIMITED

State Licensing Board for General Contractors

THIS IS TO CERTIFY THAT

CORNERSTONE CIVIL CONTRACTORS LLC

GALLION, AL 36742

is hereby licensed a General Contractor in the State of Alabama and is authorized to perform the following type(s) of work:

BC-S: EXCAVATION, EV-S: LANDFILLS, H/RR-S: DRAINAGE AND CULVERT, H/RR-S: EXCAVATION, HS: HIGHWAYS AND STREETS, MU: MUNICIPAL AND UTILITY

until **October 31, 2016** when this Certificate expires.

Witness our hands and seal of the Board, dated Montgomery, Ala.

1st day of **October, 2015**
SECRETARY-TREASURER

117197

CHAIRMAN

Charles A. White, Jr.
[Signature]

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

SECTION FIVE
CONTRACT AGREEMENT
(2015)

THIS AGREEMENT made and entered into this 5th day of February, 2016, by and between Cornerstone Civil Contractors, LLC, hereinafter sometimes called the CONTRACTOR, as party of the first part, and the CITY OF TUSCALOOSA, Alabama, a Municipal Corporation, hereinafter sometimes called the CITY or OWNER, as party of the second part,

W-I-T-N-E-S-S-E-T-H:

In consideration of the amounts herein named and of the mutual agreements and provisions herein contained, the Contractor and the City agree in regard to a public works project (hereinafter either the "work" or the "Project") as described in the Advertisement for Bids.

The Contractor will perform the work and/or construct the Project as well as furnish at his own cost and expense all labor, tools, equipment and transportation as are herein and in the Contract documents required to be furnished by the Contractor, and shall perform all the work in a manner and form required to construct the Project described in and shown on the contract documents as the same are hereinafter more specifically described and as provided by the plans, specifications and documents which are attached hereto and made a part hereof, as if fully set out herein and addenda together with all plans and drawings on file in the office specified below.

ARTICLE I. GENERALLY

A. **Contract Documents:** As used throughout the documents constituting the contract, the term "Contract Documents" shall mean and include the following: Advertisement for Bids, Addenda (if issued), the Instructions to Bidders, the Bid Proposal, the General Specifications, the Detail Specifications, Supplemental and Special Conditions (if attached), together with this Contract Agreement and any modifications, including change orders, if made, and the drawings, plans and profiles that are now on file in the office referred to in the advertisement, the Performance Bond and the Labor and Material Bond, executed by the Contractor in connection with this Contract and insurance requirements and certificates.

All such documents hereinabove enumerated are adopted herein by reference and constitute the Contract between the parties to the same extent as if each were set out in full in this agreement.

B. **Independent Contractor:** The Contractor enters into this Contract with the City as an independent contractor and, as such, agrees that neither the City nor its officers, agents, employees or inspectors shall be responsible for the acts or omissions of the Contractor, or any subcontractor, or any of the Contractor's or subcontractor's agents or employees, or any other persons performing any of the work pursuant to this Contract. The Contractor shall be solely responsible for controlling construction manner, means and techniques consistent with the contract documents, plans and specifications.

C. **Order of Precedence:** Should there be a direct conflict between the various elements of the contract documents to the extent that the same cannot be reconciled to be read *in para materia*, then precedence shall be given the same in the following order:

1. Subsequent modifications (change orders or amendments) to contract agreement after execution
2. Addenda (if issued)
3. Supplemental general conditions and special conditions (if included)
4. The Contract Agreement
5. General and technical specifications
6. Large Scale Drawings (if included)
7. Enlarged Plans (if included)
8. Plans (if included)
9. Instructions to bidders
10. Advertisement for bids
11. Proposal (Bid)
12. Purchasing Agent Appointment Agreement (if utilized)

Where more than one document relates to the same matter if both can be given reasonable effect both are to be retained. Written specifications will take precedence over drawings.

D. Integration; Contract Terms and Construction:

1. Integration: This Agreement, together with all documents which constitute the "Contract Documents," constitute the entire agreement of the parties, as a complete and final integration thereof with respect to its subject matter. All understandings and agreements heretofore had between and among the parties are merged into this Agreement, which alone fully and completely expresses their understandings. No representation, warranty, or covenant made by any party which is not contained in this Agreement or expressly referred to herein has been relied on by any party in entering into this Agreement.
2. Amendment in Writing: This Agreement may not be amended, modified, altered, changed, terminated, or waived in any respect whatsoever, except by a further agreement or change order, in writing, properly executed by all of the parties.
3. Binding Effect: This Agreement shall bind the parties and their respective personal representatives, heirs, next of kin, legatees, distributees, successors, and assigns.
4. Captions: The captions of this Agreement are for convenience and reference only, are not a part of this Agreement, and in no way define, describe, extend, or limit the scope or intent of this Agreement.
5. Construction: This Agreement shall be construed in its entirety according to its plain meaning and shall not be construed against the party who provided or drafted it.
6. Mandatory and Permissive: "Shall," "will," and "agrees" are mandatory; "may" is permissive.
7. Governing Laws: The laws of the State of Alabama shall govern the validity of this Agreement, the construction of its terms, the interpretation of the rights, the duties of the parties, the enforcement of its terms, and all other matters relating to this Agreement.
8. Ownership of Contract Documents: The Contract Documents, and copies of parts thereof, are furnished and owned either by the City or the design professional. All portions of the Contract Documents, and copies of parts thereof, are the instruments of service for this Project. They are not to be used on other work and are to be returned to the City on request at the completion of the Project. Any reuse of these materials without specific written verification or adaptation by the City will be at the risk of the user and without liability or legal expense to the City or Engineer/Architect. Such user shall hold the City and Engineer/Architect harmless from any and all damages, including reasonable attorneys' fees, from any and all claims arising from any such reuse. Any such verification and adoption shall entitle the City to further compensation at rates to be agreed upon by the user and the City.

E. Rules of Construction: For the purposes of this contract, except as otherwise expressly provided or unless the context otherwise requires:

1. Words of masculine, feminine or neuter gender include the correlative words of other genders. Singular terms include the plural as well as the singular, and vice versa.
2. All references herein to designated "articles," "sections," and other subdivisions or to lettered exhibits are to the designated articles, sections and subdivisions hereof and the exhibits annexed hereto unless expressly otherwise designated in context. All article, section, other subdivision and exhibit captions herein are used for reference only and do not limit or describe the scope or intent of, or in any way affect this agreement.
3. The terms "include," "including," and similar terms shall be construed as if followed by the phrase, "without being limited to".
4. The terms "herein," "hereof," and "hereunder," and other words of similar import refer to this agreement as a whole and not to any particular article, section, other subdivision or exhibit.
5. All recitals set forth in, and all exhibits to, this agreement are hereby incorporated in this agreement by reference.
6. No inference in favor of or against any party shall be drawn from the fact that such party or such party's counsel has drafted any portion hereof.
7. All references in this agreement to a separate instrument are to such separate instrument as the same may be amended or supplemented from time to time pursuant to the applicable provisions thereof.

F. Construction Manager - Multiple Trade Contracts: If indicated in the Advertisement for Bids, the City has elected to engage the services of a Construction Manager for the work on this Project. If so, the same will be indicated in the bid packages and special supplemental conditions will be attached in regard to trade contracts. Contractor, as one of the multiple trade contractors on the Project shall adhere to all terms and conditions of the contract documents, particularly the supplemental conditions regarding multiple trade or multiple prime contractors. Any provision of the general conditions in direct conflict with the supplemental conditions is superseded to the extent of the conflict. If using a Construction Manager format, then this shall be a multiple trade or multiple prime contract agreement subject to the supervision and direction of a Construction Manager, in accordance with the terms and provisions of the Construction Manager's agreement with the City, which agreement is adopted herein by reference.

G. Coordination of Plans, Specifications, etc.: The specifications, the plans, drawings and all supplementary documents are essential parts of the Contract, and requirements occurring in one are as binding as though occurring in all. They are intended to be comprehensive to describe and provide a complete work. In case of discrepancy, figured dimensions shall govern.

H. Corrections of Plans, etc.: Should any portions of the plans, specifications or drawings be obscure or in dispute, they shall be referred to the Engineer/Architect and he shall decide as to the true meaning and intent. The Engineer/Architect shall also have the right to correct any errors or omissions at any time when such corrections are necessary for the proper fulfillment of said plans and specifications.

I. Taxes and Charges: Except to the extent the City and the Contractor are utilizing a "Purchasing Agent Appointment agreement," Contractor shall withhold and pay all sales and use taxes and all withholding taxes, whether local, state or federal and pay all Social Security taxes and also all State Unemployment Compensation taxes, and pay or cause to be withheld, as the case may be, any and all taxes, charges, or fees or sums whatsoever, which are now or may hereafter be required to be paid or withheld under any laws. Pursuant to Ala. Code §39-1-3 (1975), Contractor shall be reimbursed for any additional severance, sales or uses taxes incurred as a result of an increase in such taxes during performance of the contract.

J. Shop Drawings and Submittals. The Contractor shall submit shop drawings, samples and submittals depicting or representing the construction of portions of the Project in accordance with the plans and specifications to the Engineer/Architect and if there is no Engineer or Architect on the Project, to the City representative. The

Contractor shall pay for or the cost may be withheld from payments to the Contractor for more than two (2) reviews of the shop drawings, samples or submittals or similar element of work by the Engineer, Architect or City representative.

K. **Alabama Immigration Law.** By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom, to the extent allowed by Federal law.

L. **Compliance with Affordable Health Care Act.** By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal compliance laws pertaining to the Affordable Health Care Act. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom, to the extent allowed by Federal law.

ARTICLE II. PAYMENTS, CLAIMS AND CHARGES, ETC.

A. **Contract Price:** The City will pay and the Contractor will accept in full consideration for the performance of the work/Project, subject to additions and deductions (including but not limited to liquidated damages) as provided in the contract documents and herein, the sum of One Million Five Hundred Sixty-Five Thousand Four Hundred Forty Dollars and Fifty Cents (\$1,565,440.50) and/or in unit prices as shown in Bidder's schedule for the base bid amount of \$1,565,440.50, being the amount of the Contractor's bid as awarded by the City.

B. **Estimated Quantities and Unit Prices:** If award was made in whole or in part based upon unit prices, the Contractor agrees that the prices given in the Proposal are unit prices. The estimated quantities as stated in the Advertisement for Bids and in the Proposal and as indicated on the plans or in other places are approximate only, are subject either to increase or decrease and are only for the purpose of comparing on uniform basis the bids offered for the Project under this contract. The Contractor further agrees that should the quantities of any of the items of the work be increased, he will do the additional work at the unit prices set out in the Proposal and should the quantities be decreased, payment will be made on actual quantities at the unit prices and he will make no claim for anticipated profits for any decrease in the quantities. Actual quantities will be determined upon completion of the Project.

C. **Overtime Work by Contractor:** If the Contractor for his convenience and at his own expense should desire to carry on his work at night or outside regular hours, he shall submit written notice to the Engineer/Architect and he shall allow ample time for satisfactory arrangements to be made for inspecting the work in progress. At no time shall the notice be given less than 24 hours before such overtime work is started. The Contractor must obtain, through the Engineer/Architect, the City's approval for work at night, on Saturdays, Sundays or legal holidays. The Contractor shall light the different parts of the Project as required to comply with all applicable federal and state regulations and with all applicable requirements of the City.

Overtime hours shall be considered any hours worked by the Contractor on Saturday, Sunday and legal holidays, which in the Engineer/Architect's opinion requires the Engineer/Architect's resident observers' presence to observe such overtime work. Overtime hours requiring the presence of City inspectors shall be considered any hours worked by the Contractor in excess of eight (8) hours during any working day and/or in excess of forty (40) hours from Monday through Friday and/or any time on Saturday, Sunday or legal holiday. In general, it should be expected that the Engineer/Architect's resident observer(s) or City's inspectors will be present at all times that the Contractor is working.

If the Contractor elects to schedule and perform overtime work, the Contractor shall pay the City for the City's resident inspector's salary plus costs for each hour of overtime work. Overtime shall be rounded up to the nearest whole hour. This amount shall include the inspector's salary at overtime rate, labor additive, which includes

insurance, social security, workmen's compensation, sick pay, paid holidays, vacation pay and his vehicle and equipment. Payment to the City shall be made by a deduction from the Contractor's monthly payment invoice for any overtime worked.

D. **Payments on Account/Payments Withheld/Retainage:** Upon presentation of a verified application for payment, which shall include a "Contractor's Affidavit of Payment of Debts and Claims," AIA Form G706 or equivalent, then usually by the fifteenth (15th) day of each calendar month or as soon thereafter as is practical, as the Project progresses, the City shall make partial payments to the Contractor of the billable work performed less payments already made and less deductions for any incomplete, unaccepted or defective work. In making partial payments to the Contractor, there shall be retained five (5%) percent of the estimated amount of work done and value of materials stored on the site or suitably stored and insured off-site. Provided; however, after fifty (50%) percent of the Project has been satisfactorily completed, no further retainage will be withheld.

Retainage shall be held until final completion and acceptance of all work covered by the Contract Documents unless escrow or deposit arrangements are agreed to by the City. When maintenance periods are included in the Contract Documents covering highways, bridges or similar structures, such period shall be considered a component part of the contract and retainage will be held until the expiration of such periods.

On completion and acceptance of each separate building, public work or other separately identifiable and complete division of the Project in regard to which a separate price has been stated in the Contract Documents or can be separately ascertained, payment may be made in full including retainage but less deductions. Provided; however, the City will not consider making such payment on any such item of work if it is an integral part of a complete project.

All materials and work covered by partial payments as provided for herein shall become the sole property of the City; provided, however, the Contractor shall not be relieved from the sole responsibility for the care and protection of materials and work upon which payments have been made and for the restoration of any damaged work.

The City may also withhold from time to time from payment to the Contractor such an amount or amounts as may be necessary to pay and fully satisfy all claims and demands for labor and services rendered in and about the Project, including any such amount or amounts due to be paid to or by any subcontractor or supplier, amounts for City's or Engineer/Architect's observers or inspectors for contractors' overtime as herein provided, or for engineering or design services associated with Contractor initiated change orders or submittals in excess of that permitted herein. The Contractor hereby authorizes the City as its agent, to apply such amounts so withheld to the payment of any amount so due to be paid and all other just and lawful claims other than claims for damages for tort. In case of disagreement with reference to any such claim or claims, the City may keep such amounts so withheld on account of such claim or claims until such disagreement is finally settled and determined.

In addition, the City may also withhold payment of the whole or any part of a verified or approved application for payment from the Contractor to such an extent as may be necessary to protect itself from loss on account of any of the following causes discovered subsequent to its verification or approvals:

1. Defective work.
2. Evidence indicating probable filing of claims by other parties against the Contractor.
3. Failure of the Contractor or subcontractor to promptly make payments to subcontractors or for materials, labor, food stuffs and supplies.
4. Damage to another contractor under separate contract with the City.
5. Assessment of liquidated damages.

When the above grounds are removed, applications for payment will then be verified and/or approved for amounts not previously verified and approved because of them.

The Contractor shall not attempt to withdraw at any time during the term of this contract or any extensions thereof, without the expressed written consent of the City, the whole or any part of the amounts so retained by the City from payments due the Contractor by the establishment of an escrow account or by depositing securities in lieu thereof, pursuant to Ala. Code §39-2-12(e) or (f), or any amendments thereto or any equivalent law, ordinance or regulation. It is expressly agreed between the parties hereto that should the City elect not to consent to the same, then the Contractor shall not elect to, attempt to or in any manner endeavor to withdraw such retained amounts.

E. **Claims for Extra Cost:** If the Contractor claims that any instructions by drawings or otherwise involve extra cost or any extension of time, he shall notify the City in writing within ten (10) days after the receipt of such instructions and in any event before proceeding to execute the Project. Thereafter, the procedure shall be the same as that for change orders. No such claim shall be valid unless made in accordance with the terms of this section. There shall be no damages for delay.

Except as otherwise herein provided, no charge for any extra work will be allowed unless the same has been duly authorized in writing by the City and the price stated in such order.

F. **Differing Site Conditions:** If, in the performance of the Contract, subsurface or latent conditions are found to be materially different from those indicated by the plans and specifications, or unknown conditions of an unusual nature are disclosed differing materially from conditions usually inherent in work of the character shown and specified, the Contractor shall immediately notify the Engineer/Architect in writing regarding such conditions but in no event later than forty-eight (48) hours after discovery of such conditions by the Contractor.

The written notice shall describe the conditions, and other pertinent information, in no event shall such notice be later than forty-eight (48) hours before such conditions are disturbed. Upon such notice, or upon such observation of conditions, the Engineer/Architect will promptly make such changes in the plans and/or Specifications as he finds necessary (if any are necessary) to conform to the different conditions, and any increase or decrease in the cost of the Project resulting from such changes may be adjusted as provided under Change Orders or Claims for Extra Cost as set forth in the Contract documents.

G. **Change Orders:** Change orders shall be allowed only under the following conditions: 1) Minor changes for a total monetary amount less than that required for competitive bidding; or 2) Changes for matters incidental to the original contract necessitated by unforeseeable circumstances arising in the course of work under the contract; or 3) Changes due to emergencies; or, 4) Changes provided for in the original bidding and original Contract Documents as alternates; 5) Changes of relatively minor items not contemplated when the plans and specifications were prepared and the Project was bid and which are in the public interest and generally do not exceed 10 percent of the Contract Price, subject to Alabama Bid Law exceptions.

The Contractor or successful bidder is expected to complete the Project as bid and specified within the financial parameters stated therein. However, if it shall be determined that a change order condition possibly exists in any given case during the performance of the contract, the Contractor shall promptly notify in writing the representative of the City and shall not implement such change until having notified the representative of the City. If the change is minor in the opinion of the representative of the City and does not involve, 1) an adjustment in the contract sum or construction bid price, or 2) result in extension of the contract time, or 3) a material change in the contract scope of services, then the City representative may authorize the change in writing to the Contractor. The Contractor shall not perform such change until receipt of such written change order.

In the event the change order requested by the Contractor involves, 1) an increase in the contract sum or construction bid price, 2) extend the contract time, or 3) materially change the Contractor's scope of work or services,

then the Contractor shall request a change order in writing and present the same to the City representative. The representative of the City, shall determine whether this is a change order which can be allowed and, if so, what exception it would fall under. The representative of the City shall then document the same, attach the same to the Contractor's request for a change order and submit the same with his recommendation to the City Council at its next or any subsequent regularly scheduled Council meeting for approval.

The City reserves the right to institute change orders as the Owner pursuant to the aforesaid terms and conditions.

In no event is a change order to be executed by the Contractor prior to approval thereof by the City, except for emergencies.

H. **Determination of Adjustment of the Contract Sum:** The adjustment of the Contract Sum resulting from a change in the Work shall be determined by one of the following methods as determined by Owner:

1. By mutual agreement to a lump sum based on or negotiated from an itemized cost proposal from the Contractor.
2. Additions to the Contract Sum shall include the Contractor's direct costs plus a maximum 15% markup for overhead and profit. Where subcontract work is involved, the total mark-up for the Contractor and a subcontractor shall not exceed 25%. No allowance for overhead and profit shall be figured on a change which involves a net credit to the Owner. For the purposes of this method of determining an adjustment of the Contract Sum, "overhead" shall cover the Contractor's indirect costs of the change, such as the cost of bonds, superintendent and other job office personnel, watchman, job office, job office supplies and expenses, temporary facilities and utilities, and home office expenses.

I. **Construction Schedule and Periodical Estimates:** Immediately after execution and delivery of the contract and before the first partial payment is made, the Contractor shall deliver to the City and Engineer/Architect and Construction Manager, a construction schedule in a form satisfactory to the City or Construction Manager, which may include CPM for all major trades, showing the proposed dates of commencement and completion of each of the various activities, of work required under the Contract documents, the interrelationship of each activity, sequences, resources for each and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule. The Contractor shall also furnish (1) a detailed estimate giving a complete breakdown on the contract price and (2) periodical itemized estimates of the work done for the purpose of making partial payments, however the same will not be considered as fixing a basis for additions to or deductions from the contract price. Scheduling is particularly critical if Contractor is a trade contractor and adherence to the Construction Manager progress schedule is required.

NOTE: Depending upon the complexity of the work the City may require CPM or equivalent meeting all criteria above.

J. **Sales and Use Tax Savings:** Pursuant to the invitation for bids, sales and use taxes are not to be included in the bid. The project will be administered in compliance with the State of Alabama Act 2013-205, Certificate of Exemption from Sales and Use Tax for Governmental Entities, regarding sales and use taxes. The Contractor shall be responsible for obtaining a certificate of exemption from the Alabama Department of Revenue for purchases of materials and other tangible property made part of the project. Any subcontractors purchasing materials or other tangible personal property as part of the project shall also be responsible for obtaining a certificate of exemption. The estimate sales and use tax saving must be accounted for on the bid proposal. Failure to provide the estimated sales and use tax savings may render the bid as non-responsive. Other than determining responsiveness of the bid, sales and use tax accounting shall not affect the bid pricing nor shall be considered in the determination of the lowest responsible and responsive bidder

ARTICLE III. TIME

A. **Time for Completion/Delays:** The Contractor hereby agrees to commence work under this contract on the date to be specified in a written "Notice to Proceed" of the Engineer/Architect or thirty (30) days from the date of contract execution if no notice is issued, and to fully complete the Project within 180 consecutive calendar days thereafter. If this is a trade contract, then the Contractor shall perform within the time periods and at the times as established by the Construction Manager's approved construction schedule for the project. The Contractor further agrees to pay to the City, liquidated damages for each consecutive calendar day thereafter as hereinafter provided. Time is of the essence and a material element to this agreement.

NOTE: When maintenance periods are included in the contract for highways, bridges or similar structures, such periods shall be considered component parts of the contract. To the extent the construction schedule contains "float," the parties agree that the same belongs to the Project and may be utilized by either party.

Delay: If the Contractor is delayed at any time in the progress of work by any of the following causes, the Contractor may be entitled to a reasonable extension of time as determined by the City in which to complete the Project. Provided, however, no such delay nor the extension of time if granted shall be grounds for a claim by the Contractor for damages or for additional cost, expenses, overhead or profit or other compensation:

1. Fires, abnormal floods, tornadoes or other cataclysmic phenomenon of nature.
2. Strikes, embargoes, lockouts, war, acts of public enemy.
3. Change orders.
4. Acts of performance or delays in performance by other contractors employed by the City or their subcontractors.
5. Causes beyond the control of the Contractor.

Provided further, that the Contractor shall immediately give notice in writing to the City and follow extension of time procedures as provided for herein. The City expressly disclaims any liability to Contractor for any cost, expense or damage caused by other contractors, subcontractors or suppliers, including those engaged by the City. The City shall not be liable for damages or cost to the Contractor sustained due to any interference from utilities or appurtenances or from the operations of relocating the same.

B. **Extensions of Time:** All written requests for extensions of time must be submitted to Engineer/Architect within ten (10) days after the occurrence of the cause for delay. The Engineer/Architect shall ascertain the facts and the extent of the delay and shall recommend to the City Council whether it should extend the time for completing the Project. Any extension of time shall be in writing and processed as a change order.

For change orders requesting extensions of time due to rain, wind, flood or other natural phenomenon, the Contractor's written request must be accompanied, at the City's request, by a detailed report of weather at this site for the last ten (10) years with averages showing means and statistical deviations from mean averages to support request for extension.

No extension shall be made for delays due to rain, wind, flood or other natural phenomenon of normal intensity for the locality.

In the event any material changes, alterations, or additions are made as herein specified, which in the opinion of the Engineer/Architect will require additional time for execution of any work under the contract, then in that case, the time of the completion of the Project may be extended through change order. No extensions of time shall be given for any minor changes, alterations or additions. The Contractor shall not be entitled to any reparation or compensation on account of such additional time or extensions of time. To the extent that the construction schedule contains "float," the parties agree that the same belongs to the Project and may be utilized by either party.

C. **Right of the City to Terminate Contract:** If the Contractor should be adjudged as bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed for the Contractor or any of its property, or if it should persistently or repeatedly refuse or fail to supply enough properly skilled workmen or if it should refuse or fail to make prompt payment to persons supplying labor for the Project under the Contract, or persistently disregard instructions of the Engineer/Architect or fail to observe or perform any provisions of the Contract documents, or fail or neglect to promptly prosecute or perform the Project in accordance with the contract documents or otherwise be guilty of a substantial violation of any provision of the Contract documents, then the City may, on giving at least thirty (30) days' written notice to the Contractor, without prejudice to any other rights or remedies of the City in the premises, terminate the Contractor's right to proceed with the Project. In such event, the City may take over the Project and prosecute the same to completion, by contract or otherwise, and the Contractor and its sureties shall be liable to the City for any and all excess cost occasioned to the City thereby, including attorney's fees; and in any such case, the City may take possession of and utilize in completing the Project such appliances and plant of the Contractor or its subcontractors as may be on the site work and necessary or useful thereof. In the event of termination, the same shall not relieve the Contractor nor any of its sureties of their obligation pursuant to this agreement. In the event it becomes necessary for the City to maintain any legal action against the contractor, to enforce its rights herein, the Contractor shall pay the City all expenses associated therewith including a reasonable attorney's fee.

Owner may at any time and for any reason terminate Contractor's services and work at Owner's convenience. Upon receipt of such notice, Contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement. Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this Agreement; plus, (2) such other costs actually incurred by Contractor as are permitted by the prime contract and approved by Owner; (3) plus ten percent (10%) of the cost of the work referred to in subparagraph (1) above for overhead and profit.

D. **Liquidated Damages:** Should the work under this contract not be completed within the time specified, scheduled or as extended, it is understood and agreed that there may be deducted by the City or Engineer/Architect from the partial and/or final payments to the Contractor or otherwise charged to the Contractor, a sum computed at the rate of One Thousand Dollars (\$1000.00) per day beginning from the stated or extended date of completion and continuing for so long as the Project remains incomplete. It is understood and agreed that the above deduction is not a penalty, but money due to reimburse the City/Owner for inconvenience and damage to the general public, due to the delay in the completion of the Project and is reasonable. The collection of liquidated damages by the City shall not constitute an election or waiver by the City of recovery of additional delay or non-delay related damages from the Contractor, and the City expressly reserves the right to recover actual damages for other harms resulting from delay. The provisions of the liquidated damage clause shall apply and continue to apply even if the Contractor terminates or abandons the Project prior to the scheduled completion dates.

The amounts of such liquidated damages and actual damages incurred by reason of failure to complete the work stipulated in the Contract are hereby agreed upon as reasonable estimates of the costs which may be accrued by the City. It is expressly understood and agreed that these amounts are not to be considered in the nature of penalties, but as damages which have accrued against the Contractor. The City shall have the right to deduct such damages from any amount due, or that may become due the Contractor, or the amount of such damages shall be due and collectible from the Contractor or Surety.

ARTICLE IV. WORK AND MATERIALS

A. **Cooperation of Contractor:** The Contractor shall have available on the job site, at all times, at least one (1) copy of the plans and specifications if prepared for the Project.

He shall give the Project the constant attention necessary to facilitate the progress thereof and shall cooperate with the City, Engineer/Architect and with other Contractors in every way possible. The Contractor shall at all times have a superintendent, capable of acting as his agent on the Project, who shall receive communications from the Engineer/Architect or his authorized representatives or the City's authorized representative. The superintendent shall have full authority to give and execute orders relating to the Project without delay and to promptly supply such tools, plant equipment, materials and labor as may be required.

The City reserves the right to utilize its own forces on the site or those of another contractor and to communicate through its representative directly with the Contractor.

B. Coordination - Trade Contractors: If the supplemental conditions are attached to these general conditions indicating that this Project involves the use of multiple trade or multiple prime contractors under the supervision and direction of a Construction Manager employed by the City, then each such trade contractor shall cooperate and coordinate its construction activities and operations with those of other trade contractors and other entities involved in the Project and included under different sections of the specifications that are dependent upon each other in any manner for proper and correct installation, connection and operation, to assure efficient, prompt, orderly and proper installation of each part of the Project.

When utilizing trade contractors and/or multiple prime contractors under the supervision of Construction Manager cooperation and coordination of activities is extremely important. Refer to the provisions of the supplemental conditions for detailed requirements.

C. Superintendence: The Contractor shall assign to and keep at the Project site competent supervisory personnel. The Contractor shall designate, in writing, before starting work, an authorized representative who shall be an employee of the Contractor and shall have complete authority to represent, to receive notice for, and to act for the Contractor. The Contractor shall not permit or allow any work to be conducted upon the Project site without the presence of supervisory personnel. The Engineer/Architect shall be notified in writing prior to any change in superintendent assignment. Using his best skill and attention, the Contractor shall give efficient supervision to the Project. The Contractor shall be solely responsible for all construction means, methods, techniques, and procedures, for providing adequate safety precautions, and for coordinating all portions of the Project under the Contract. It is specifically understood and agreed that neither the Engineer/Architect nor the City shall not have control or charge of and shall not be responsible for the construction means, methods, techniques, or procedures, or for providing adequate safety precautions in connection with the Project under the Contract.

D. Contractor's Tools and Equipment: The Contractor's tools and equipment used on the Project shall be furnished in sufficient quantity and of a capacity and type that will adequately and safely perform the work specified, and shall be maintained and used in a manner that will not create a hazard to persons or property, or cause a delay in the progress of the Project.

E. Furnishing Labor and Equipment: The Contractor shall furnish and pay for all equipment, labor and supervision, and all such materials as required to be furnished in the Notice to Bidders and as may otherwise be necessary to the completion of the Project and the operation of each construction crew required.

F. Employees: The Contractor shall employ only competent, skillful workers on the Project, and whenever any person shall appear to be incompetent or to act in a disorderly, unsafe improper manner, such person shall promptly be removed from the Project by the Contractor.

G. Materials and Appliances: Unless otherwise stipulated, the Contractor shall provide and pay for all other materials, water, heating, lighting, fuel, power, transportation, machinery, appliances, telephone, sanitary facilities, temporary facilities and other facilities and incidentals necessary for the execution and completion of the Project.

The Contractor warrants to the City and the Engineer/Architect that, unless otherwise specified, all materials and equipment furnished under this contract shall be new, and both workmanship and materials shall be of good quality, free of faults and defects, and in conformance with the Contract Documents. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials. In selecting and/or approving equipment for installation in the Project, neither the City nor Engineer/Architect assume responsibility for injury or claims resulting from failure of the equipment to comply with applicable federal, state, and local safety codes or requirements, or the safety requirements of a recognized agency, or failure due to faulty design concepts, or defective workmanship and materials. Material and/or equipment damaged by flooding or other causes during the construction period shall be subject to rejection by the Engineer/Architect; reconditioning and/or repairing material and/or equipment is not acceptable.

H. **Asbestos and Hazardous Materials:** Unless specifically authorized and instructed to the contrary by the City, the Contractor shall not permit, allow, place, install or incorporate into the Project or upon the work site, any hazardous material(s), including, but not limited to, any products or materials that contain asbestos in any quantity. It shall be the responsibility of the Contractor to inspect all materials and products delivered for incorporation or installation in the Project to ensure that they contain no hazardous materials or asbestos. Where the Contractor or any subcontractor has or should have a reasonable suspicion that any product or material contains asbestos or other hazardous material, the Contractor shall immediately inspect the material or product, obtain a product or material data sheet, and notify the City's representative prior to installation or incorporation of the same into the Project. Any product or material determined to contain asbestos or other hazardous material shall be removed from the Project immediately and properly disposed of as required by law. Products or material to which the contractor should pay particular attention to avoid the presence of asbestos incorporated therein include, but are not limited to the following: concrete, batt insulation, roof insulation, building felts, mastics, water proofing products, adhesives, resilient flooring products, ceiling tiles, interior coatings, exterior coatings, roofing, pipe installation, duct installation and pre-assembled items of equipment.

At the completion of the Project, the Contractor shall submit a duly executed Asbestos Affidavit in the form as attached hereto prior to final payment.

The Contractor is responsible for insuring that all of its employees and subcontractors are adequately trained to handle hazardous materials in accordance with 49 CFR §172(g).

I. **Protection of Work and Property:** The Contractor shall furnish and install all necessary temporary works for the protection of the Project. The Contractor shall at all times adequately maintain, guard and protect his own work from damage, and safely guard and protect private, commercial, industrial, the City's and others' property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except such as may be directly due to errors in the plans or specifications or caused by agents or employees of the City.

The Contractor shall protect all existing vegetation such as trees, shrubs, and grass on or adjacent to the site which are not required to be removed or do not unreasonably interfere with construction, as may be determined by the Engineer/Architect, and be responsible for all cutting or damaging of trees and shrubs or grassed areas, including damage due to careless operation of equipment, stockpiling of materials or equipment.

Care shall be taken by the Contractor in felling trees that are to be removed to avoid any unnecessary damage to vegetation or other trees that are to remain in place. Any limbs or branches unavoidably broken during such operations shall be trimmed with a clean cut and painted with an approved tree priming compound. The Contractor may be required to replace or restore at his own expense all vegetation not protected and preserved, as above required, that may be destroyed or damaged.

The Contractor shall provide and maintain all passageways, guard fences, lights, and other facilities required for protection by federal, state or municipal laws and regulations or local conditions.

The Contractor shall comply with local and state regulations governing the operation of premises which are occupied and shall perform the contract in such a manner as not to interrupt or interfere with the operation of other facilities.

The Contractor shall store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the Project as will not unduly interfere with the progress of his work or the work of any other contractor.

Necessary crossings of curbs, sidewalks, roadways or parkways shall be protected against damage and any damage shall be repaired by or at the expense of the Contractor.

The Contractor shall not place upon the Project or any part thereof, loads inconsistent with the design or safety of that portion of the Project.

The Contractor shall provide and maintain access to all public and private properties at all times and be responsible for any damage caused by his operation to existing driveways, yards, streets, parking lots, utilities, railroads, etc., and such damage shall be corrected at the Contractor's expense. Roadways authorized closed by State or Local authorities shall be maintained to provide access to all fire, police, and other emergency vehicles and all individuals having private property in the closed area. The Contractor shall notify at least 24 hours in advance the Fire, Police, and Transportation Departments having local jurisdiction, the Owner and any other individuals, businesses, or agencies that may be affected.

J. Protection of Existing Utilities. Contractor shall be responsible for any damage to existing structures or the interruption of any utility services which shall be repaired or restored promptly by and at the expense of the Contractor.

To that extent, the Contractor shall provide whatever measures are necessary to properly protect and maintain all existing utilities encountered in the course of the work. The Contractor shall be exclusively responsible to the utility owner for any and all damages to the various utilities caused by the Contractor's actions or lack of actions to adequately protect the same.

The Contractor shall determine the exact location of all existing utilities before commencing work and agrees hereby to be fully responsible and liable for any and all damages which might occur by his failure to exactly locate and/or preserve the location of any and all underground or overhead utilities. The Contractor shall be solely and directly responsible to the utility owner for any and all damages to the various utilities, caused by the Contractor's actions or lack of actions to adequately protect such utilities. If any utilities are to be affected during the course of construction, the Contractor shall so notify the owners thereof at least seventy-two (72) hours prior to any such construction activity. The Contractor shall fully cooperate and coordinate with all utility owners in the event of an interruption to any utility service. The cost for locating, uncovering and protecting underground and/or overhead utilities is included within the Contractor's bid price for various other items of work.

The Contractor shall maintain all storm sewers, drains and/or ditches so that flow is not disturbed or impeded. The Contractor shall protect storm drains, inlets and/or ditches, lawns, landscaping and other facilities, from damage during the testing, and flushing.

K. Limiting Exposures: The Contractor shall prosecute the work on the Project to insure that no part of the construction, complete or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to the following:

Excessive static or dynamic loading
Excessive internal or external pressures
Excessively high or low temperatures
Thermal shock
Excessively high or low humidity
Air contamination or pollution
Water or ice
Solvents
Chemicals
Light
Puncture
Abrasions
Heavy traffic
Soiling, staining and corrosion
Bacteria

Rodent and insect infestation
Combustion
Electrical Current
High speed operation
Improper lubrication
Unusual wear or other misuse
Contact between incompatible materials
Destructive Testing
Misalignment
Excessive weathering
Unprotected storage
Improper shipping or handling
Theft
Vandalism

The Contractor shall minimize dust and air pollution through the use of water or other devices, require the use of properly operating combustion emission control devices and by encouraging the shutdown of construction vehicles when not in use.

L. **Safety:** The completed Project shall include all necessary permanent safety devices, such as machinery guards and similar ordinary safety items as may be appropriate or required by law. Further, any feature of the Project (including City-furnished or City-selected equipment) subject to such safety regulations shall be fabricated, furnished, and installed in compliance with these requirements. Contractors and manufacturers of equipment shall be held responsible for compliance with the requirements included herein. Contractors shall notify all equipment suppliers and subcontractors of the provisions of this Article.

In selecting and/or accepting equipment for installation in the Project, neither the City nor Engineer/Architect assume responsibility for any personal injury, property damage, or any other damages or claims resulting from failure of the equipment to comply with applicable safety codes or requirements, or the safety requirements of a recognized agency, or failure due to manufacturer's faulty design concepts, or defective workmanship and materials. The Contractor shall indemnify and hold the City, Program Coordinator, and Engineer/Architect harmless against any and all liability, claims, suits, damages, costs, or expenses without limitation arising out of the installation or use of such equipment.

The Contractor shall take all necessary precautions for the safety of employees on the Project and shall comply with all applicable provisions of federal, state, and municipal safety laws and building codes to prevent accidents or injury to persons on or about or adjacent to the premises where the Project is being performed. He shall erect and properly maintain at all times, as required by conditions, and progress of the Project, all necessary safeguards for the protection of workmen and the public, and shall post danger signs warning against the hazards created by features of construction and the site.

Machinery, equipment and all hazards shall be guarded or eliminated in accordance with the State Accident Prevention in Construction provisions to the extent that such provisions are not in contravention with applicable laws.

The Contractor shall do whatever work is necessary for safety and be solely and completely responsible for conditions of the jobsite, including safety of all persons (including but by no means limited to the public, site personnel, visitors, or employees) and property during the Contract period. The contract period shall include any subsequent warranty or other period associated with Project deficiency or repair and all hours including, and in addition to, normal working hours.

Safety provisions shall conform to the Federal and State Departments of Labor and the Occupational Safety and Health Act (OSHA), and all other applicable federal, state, county, and local laws, ordinances, codes, the requirements set forth herein, and any regulations that may be specified in other parts of these Contract Documents. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth therein.

The Contractor shall at all times provide proper facilities for safe access to the work by authorized government officials (federal, state, county and local) and representatives of the Owner.

M. **Traffic Control:** The Contractor shall be responsible for traffic control, including plan and devices to the extent the same is required due to work in, upon or in proximity to public right-of-way, streets, roads or vehicular traffic. The traffic control plan and all traffic control devices shall conform at a minimum to the Manual on Uniform Traffic Control Devices for Streets and Highways, Latest Edition, Federal Highway Administration. A copy of which is on file in the office of the City of Tuscaloosa Director of the Department of Transportation for examination. Copies may be obtained from the Alabama Department of Transportation. Should the appropriate public authority determine a greater degree of traffic control is required, then the Contractor shall promptly provide same. The Contractor shall submit a plan to the City Engineer for approval before commencing construction.

Reasonable means of ingress and egress by vehicular and/or pedestrian traffic to property adjacent to the Project shall be maintained at all times. The Contractor shall indemnify and hold the City harmless for any claims or causes of action including but not limited to those for inverse condemnation and/or lost profits arising out of or in any manner associated with access to or the restriction or prevention thereof to adjoining property. Traffic control and erosion control is of paramount importance during the construction of this Project and the terms and conditions in the contract documents in regard to these matters must be strictly adhered to.

N. **Responsibility to Act in Emergency:** In case of an emergency which threatens loss or damage to property, and/or safety, the Contractor shall act, without previous instructions from the City or Engineer/Architect, as the situation may warrant. The Contractor shall notify the Engineer/Architect thereof immediately thereafter. Any claim for compensation by the Contractor, together with substantiating documents in regard to expense, shall be submitted to the City through the Engineer/Architect. The claim will be handled in accordance with the provisions for extra work. However, if the emergency is created or aggravated by the Contractor, he shall be liable for the resulting damages. If the Contractor fails to take necessary action as required by such an emergency, the City may assign another Contractor or use his own forces to perform the emergency work. Costs or damages arising from the failure of the Contractor to act in an emergency may be deducted from the Contractor's request for payment.

O. **Sanitary Regulations:** The Contractor shall provide and maintain such sanitary accommodations for the use of his employees and those of his subcontractors as may be necessary to comply with the requirements and regulations of the local and State Department of Health. At a minimum, necessary sanitary conveniences for the use of the laborers on the work shall be erected and maintained by the Contractor, in such a manner and at such points as shall be approved by the Engineer/Architect. Their use shall be strictly enforced. In the Construction Manager format, the City may provide sanitary accommodations through the Construction Manager.

P. **Cutting, Patching, etc.:** Unless otherwise stated in the contract documents, the Contractor shall do all necessary cutting, fitting and patching of the Project that may be required to properly receive the work, to make its several parts join together properly, receive and provide for the work of various trades, and be received by the work of other contractors, or as required by drawings and specifications to complete the Project. After such cutting, he shall replace or restore or repair and make good all defective or patched work as required by the Engineer/Architect. He shall not cut, excavate or otherwise alter any work in any manner or by a method or methods that will endanger the Project, adjacent property, workmen, the public or the work of any other contractor. The Contractor shall check

the location of all sleeves, openings, slots, etc., for the piping, ducts, breeching, conduits, louvers, grills, fans, etc., as they are laid out on the job.

Provisions for openings, holes and clearances through walls, beams, floors, ceilings and partitions shall be made and checked by the Contractor and/or his subcontractor in advance of constructing such parts of the Project and unnecessary, superfluous or dangerous cutting shall be avoided.

Pipes passing through concrete or masonry walls shall be protected by pipe sleeves two sizes larger than the pipe, plus its installation to provide free movement.

Under no condition shall structural, framing or other parts or members subjected to computed stress be cut or disturbed without the approval of the Engineer/Architect. Any plates, studs or joists, and/or rafters that are approved to be cut to execute necessary work shall be securely strapped and braced to restore their strength by approved methods.

Unless otherwise indicated in Supplemental Conditions, all road crossings and/or driveways cut by the Contractor during the performance of the Project shall be returned to service as soon as possible and replaced or repaired within seven (7) calendar days.

All major thoroughfares must be repaired the same day as cut. The Contractor shall be responsible for the safety and welfare of the traveling public while construction work is being done and until the City accepts the Project.

The Contractor will replace at his own expense, all pipe and accessories that may be broken, damaged, stolen or lost and all materials that may become damaged, lost, stolen or misused.

The Engineer/Architect's approval shall be obtained before cutting or drilling holes in concrete or masonry that tend to damage or weaken the load capacity.

Q. Trailers: With the approval of the City or Engineer/Architect, the Contractor may park trailers or other structures for housing men, tools, machinery and supplies, but they will be permitted only at approved places and their surroundings shall be maintained at all times in a sanitary and satisfactory manner by the Contractor. On or before the completion of the Project, all such trailers or structures shall be removed, unless the City authorizes their abandonment without removal, together with all rubbish and trash, at the expense of the Contractor.

R. Construction Staking: If necessary, the Engineer or the City will furnish initial lines and grades to establish the initial horizontal and vertical control points and define the beginning and ending points of the Project. The Contractor is responsible for engaging the services of a qualified Engineer or land surveyor to replace and/or re-establish in accordance with the construction plans and/or specs, all construction stakes that are disturbed, displaced or destroyed during construction.

If the Contractor finds any errors or discrepancies with the construction staking or the criteria upon which it is based, he/she shall promptly notify the Owner's representative.

S. Periodic Cleanup: The Contractor shall periodically, at least weekly, or as requested during the progress of the Project, clean up and remove from the premises, all refuse, rubbish, scrap materials and debris caused by its employees or its subcontractors resulting from its work, to the end that all times the premises are sanitary, safe, reasonably clean, orderly and workmanlike. Trash and combustible materials shall not be allowed to accumulate inside buildings or elsewhere on the premises. At no time shall any rubbish be thrown from window openings, except during renovations with adequate precautions and into proper receptacles. The Contractor shall comply with all municipal litter and construction site ordinances.

Before the Project is considered as complete, all rubbish created by or in connection with the construction must be removed by the Contractor and the premises left in a condition by the Contractor satisfactory to the City. Street, curbs, crosswalks, pavements, sidewalks, fences and other public and private property disturbed shall be restored to their former condition or better, and final payment will be withheld until such work is finished by the Contractor.

Contractor shall conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws. No burning or burying of rubbish or waste materials is permitted on the Project site. The Contractor shall dispose of any hazardous material in a safe manner, off site, in accordance with applicable laws and regulations and shall not dispose of volatile or hazardous waste in storm or sanitary sewer drainage ditches, streams or waterways.

Contractor shall periodically wet down dry materials and rubbish to lay dust and prevent blowing dust; and shall provide adequate and approved containers for collection and disposal of waste material, debris and rubbish, removing grease, dust, dirt, stains, labels, fingerprints and other foreign materials from exposed and semi-exposed surfaces.

T. Termite Control. If the Project involves construction of a building or if otherwise specifically required by the City, then the Contractor shall provide soil treatment for termite control under all interior slabs on grade and foundation walls, and as herein specified. Contractor shall also comply with manufacturer's instructions and recommendations for work, including preparation of substrate and application and shall engage a professional pest control operator, licensed in accordance with regulations of governing authorities for application of soil treatment solution and doing business in the state where the Project is located for a minimum of five (5) years.

Contractor shall not apply soil treatment solution until excavating, filling and grading operations are completed, except as otherwise required in construction operations. To insure penetration, the soil treatment will not be applied to frozen or excessively wet soils or during inclement weather. Contractor shall comply with all handling and application instructions of the soil toxicant manufacturer. The type of materials to be used for soil poisoning shall first be submitted to the City for approval.

The soil treatment solution shall be an emulsible concentrate insecticide for dilution with water, specially formulated to prevent infestation by termites. Fuel oil will not be permitted as a dilutant.

Contractor shall strictly comply with the Environmental Protection Agency's (EPA) rules and regulations governing chemicals and their use. Only soil treatment solutions which are not injurious to planting shall be used. Other solutions may be used as recommended by Applicator when acceptable to the EPA, local governing authorities, and the Engineer/Architect.

Contractor shall comply with the following requirements when applying the soil treatment solution:

1. Surface Preparation: Remove foreign matter which could decrease effectiveness of treatment on areas to be treated. Loosen, rake, and level soil to be treated, except previously compacted areas under slabs and foundations. Toxicants may be applied before placement of compacted fill under slabs if recommended by toxicant manufacturer.
2. Under slab-on-grade structures, treat soil before concrete slabs are placed using either power sprayer or tank type garden sprayer.
 - (A) Apply 4-gallons of chemical solution per 10 linear feet to soil in critical areas under slab, including entire inside perimeter inside of foundation walls, along both sides at interior partition walls, around plumbing pipes and electric conduit penetrating slab, and around interior column footings.

- (B) Apply one gallon of chemical solution per 10 sq. ft. as an overall treatment under slab and attached slab areas where fill is soil or unwashed gravel. Apply 1-1/2 gallons of chemical solution to areas where fill is washed gravel or other coarse absorbent material.
 - (C) Apply 4 gallons of chemical solution per 10 linear feet of trench for each foot of depth from grade to footing, along outside edge of building. Dig a trench 6" to 8" wide along outside of foundation to a depth of not less than 12". Punch holes to top of footing at not more than 12" o.c. and apply chemical solution. Mix chemical solution with the soil as it is being replaced in trench.
3. Post signs in areas of application warning workers that soil poisoning has been applied. Remove signs when areas are covered by other construction.
 4. Reapply soil treatment solution to areas disturbed by subsequent excavation or other construction activities following application.

U. Erosion Control.

1. To the extent there has been issued by the City Engineer a land development permit in accordance with applicable ordinances, the Contractor shall conform to and abide by all terms and conditions of such permit.
2. Erosion control measures shall be performed on all disturbed areas in accordance with the BMPP included in the Notice of Intent and with Section 665, Alabama Highway Department Specifications. The CONTRACTOR will perform all erosion control measures necessary to prevent silt and soil from leaving construction area and entering private property or the "Waters of the State." Erosion control measures shall be in strict accordance with Alabama Non Point Source Management Program Document and EPA Storm Water Pollution Prevention for Construction Activities.
3. In accordance with Section 665 of Alabama Highway Department Specifications, temporary erosion control work shall involve the construction of temporary berms, dikes, drains, fences, dams, etc. with the use of temporary seeding, mulching, erosion control netting, hay bales, sandbags, check dams, etc., as necessary in order to prevent silt and soil from leaving rights-of-way and entering private property or from washing into drainage structures located on State or County rights-of-way. CONTRACTOR shall mow grassed areas as required during the construction phase of the contract.
4. Erosion control measures shall be maintained by the CONTRACTOR through the warranty period of the contract. If additional measures are required to correct problems which might occur, these shall be performed by the CONTRACTOR at no additional cost to the OWNER.
5. Materials used for erosion control measures shall be in accordance with Section 665.02 of Alabama Highway Department Specifications and shall include hay bales, sandbags, silt fencing rip rap, crushed stone, mulch or other materials necessary in order to accomplish erosion control.

V. **Wastewater Containment and Management Plan.** In accordance with ADEM Consent Order, NPDES permit NO. AL0022713, Tuscaloosa WWTP, Tuscaloosa County (125) dated September 8, 2009 and the "City of Tuscaloosa, Water and Sewer Department Engineering Report and Compliance Plan", December 2009; to the extent that construction activity by the Contractor involves any wastewater infrastructure or construction activities in close proximity to any wastewater infrastructure and/or to any City sanitary sewer assets the Contractor shall submit to the City Engineer, prior to commencing construction, a wastewater containment and management plan (the "Plan"). The Plan shall adequately address the means, methods and techniques to be employed by the Contractor for containing and transporting wastewater in a sanitary manner without, at any time, permitting the discharge of wastewater into the environment or creating the necessity of a State required sanitary sewer overflow report. The Plan shall be submitted by the Contractor to the Office of City Engineer for review and approval before commencing any construction activity. The City Engineer may waive the requirement of submitting a Plan if he/ she determines that the construction activity to which the Plan would relate does not involve any potential for the discharge of wastewater into the environment or creating the potential for the necessity of a State required sanitary sewer overflow report.

W. **Environmental Clause/Covenant.** Contractor shall not allow any toxic, hazardous or contaminated substances or gases (including, but not limited to, asbestos and raw materials which include hazardous constituents or any other similar substances or materials which are included under or regulated by any local, state, or federal law, rule or regulation pertaining to environmental regulations, contamination, clean-up or disclosure such as, without limitation, the Comprehensive Environmental Response Compensation and Liability Act of 1980 (“CERCLA”); the Clean Air Act (42 U.S.C. Sec. 7401 et seq.); the Clean Water Act (33 U.S.C. §1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §6901 et seq.); and the Toxic Substances Control Act (42 U.S.C. §2601 et seq.) or state environmental clean-up or disclosure acts and statutes as all such acts and statutes exist now or are hereafter amended (such acts and statutes referred to herein as “Environmental Laws”)(such substances or gases referred to herein as ‘Hazardous Substances’) to be stored, located, or discharged on the premises without specific prior written consent of the City. Contractor shall comply with all Environmental Laws affecting the premises. Contractor covenants to hold the City, its officers, agents and employees harmless from and against any loss, costs, damage or expenses (including attorney’s fees and expenses) arising out of the presence of Hazardous Substances (as hereinbefore described) on or about the premises or the violation of any Environmental Laws with respect thereto, the occurrence of which Hazardous Substances on the premises or the violation of any Environmental Laws shall have arisen solely from the acts or omissions of Contractor, its subcontractors, agents, invitees and employees. This indemnity shall survive the termination of this contract and shall inure to the benefit of the City of Tuscaloosa, its successors and assigns.

ARTICLE V. INSURANCE, LIABILITY, ETC.

A. Contractor's Insurance (Generally):

1. **Insurance Required.** The Contractor shall not commence work under this contract until it has obtained all insurance required by the Contract documents and such insurance has been accepted by the City. The Contractor shall maintain the required insurance during the term of the contract including any extensions of the term.

Insurance shall be written in comprehensive form by insurance companies rated A- or better by A. M. BEST and shall protect the Contractor and the City against claims for injuries to members of the public (including City employees) or damages to property of others (including City property) arising out of any act of the Contractor or any of its agents, employees or subcontractors and shall cover both on-site and off-site operations under this contract and insurance coverage shall extend to any motor vehicles or other related equipment, irrespective of whether the same is owned, non-owned or hired.

The obtaining and maintaining by Contractor and subcontractors of the insurance required herein does not relieve the Contractor of any responsibilities, obligations or duties to the City pursuant to this contract.

2. **Additional Insurance.** The Contractor shall have an insurance professional review the Contractor’s activities in regard to the performance of this contract and the Contractor shall obtain any further or additional insurance or greater limits as recommended by the insurance professional.

3. **Insurance Limits.** Neither the setting of insurance limits or requirements nor the acceptance or approval of the same by the City imply or represent that the limits or the insurance carrier is sufficient or that such insurance actually has been obtained, that being the responsibility of the Contractor.

4. **Subcontractors.** The Contractor shall require all subcontractors to take out and maintain the type of insurance required herein to the extent of their involvement in the Project so as to be adequate to protect against liability. In the event any work under this Contract is performed by a subcontractor(s), the Contractor shall remain responsible for any liability directly or indirectly arising out of the work performed under this Contract, regardless of whether or not such work is covered by the subcontractor’s insurance. The Contractor shall not allow any

subcontractor to commence work on the project until all similar insurance required of the subcontractor has been obtained. All subcontractors shall maintain required insurance during the term of the contract including any extensions of the term.

5. City's Right to Review Coverage. The City shall have the right to inspect and approve Contractor's insurance coverage herein required. Should the City deem it advisable to modify the coverage in any way, it shall so request of the Contractor in writing and should the Contractor fail to modify the coverage, then the City may pay the cost of any increased coverage or take credit for any decreases as may be appropriate. Review or acceptance of insurance by the City or representatives of the City shall not relieve or decrease the responsibility of the Contractor hereunder.

6. Waiver of Subrogation. To the extent that the Contractor is required to maintain insurance coverage for loss or damage to property or bodily injury, including Builders Risk All Risk insurance, the insurance must waive and the Contractor hereby waives subrogation of claims against the City, its officers, agents and employees.

7. City as Additional Insured. The City shall be named as additional insured , for ongoing and completed operations for up to two (2) years, on the Contractor's and any subcontractor's policies for any claims arising out of work performed under this Contract. The Contractor shall provide the City with a Certificate of Insurance naming the City as an additional insured using ISO for CG 2010 1185 (or a substitute form providing equivalent coverage) or on the combination of ISO forms CG 20 10 07 04 or CG 20 33 07 04 and CG 20 37 07 04 (or a substitute or ISO form providing equivalent coverage) naming the City as an additional insured , giving all parties a 30 notice of cancellation or intent not to renew the insurance, a waiver of subrogation and list any and all exclusions. The coverage available to the City as an additional insured shall not be less than \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate (subject to a per project general aggregate applicable to the project,), \$2,000,000 Products/completed Operations Aggregate, and \$1,000,000 Personal and Advertising injury limits. Additional insured coverage shall apply as primary, non contributory, insurance with any other insurance afforded to the City and the Contractor.

8. Elevators, Hoist and Cranes. If the Contractor or a subcontractor will utilize in connection with the performance of the work pursuant to this contract an elevator, material hoist, crane or other equipment, or conveyor, then the Contractor shall take out and maintain or require the subcontractor to take out and maintain insurance that shall protect the Contractor and the City against claims for injuries to members of the public (including City employees) or damages to property of others (including City property) arising out of any act of the Contractor or any of its agents, employees or subcontractors resulting from the operation of such elevator, material hoist, crane or other equipment, or conveyor.

B. Insurance:

1. Workmen's Compensation Insurance: The Contractor shall take out and maintain during the term or any extensions of this contract Workmen's Compensation Insurance as required by Alabama law for all of its employees employed at the site of the Project or off-sites related to the Project and, in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor.

In case any class of employees engaged in any work under this contract at the site of the Project is not protected under the Workmen's Compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, adequate accident insurance for the protection of its employees not otherwise protected.

Water or Navigational Exposure; Where work under this contract may trigger the requirement for Federal Longshoreman's and Harbor worker's Act and Federal Jones Act or insurance required by other applicable law or regulations, the Contractor shall obtain the same if required.

2. Comprehensive Automobile and Vehicle Liability Insurance: The Contractor shall maintain during the term or any extensions of this contract, comprehensive automobile and vehicle liability insurance. The limits of liability shall not be less than \$1,000,000 combined single limit or equivalent.

3. Commercial General Liability Insurance: The Contractor shall maintain during the term or any extensions of this contract, Commercial General Liability Insurance, including officers, agents and employees. The limits of liability shall not be less than \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate (subject to a per project general aggregate applicable to the project), \$2,000,000 Products/Completed Operations Aggregate, and \$1,000,000 Personal and Advertising Injury Limits Combined Single Limit or equivalent.

4. Owner's Protective Insurance: For projects with a contract amount of \$500,000.00 or greater, an Owner's Protective Policy is required in the minimum amount of \$1,000,000 each occurrence. Provided; however, the City may require such insurance on projects of lesser amount if an insurance limit amount is stated herein.

5. Umbrella Excess Liability Over Primary Insurance: The Contractor shall take out and maintain during the term of this contract, and any extensions thereof, Umbrella Excess Liability Insurance. The minimum limits of coverage shall be as follows:

Each Occurrence	\$ <u>1,000,000.00</u>
Aggregate	\$ <u>1,000,000.00</u>

The coverage shall be over the required general liability insurance and automobile liability insurance as a minimum. There shall be no gaps or sublimit deductibles, etc.

6. Miscellaneous Insurance: The Contractor shall provide whatever insurance may be required of the City or the Contractor by permits or agreements, etc., with the railroad, highways, or other utilities. The Contractor shall familiarize himself with all insurance requirements contained in easements, permits, and agreements associated with this Project. The Contractor shall provide any Railroad Protective Liability and other General Liability Insurance in the amounts contained in the agreements, permits or easements or in greater amounts if higher limits are appropriate or required elsewhere. The Contractor shall bear the cost of all required insurance and shall include in his bid a sufficient amount to cover the cost of all required insurance. To the extent the City obtains permits or licenses for railroad or highway bores, crossings or other work involved in the Project, the Contractor shall obtain adequate insurance to protect itself and the City.

7. Builders Risk All Risk Insurance: To the extent applicable to the Project, the Contractor shall secure and maintain during the life of this Contract, Builder Risk All Risk Insurance coverage for 100 percent of the Contract Price. This insurance shall not exclude coverage for earthquake, landslide, tornado, flood, collapse or loss due to the result of faulty workmanship. Such insurance shall also provide for any damages caused by injury to, or destruction of, tangible property, including loss of use resulting therefrom, and shall pay all losses to the Contractor and the City as their interest may appear.

If this is a trade contract under a construction manager format, the provisions of this subsection shall not apply.

8. **Proof of Carriage of Insurance:** The Contractor shall furnish the City with satisfactory proof of carriage of the insurance required herein, in the form of an insurance certificate or if the City elects in the form of a policy. Insurance shall be in a form satisfactory to the City.

- (A) The Contractor's and any subcontractor's general liability and automobile liability insurance shall endorse the Owner (City of Tuscaloosa), its officers, agents and employees, as additional insured's for any claims arising out of work performed under this contract.
- (B) The Contractor's insurance endorsing the Owner and others as additional insured's shall be "primary" and non contributory as to such endorsed insured's.
- (C) Cancellation: The certificate and policy, as the case may be, shall state that the City shall be given thirty (30) days' written notice of cancellation or any change in the insurance coverage.
- (D) There shall be a statement that the Contractor and any subcontractors waive subrogation as to the City, its officers, agents, employees and Program Coordinator.
- (E) There shall be a statement that full aggregate limits apply per job or contract.
- (F) Agents verification of Contractor's insurance on form provided by the City or equivalent.
- (G) Insurance shall contain no exclusions for x, c or u.
- (G) Full aggregate limits must apply per job or contract.

C. **No Personal Liability of Public Officials:** In carrying out any of the provisions hereof in exercising any authority granted by the Contract, there will be no personal liability upon any public official.

D. **Indemnity:** To the maximum extent permitted by law, the Contractor shall save harmless, indemnify and defend the City, its officers, agents and employees from and against any and all claims and losses, cost, expense or liability including attorney's fees and litigation costs caused by, arising out of, resulting from, or occurring in connection with the performance of the work by the Contractor or any subcontractor, regardless of the fault, breach of contract, or negligence of the City, its officers, agents or employees excepting only such claims or losses that have been adjudicated to have been caused solely by the negligence of the City and regardless of whether or not the Contractor is or can be named a party in a litigation.

Contractor agrees to indemnify and/or reimburse the City for any fines, violations, charges, suits, or sums of money imposed by the Alabama Department of Environmental Management (ADEM), Environmental Protection Agency (EPA), or any administrative agency on the City of Tuscaloosa for any sewage or contaminate discharged or Wetlands regulations violation as a result of or arising out of the work by the Contractor pursuant to this agreement.

E. **Errors and Omissions.** The Contractor does agree to release and hold harmless the City of Tuscaloosa or any of its officers, agents and employees and its Program Coordinator from any damages claimed by the Contractor or subcontractors resulting from or attributable in whole or in part to, errors in or omissions of the plans and specifications, including final drawings of the Engineer/Architect or other design professionals. As to plans, specifications or designs prepared by independent design professionals, the parties agree that any City review or approval thereof was only for overall suitability, maintenance and usability and there are no express or implied warranties by the City as to the adequacy, accuracy, correctness, or code compliance thereof.

F. **Exclusion of Contractor Claims:** In performing its obligations, the Engineer/Architect and its consultants may cause expense for the Contractor or its subcontractors and equipment or material suppliers. However, those parties and their sureties shall maintain no direct action against the City or its officers, employees, agents and program coordinator for any claim arising out of, in connection with, or resulting from the Engineering services performed or required to be performed where such services are performed in good faith to protect the City or the Public.

G. **Inadequate Surety/Insurance.** It is further mutually agreed between the parties hereto that if, at any time after the execution of this agreement, any of the surety bonds of the Contractor or subcontractors relating to the

Project for its faithful performance shall be deemed by the City to be unsatisfactory, or if for any reason such bond(s) ceases to be adequate to cover the performance of the work or the surety ceases to do business by agent in Tuscaloosa County, Alabama, the Contractor shall, at its expense, within five (5) days after the receipt of notice from the City so to do, furnish an additional bond or bonds in such form and amount and with such surety or sureties as shall be satisfactory to the City. In such event, no further payment to the Contractor shall be deemed to be due under this agreement until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to the City.

H. **Changes.** When changes in the scope of work by written order or change orders aggregate in amount equal to 10 percent of the total contract, including the change order or change orders, the insurance coverage included under this heading shall be increased accordingly by the Contractor. Proof of coverage shall be established by endorsement to the original policy or by re-issue of the original policy to include the added coverage, or in accordance with any other acceptable policy with the insuring company for increasing the coverage.

ARTICLE VI. OBSERVATION OF THE PROJECT

A. **Generally:** The Contractor shall furnish the Engineer/Architect and/or the City's observer with every reasonable facility for ascertaining whether or not the work performed is in accordance with the requirements and intent of the Specifications and Contract Documents. No work shall be done without suitable inspection by the Engineer/Architect's Inspector or the City's observer. Payment for work or failure to reject any defective work shall not in any way prevent later rejection when such defect is discovered, nor obligate the City to final acceptance. All work done when not in accordance with the Plans, specifications and contract will be rejected and, without cost to the City, shall immediately be removed and other work done in accordance therewith by the Contractor. If the Contractor fails to remove the work as above ordered, then the Engineer/Architect shall have the right and authority to stop the Contractor and his work at once and the City may correct the work as herein provided at the cost and expense of the Contractor.

Inspection is not acceptance and shall not constitute acceptance by the City.

The work shall also be subject to inspection by representatives of the City of Tuscaloosa Building Inspection Department.

B. **Observation of the Project:** The Engineer/Architect, the City and its observers, agents, any agency having jurisdiction, and their representatives shall have access at all times to the Project for inspection whenever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and inspection. The City or the Engineer/Architect may appoint or assign observers, with designated duties and restricted authority, to inspect the Project as may be directed, or to make special observations requested in advance by the Contractor, and to report progress of the Project, and manner of procedure, quality of the material and workmanship, and compliance with the Contract Documents.

Inspection or observation is not acceptance and shall not constitute acceptance by the City.

All materials, workmanship, equipment, processes of manufacture, and methods of construction, shall be subject to inspection, examination, and test by such persons at any and all places where such manufacture and/or construction are being carried on. The Engineer/Architect shall have the right to reject material, workmanship and/or equipment that are defective or otherwise not in accordance with the drawings and Specifications and require its correction by the Contractor. Rejected workmanship shall be satisfactorily corrected, and rejected material shall be satisfactorily replaced with proper material by the Contractor without charge therefor, and the Contractor shall promptly segregate and remove the rejected material from the premises. Provided; however, neither the presence or absence of such observers nor the giving or failure to give such advice, direction or instruction shall in any manner relieve the Contractor from any contract requirement.

Upon rejection of material and/or workmanship by the Engineer/Architect or the City, there may be occasion where such deficiencies may be corrected more economically and timely through modification of the design versus removal and replacement. In such instances, the Engineer/Architect shall provide design services on behalf of the City necessary for analysis and correction of the rejected work. Costs associated with hourly fees for these professional services shall be paid by the City and deducted from payment to the Contractor based on the actual costs incurred. Prior to beginning any analysis and accrual of associated professional service fees, the Engineer/Architect shall provide the Contractor and City notice in writing of the intent to begin, summary of the scope of work, estimated time to complete, and estimated total fees. Any costs associated with corrective work performed by the Contractor to remedy such deficiencies shall be the sole responsibility of the Contractor.

Neither the City observers nor the Engineer/Architect, will be authorized to revoke, alter, relax, or waive any requirements of the Contract Documents; to issue instructions contrary to the drawings and Specifications; nor shall they supervise and direct work for the Contractor, nor unreasonably interfere with the Contractor's operations beyond the extent necessary to make certain that the Project is being carried out according to the contract requirements.

Any advice which they may give the Contractor shall not be construed as binding the City in any way, nor as releasing the Contractor from any of the contract requirements.

If the Contractor considers any work demanded of it to be outside the contract requirements, or any ruling of the Engineer/Architect or an inspector to be unfair, it may immediately, upon such work being demanded or ruling made, request written instructions from the Engineer/Architect, or inspector, or within ten days file an appeal to the Engineer/Architect or the City, stating clearly and in detail the basis of its objections. However, pending the decision on such appeal no work shall be done in disregard of the rulings of the Engineer/Architect or inspector or his instructions on items of work affected by such appeal.

The Contractor shall furnish promptly, without extra compensation, all reasonable facilities, labor, and material necessary for safe and convenient access, inspection, and tests that may be required by the Engineer/Architect.

C. Authority and Duties of Observers: If City or consultant inspectors, whether for the Engineer/Architect or Construction Manager, are being utilized, they shall be authorized and permitted to inspect all work done. The Inspector shall not be authorized to alter or waive any requirements of the Specifications. He shall have authority to call the attention of the Contractor to failure of the work to conform to the specifications and Contract. He may suspend the Project until any questions at issue can be referred to and decided by the Engineer/Architect or the City.

Neither the Engineer/Architect, Inspector, the City or other representatives for the City shall be responsible in any way for construction means, methods or techniques, nor for the safety of the construction work, progress, or employees of the Contractor or any subcontractors, except as set forth in the Construction Manager contract, if applicable.

The presence of the Inspector shall not in any manner lessen the responsibility of the Contractor pursuant to this agreement.

D. Defective Work/Correction of Work by the City: The inspection of the work shall not relieve the Contractor of any of its obligations to fulfill its contract and defective work shall be made good, notwithstanding that such work has been previously inspected by the Engineer/Architect and accepted or estimated for payment. The failure of the Engineer/Architect or inspector to condemn improper workmanship shall not be considered as a waiver of any defect, whether known at the time or discovered later, or as preventing the City at any time subsequently from recovering damages for work actually defective. All work shall be guaranteed by the Contractor against defects in workmanship for a period of one year from date of final payment.

Upon failure and/or neglect by the Contractor to promptly prosecute or perform the work in accordance with the contract documents, including any requirements with respect to the construction schedule, plans or

specifications, the City may, without prejudice to any other remedy it may have, correct such deficiencies and may deduct the actual cost thereof from payment, then or thereafter due to the Contractor.

E. **Disagreement:** Should any disagreement or difference arise as to the estimated quantities or classifications or as to the meaning of the drawings or specifications, or any point concerning the character, or acceptability or nature of the several kinds of work, or construction thereof, the decision of the Engineer/Architect shall be final and conclusive and binding on the Contractor.

F. **Stop Work Orders:** During unseasonable weather all work must stop when the Engineer/Architect so directs and all work must be suitably protected by Contractor at all times. However, the Engineer/Architect shall be under no obligation to stop work on the Project. If the Project is stopped, the Contractor shall not be entitled to extra compensation for delays or problems associated with the stoppage.

G. **Progress Meetings:** The Contractor shall conduct regular progress meetings during the course of the Project at least once a month or more often if requested by the City or Engineer/Architect. The meetings shall be held at a site convenient to all parties and if a site cannot be agreed upon, the City will designate a site.

The Contractor or designated representative, the Contractor's Superintendent, all subcontractors, engineers, inspectors, and the City's representative shall attend.

The Contractor shall keep accurate written minutes of the meetings and forward copies thereof to the Engineer/Architect and the City's representative before the next scheduled meeting.

If a trade contract, progress meetings will be conducted by the Construction Manager, who will keep minutes. All trade contractors shall attend unless excused by the Construction Manager.

ARTICLE VII. PROJECT COMPLETION

A. **Substantial Completion:** "Substantial completion" shall be that degree of completion of the Project or a defined portion of the Project, as evidenced by the Engineer/Architect's written notice of Substantial Completion, sufficient to provide the City, at its discretion, the full-time use of the Project or defined portion of the work for the purposes for which it was intended. "Substantial Completion" of an operating facility or operating component of the Project shall be that degree of completion that has provided a minimum of seven (7) continuous days of successful, trouble-free operation in a "fully automatic" manner acceptable to the City and Engineer/Architect and with all redundant systems fully operational. All equipment contained in the Project, plus all other components necessary to enable the owner to operate the facility in the manner that was intended, shall be complete on the substantial completion date.

When the Contractor considers that the Project, or where acceptable to the City, a designated portion thereof is substantially complete, the Contractor shall prepare and submit to the Engineer/Architect a list of items to be completed or corrected and request an inspection for Substantial Completion. The failure by the Contractor to include any items on such list does not alter the responsibility of the Contractor to complete all work in accordance with the Contract Documents. After inspection and/or if an operating facility, after a minimum of seven (7) continuous days of successful, trouble free operation has been achieved during startup, the Engineer/Architect may, at his sole discretion, issue a written notice of substantial completion for the purpose of establishing the starting date for specific equipment guarantees or warranties, and to establish the date that the City will assume the responsibility for the cost of operating such equipment.

Said notice shall not be considered as final acceptance of any portion of the Project or relieve the Contractor from completing the remaining work, including any remaining performance or acceptance testing, within the specified time and in full compliance with the Contract Documents. Specifically, the issuance of a written notice of Substantial Completion shall not relieve the Contractor of his obligation to promptly remedy any omissions and latent or unnoticed defects in the Project covered by the written Notice of Substantial Completion.

B. **Final Inspection:** Upon notice from the Contractor that its work is complete, the Engineer/Architect and/or other representatives of the City shall make a final inspection of the work or Project and conduct test or tests if applicable. The Engineer/Architect shall notify the Contractor of all apparent and/or visible instances where the Project fails to comply with the plans and specifications and contract documents, as well as any defects he may discover (punch list). The Contractor shall immediately make such alterations as are necessary to make the Project comply with the plans and specifications and to the satisfaction of the Engineer/Architect.

Upon completion of all such repairs in a satisfactory manner, and when the Engineer/Architect has determined that the work or Project is acceptable under the contract, including this provision and after publication of final completion and all other requirements of final payment as provided for in this agreement, then he shall issue a final certificate of payment to the City stating that the balance is due the Contractor, less such amounts as may have been withheld by the City from time to time as provided in the contract documents. In recommending to the City that it make such final payment to the Contractor, the Engineer/Architect shall also issue a certificate of final acceptance wherein he shall recommend to the City that it accept the Project and/or work as final and complete pursuant to the contract documents.

Verification, approval, inspection, final inspection, issuance of final acceptance, issuance of final certificate of payment, action or approval by the City upon the final certificate of payment or final acceptance shall not in any way relieve the Contractor of responsibility for faulty materials or workmanship.

All warranty or guarantee periods shall commence and start to run from the date of substantial completion.

C. **"As Built" Drawings:** Unless waived by the City representative, the Contractor must provide to the City a set of "as built" drawings acceptable to the City as a component part of the Project prior to final payment.

D. **Final Cleanup:** Before final completion and final acceptance, the Contractor shall remove from the City's property or rights-of-ways and from all public and private property, all tools, scaffolding, false work, temporary structures and/or utilities, including the foundations thereof (except such as the City permits in writing to remain); rubbish and waste materials resulting from its operation or caused by its employees; and shall remove all surplus materials, leaving the site clean and true to line and grade, and the Project in a safe and clean condition ready for use and operation. In addition to the above, the Contractor shall be responsible for the following special cleaning for all trades as the Project shall have been completed:

1. Cleaning of all painted, enameled, stained or baked enamel work: removal of all marks, stains, fingerprints and splatters from such surfaces.
2. Cleaning of all glass: cleaning and removing of all stickers, labels, stains and paint from all glass and the washing and polishing of the same on interior and exterior.
3. Cleaning or polishing of all hardware.
4. Cleaning all tile, floor finishing of all kinds; removal of all splatters, stains, paint, dirt, and dust, the washing and polishing of all floors as recommended by the manufacturer or required by the Engineer/Architect.
5. Cleaning of all manufactured articles, materials, fixtures, appliances and equipment; removal of all stickers, rust stains, labels (except instructional and/or safety labels) and temporary covers and cleaning and conditioning of all manufactured articles, materials, fixtures, appliances, electrical, heating and air conditioning equipment as recommended or directed by the manufacturers, unless otherwise required by the Engineer/Architect; blowing out or flushing out of all foreign matter from all dust pockets, piping, tanks, pumps, fans, motors, devices, switches, panels, fixtures, boilers, similar features; and freeing identification plates on all equipment or excess paint and the polishing thereof.

In the case of failure to comply with the above requirements for any part of the Project within the time specified by the Engineer/Architect, he may cause the work to be done and deduct the cost thereof from the contract

price on the next or succeeding application for payment, or in the event that the cost exceeds the balance due the Contractor, bill the Contractor for the excess.

E. **Notice of Completion:** The Contractor shall, immediately after the completion of the Project and acceptance by the Owner as provided for herein, give notice as required by Ala. Code §39-1-1(f) by an advertisement in some newspaper of general circulation published within the city or county wherein the Project has been done for a period of four (4) successive weeks. The advertisement shall advise interested parties to contact both the Contractor and the specific City representative. The City's representative shall be named along with his proper mailing address. In no instance shall a final payment be made upon the contract until the expiration of thirty (30) days after the completion of the notice. Proof of publication of said notice shall be made by the Contractor to the City of Tuscaloosa by affidavit of the Publisher and a printed copy of the notice published.

Provided, however, that the requirements hereinabove stated for notice and advertisement shall not apply to contractors performing contracts of less than Fifty Thousand Dollars (\$50,000.00) in amount and the governing body of the City of Tuscaloosa so as to expedite final payment, shall cause notice of final completion of such contract to be published one time in Tuscaloosa County and shall post notice of final completion on the City of Tuscaloosa's bulletin board for one (1) week and shall require the Contractor to certify under oath that all bills have been paid in full. Final settlement with such Contractor may be made at any time after the notice shall have been posted for one (1) entire week.

NOTE: When maintenance periods are included in the contract for highways, bridges or similar structures, such periods shall be considered component parts of the contract.

F. **Final Payment:** Upon completion of the Project by the Contractor and acceptance by the City's representatives of all work required of the Contractor for the Project, but not until thirty (30) days after completion of the notice, the amount due the Contractor pursuant to the Contract Documents shall be paid upon the presentation by the Contractor to the City's representative of the following:

1. A properly executed and duly certified voucher for payment, verified by architect, engineer or other City representative, including therewith evidence that all payrolls and all amounts due for labor and materials, other than claims for damages due to tort, have been fully paid and satisfied and there are no outstanding claims or demands associated with the work on the Project.
2. A release of all claims and claims of lien against the City from the Contractor and all major subcontractors (the City may waive the requirement for subcontractor releases) arising under and by virtue of the contract, on the form attached, duly executed by the Contractor and with the consent of the surety. The Contractor may specifically except claims of the Contractor from the operation of the release if specifically excepted therefrom in stated amounts and the reason therefor.
The Contractor may with the consent of the City representative, if any subcontractor refuses to furnish such a release, furnish a bond with surety satisfactory to the City representative to indemnify against such claims.
3. Proof of publication of notice of completion including affidavit of publisher and a printed copy of the notice so published, as provided by law.
4. In accordance with Ala. Code §39-2-12(c), a non-resident contractor shall satisfy the City that he or she has paid all taxes due and payable to the State, the City and all applicable political subdivisions.

G. **Acceptance of Final Payment Constitutes Release:** The acceptance by the Contractor of the final payment shall release the City, the Engineer/Architect, as representatives of the City, and their officers, employees, agents, and subconsultants from all claims and all liability to the Contractor for all things done or furnished in connection with the Project, and every act of the City and others relating to or arising out of the work except claims previously made in writing and still unsettled. No payment, however, final or otherwise, shall operate to release the

Contractor or his Sureties from obligations under this Contract and the Performance Bond, Payment Bond, and other bonds, warranties and guarantees as herein provided.

ARTICLE VIII. WARRANTY AND GUARANTEES

A. Warranty and Guarantee:

1. Warranty: The Contractor warrants to the City and the Engineer/Architect that all materials and equipment furnished under this Contract will be new unless otherwise specified and that all work, materials and equipment will be of good quality, free from fault and defects and in conformance with the contract documents. The work must be safe, substantial and durable construction in all respects. All work, materials and equipment not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. Warranties shall commence to run from the date of substantial completion.

The work furnished must be of first quality and the workmanship must be the best obtainable in the various trades. The Contractor hereby guarantees the Project and the work on the Project against defective materials or faulty workmanship for a minimum of one (1) year after final payment by the City and shall replace or repair any defective materials or equipment or faulty workmanship during the period of guarantee at no cost to the City.

2. Guarantee: If, within the designated warranty period or if not designated, within one (1) year from the date of substantial completion, any of the work, materials or equipment is found to be defective or not in accordance with the contract documents, the Contractor shall correct it promptly after receipt of written notice from the City to do so, unless the City has previously specifically given the Contractor a written acceptance of such specific condition. This obligation shall survive termination of the Contract. The City shall give such notice promptly after discovery of the condition.

3. Roofing Guarantee: If the Project involves a roof on a building or other structure, then the Contractor shall execute and provide the Roofing Guarantee in the form attached hereto. The guarantee shall be delivered to the City and Engineer/Architect prior to final payment.

4. Termite Warranty: If the Project involves termite treatment as required in Article IV, then the Contractor shall furnish to the City a written warranty certifying that the applied soil poisoning treatment will prevent the infestation of subterranean termites and that if subterranean termite activity is discovered during the warranty period, Contractor shall re-treat the soil and repair or replace any damage caused by termite infestation. The warranty shall be for a period of five (5) years from the date of treatment signed by Applicator and Contractor.

B. Correction of Defective Work During Warranty/Guarantee Period: The Contractor hereby agrees to make, at his own expense and no cost to the City, all repairs or replacements necessitated by defects in materials or workmanship, provided under the terms of this Contract, and pay for any damage to other works resulting from such defects, which become evident within 1 year after the date of substantial completion unless substantial completion is established by the Engineer/Architect only for specified items of equipment, or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents unless the City has previously given the Contractor a written acceptance of such defects. The Contractor shall promptly correct such defects upon receipt of a written notice from the City to do so. This obligation shall survive the termination of the Contract.

Unremedied defects identified for correction during the warranty period described herein before, but remaining after its expiration, shall be considered as part of the obligations of the warranty. Defects in material, workmanship, or equipment which are remedied as a result of obligations of the warranty shall subject the remedied portion of the Project to an extended warranty period of 1 year after the defect has been remedied.

Repetitive malfunction of equipment shall be cause for equipment replacement and an extension of the guarantee period for the equipment to a date 1 year following acceptable replacement.

The Contractor further assumes responsibility for a similar guarantee for all work and materials provided by subcontractors or manufacturers of packaged equipment components.

The Contractor also agrees to hold the City and the Engineer/Architect and employees harmless from liability or damages, including the Engineer/Architect's and attorneys' fees, and cost and expenses of litigation of any kind arising from damage due to said defects. The Contractor shall make all repairs and replacements promptly upon receipt of written order for same from the City. If the Contractor fails to make the repairs and replacements promptly, or in an emergency where delay would cause serious risk, or loss, or damage, the City may have the defective work corrected or the rejected work removed and replaced, and the Contractor and his Surety shall be liable for the cost thereof. The Contractor during the warranty period shall repair/replace as rapidly as possible any and all equipment, materials, etc., which are found to be defective. Should any items not be repaired/replaced within thirty (30) days from the time it is reported to the Contractor by the City, then the warranty period shall be extended on that item for a period equal to the time that the item has remained defective, incomplete, or inoperable as determined by the City. The Contractor must certify that the item has been corrected.

The City's rights under this Article shall be in addition to, and not a limitation of, any other rights and remedies available by law.

ARTICLE IX. LAWS, PERMITS, ETC.

A. **Laws and Regulations/Royalties, Patents, Copyrights and Permits and Rights-of-Way:** The Contractor shall comply with and keep itself fully informed of all laws, ordinances and regulations of federal, state, City and county in any manner effecting those engaged or employed in the Project, or the materials used in the Project, or in any way affecting the conduct of the Project, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. The Contractor shall possess all permits and licenses required by applicable law, rule or regulation for the performance of the Project. If any discrepancy or inconsistency should be discovered in this contract, or in the drawings or specifications herein referred to, in relation to any law, ordinance, regulation, order or decree, it shall forthwith report the same in writing to the Engineer/Architect. It shall at all times, itself, observe and comply with all such existing and future laws, ordinances and regulations.

The Contractor shall protect and indemnify the City, Engineer/Architect, and their respective employees, officers, subconsultants, and agents against any claim or liability arising from or based on the violation of any such laws, ordinances, or regulations. All permits, licenses, and inspection fees necessary for prosecution and completion of the Project shall be secured and paid for by the Contractor, unless otherwise specified.

The Contractor shall obtain and pay for all licenses and permits and shall pay all fees and charges for connection to outside service and the use of property required for the execution and completion of the Project.

The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and code requirements applicable in or bearing on the conduct of the Project unless in conflict with contract requirements. If the Contractor ascertains at any time that any requirements of the Contract is at variance with applicable laws, ordinances, regulations, or building code requirements, it shall promptly notify the Engineer/Architect and any necessary adjustment of the Contract will be made as herein specified under change in orders.

The Contractor shall pay all applicable federal, state and local taxes and assessments on the Project. Wherever the law of the place of building requires a special tax, consumer, use, occupation, or other tax, the Contractor shall pay such tax.

The Contractor shall pay all royalties and license fees. The Contractor shall hold and save the City and its agents and employees harmless 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 City.

To the extent that the Project has not been permitted or registered by the Engineer or City, the Contractor shall register or obtain any and all necessary National Pollutant Discharge Elimination System (NPDES) Permits required by USEPA or the Alabama Department of Environmental Management (ADEM) as well as any applicable storm water permits or registration for the construction of the improvements specified in the Contract Documents. The Contractor shall abide by all regulations and conditions relative to the permit or registration and attachments to the permit or registration, including but not limited to sampling and monitoring. The Contractor shall fulfill for the City all the requirements made upon the City by the permit(s) or registration.

The Contractor shall be fully responsible for all aspects of erosion and sediment control. The Contractor shall utilize whatever measures are necessary to prevent pollution or siltation due to his activities. As a minimum, the Contractor shall strictly comply with the erosion control methods referenced in the Alabama Soil and Water Conservation Committee "Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas," latest edition (referred to as the "Alabama Handbook").

If the Contractor has information that any process, article or item specified or delineated by the Engineer/Architect is an infringement of a patent or a copyright, it shall promptly give such information to the Engineer/Architect.

B. Alabama Department of Transportation Rights-of-Way: If any portion of the Project involves work upon State right-of-way, the Contractor agrees to provide the Alabama Department of Transportation with a bond or certified check in the amount required, made payable to the Alabama Department of Transportation, to guarantee the faithful performance of the provisions of a permit and to guarantee that the Contractor shall maintain the work in a manner suitable to the Alabama Department of Transportation for a period of one (1) year. The Alabama Department of Transportation Bond Form must be used. At the end of one (1) year from the completion of this work, the Department of Transportation will return the certified check or bond to the applicant provided all provisions of this permit have been complied with. Otherwise, the Department of Transportation shall apply the certified check or bond to the cost of repairing the rights-of-way with State forces.

C. Tuscaloosa County Right-of-Way: If any portion of the Project involves work upon County right-of-way, the Contractor agrees to execute an application and file with Tuscaloosa County a bond or certified check in the amount required, made payable to Tuscaloosa County to guarantee the faithful performance of this provision of this work suitable to the County for a period of one (1) year. At the end of one year from the completion of this work, the County will return the certified check or bond to the applicant provided all provisions of this permit have been complied with. Otherwise, the County shall apply the certified check or bond on the cost of repairing the right-of-way with the County forces.

D. Storm Water Permit and Monitoring:

1. To the extent that the Project has not been permitted or registered by the Engineer or the City, and the Project is defined as an NPDES Construction Site per ADEM Admin. Code Chapter 335-6-12 (the Rule), the Contractor shall submit to the Alabama Department of Environmental Management (ADEM) a Notice of Registration (NOR) under the Rule for Storm Water Discharges during construction activities.
The Contractor shall strictly adhere to all requirements of the NOR and the rule regardless of which party has obtained coverage.
2. Compliance with all provisions of ADEM Admin. Code Chapter 335-6-12 and this registration is required, including but not limited to, the preparation and implementation of a Construction Best Management Practices Plan (CBMPP) and any other plans as may be required, the regular

maintenance of the Best Management Practices (BMPs) to the maximum extent practicable and the submittal of required reports. As required by the Rule, the Contractor shall retain a Qualified Credentialed Professional (QCP) to prepare the CBMPP and to certify that it was prepared in accordance with the requirements of the "Alabama Handbook" and the Rule.

3. This registration neither precludes nor negates an operator's responsibility or liability to apply for, obtain, or comply with other ADEM, federal, state, or local government permits, certifications, licenses, or other approvals.
4. The Contractor, unless application for registration has already been made, will be furnished a Storm Water NOR application package when the contract is awarded. The Storm Water NOR application package will include the following:
 - a. Typical transmittal letter to ADEM.
 - b. NOR applications filled out with Project information.
 - c. Project area map.
 - d. Other data as required by the NOR for Tier 1 waters if applicable.
5. The Contractor will complete or furnish the following items and submit to ADEM within five working days of the receipt of the NOR application provided by the Owner.
 - a. Information as outlined in the typical letter of transmittal, to the address indicated on the letter of transmittal, by registered mail or hand deliver.
 - b. The "Alabama Department of Environmental Management (ADEM), Field Operations Division Storm Water Program" Notice of Registration (NOR); NOR shall be signed by a responsible official who is the operator, owner, the sole proprietor of a sole proprietorship, a general/controlling member or partner, or an executive officer of at least the level of vice-president for a corporation. Additionally, the QCP is required to sign the CBMPP certification part of the NOR.
 - c. Determine applicable fee per ADEM Fee Schedule F and make check payable to: Alabama Department of Environmental Management for the NOR and submit to the Alabama Department of Environmental Management with the NOR application.
6. Application for the Storm Water Permit shall be made by the Contractor no later than five working days after receipt of application provided by Owner. The Contractor shall not commence any construction activities until ADEM has issued the authorization number for the Project.
7.
 - a. Payment will be made to the Contractor for obtaining the storm water NOR as specified herein for the lump sum amount as shown in the bid schedule. If there is no line item for registration, obtaining the NOR shall be considered a subsidiary obligation of mobilization.
 - b. Individual erosion and sediment control items shall be paid for at the unit prices as shown in the bid schedule. Routine inspections will be performed by the Owner's representative or Engineer to verify compliance with the CBMPP and the Rule shall be the Contractor's responsibility and shall be incidental to the storm water registration.
 - c. If no individual erosion and sediment control items are included in the bid schedule the cost of these items shall be incidental to the lump sum amount as shown in the bid schedule for Storm Water Monitoring and Temporary Erosion and Sediment Control and payment shall be made pro rata as the Project progresses.

E. The Contractor shall perform all work in compliance with and as required by any State, Federal or Local registration, permit or license, the terms and conditions of which are adopted herein by reference. The Contractor agrees to indemnify and hold harmless the City, Engineer, and their respective officers, agents and employees from any fines, penalties, damages, claims, liability or judgment arising out of or in any manner associated with the Contractor's failure to perform work on the Project in strict accordance with all storm water registration, permit or license requirements.

ARTICLE X. MISCELLANEOUS CLAUSES

A. Notice and Service Thereof:

1. All notices, demands, requests, change orders, instructions, approvals and claims shall be in writing. Unless expressly otherwise provided elsewhere in this agreement, any election, notice or other communication required or permitted to be given under this agreement shall be in writing and deemed to have been duly given if provided in accordance with the provisions hereof.
2. Any notice to or demand upon the Contractor shall be in writing and shall be sufficiently given if addressed to the Contractor at the address stated herein and deposited in the United States mail in a sealed envelope with sufficient postage prepaid or delivered with charges prepaid to any telegraph company for transmission to the Contractor at such address. It shall also be sufficient if such notice or demand be served upon the Contractor personally or its local representative in charge of the Project or delivered at his local office. The Contractor shall, from time to time, designate to the City in writing any change of address to which such notice or demand shall be sent.
3. Any notice to or demand upon the City shall be in writing and shall be sufficiently given if delivered to the office of the City's representative or if addressed to the City representative and deposited in the United States mail in a sealed envelope with sufficient postage prepaid or delivered with charges prepaid to any telegraph company for transmission to such representative of the City.

B. City Representative: The City's representative on this Project is hereby designated as Craig Williams - BKI and whose address is 600 Lurleen Wallace Blvd., Suite 180 Tuscaloosa, AL. All references to Engineer or Architect shall be to the City representative if no Engineer or Architect is involved in the Project.

With a copy to: Glenda Webb, Esquire, City Attorney, Office of the City Attorney
City of Tuscaloosa, Post Office Box 2089, Tuscaloosa, Alabama 35403-2089
Telephone: (205) 248-5140, Facsimile: (205) 349-0328

C. Contractor Representative: The Contractor's representative on this Project is hereby designated as Patrick Shay and whose address is P.O. Box 20225 Tuscaloosa, AL 35402

D. Capacity: Each party to this agreement represents and warrants to the other as follows:

1. That it is an individual of the age of majority or otherwise a legal entity duly organized and in good standing pursuant to all applicable laws, rules and regulations.
2. That each has full power and capacity to enter into this agreement, to perform and to conclude the same including the capacity, to the extent applicable, to grant, convey and/or transfer; areas, assets, facilities, properties, (both real and personal), permits, consents and authorizations and/or the full power and right to acquire and accept the same.
3. That to the extent required, each party has obtained the necessary approval of its governing body or board and a resolution or other binding act has been duly and properly enacted by such governing body or board authorizing this agreement and said approval has been reduced to writing and certified or attested by the appropriate official of the party.
4. That each party has duly authorized and empowered a representative to execute this agreement on their respective behalf and the execution of this agreement by such representative fully and completely binds the party to the terms and conditions hereof.
5. That absent fraud, the execution of this agreement by a representative of the party shall constitute a certification that all such authorizations for execution exist and have been performed and the

liability company or joint venture, the execution of this agreement by any member thereof shall bind the party and to the extent that the execution of agreement is limited to a manager, managing partner or specific member then the person so executing this agreement is duly authorized to act in such capacity for the party.

6. That each party represents and warrants to the other that there is no litigation, claim or administrative action threatened or pending or other proceedings to its knowledge against it which would have an adverse impact upon this transaction or upon either's ability to conclude the transaction or perform pursuant to the terms and conditions of this agreement.
7. That each party has obtained any and all required permits, approvals and/or authorizations from third parties to enable it to fully perform pursuant to this agreement.
8. Under the provisions of the Constitution and laws of the State of Alabama, each party has the power to consummate the transactions contemplated by this agreement;
9. Each party represents and warrants that the execution and delivery of this agreement and the consummation of the transactions contemplated herein will not conflict with, be in violation of, or constitute (upon notice or lapse of time, or both) a default under the laws of the State of Alabama, any resolution, agreement, or other contract agreement, or instrument to which a party is subject, or any resolution, order, rule, regulation, writ, injunction, decree or judgment of any governmental authority or court having jurisdiction over the party.
10. This agreement constitutes the legal, valid and binding obligation of each party and is enforceable against each party in accordance with its terms, except in so far as the enforceability thereof may be limited by:
 - (a) Bankruptcy, insolvency or other similar laws affecting the enforcement of creditors' rights
 - (b) General principles of equity, regardless of whether such enforceability is considered as a proceeding at equity or at law.
11. Neither party will enter into any agreement to do anything prohibited in this agreement or enter into any agreement or take any action which would in any way impair the ability of the other party to faithfully and fully perform its obligations hereunder.
12. Under the provisions of the Constitution and laws of the State of Alabama, each party has the power to consummate the transactions contemplated by this agreement.

E. Ownership of Contract Documents: The Contract Documents, and copies of parts thereof, are furnished and owned either by the City or the Engineer/Architect. All portions of the Contract Documents, and copies of parts thereof, are the instruments of service for this Project. They are not to be used on other work and are to be returned to the City on request at the completion of the Project. Any reuse of these materials without specific written verification or adaptation by the City will be at the risk of the user and without liability or legal expense to the City or Engineer/Architect. Such user shall hold the City, its officers, agents and employees harmless from any and all damages, including reasonable attorneys' fees, from any and all claims arising from any such reuse. Any such verification and adoption shall entitle the City to further compensation at rates to be agreed upon by the user and the City.

F. No Waiver of Rights: Neither the inspection by the City or the Engineer/Architect or any of their officers, employees, agents, or subconsultants, nor any order by the City for payment of money, nor any payment for, or acceptance of, the whole or any part of the Project by the City or Engineer/Architect, nor any extension of time or change order, nor any possession taken by the City or its employees, or non enforcement of any provision of this agreement by either party shall operate as a waiver of any provision of this agreement, or any power herein reserved to the City, or any right to damages, nor shall any waiver of any breach in this agreement be held to be a waiver of any other or subsequent breach. Acceptance or final payment shall not be final and conclusive with regards to latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the City's rights under any warranty.

G. Subletting or Assigning of Contract:

1. Limitations: The Contractor shall not sublet, assign, transfer, convey, sell or otherwise dispose of any portion of the agreement, his obligations, right, or interest therein, or its power to execute such agreement, to any person, firm or corporation without written consent of the City and such written consent shall not be construed to relieve the Contractor of any duty or responsibility for the fulfillment of the agreement. A sale, conveyance or transfer of 50% or more of the stock or ownership of the Contractor shall be considered an assignment. Provided; however, in no event shall any portion of this agreement be assigned to an unsuccessful bidder whose bid was rejected because he or she was not a responsible or responsive bidder. Use of subcontracts up to a combined (total) value of 50 percent of the value of all work will not be construed as an assignment. Unless otherwise stipulated in the proposal or general conditions, the Contractor shall perform, with its own organization, work with the value not less than fifty (50) percent of the value of all work embraced in the contract.
2. Subcontractor's Status: A subcontractor shall be recognized only in the capacity of an employee or agent of the Contractor.

H. Third Party Beneficiaries: It is the intent of the parties hereto that there shall be no third party beneficiaries to this agreement.

I. Final Integration: This Agreement constitutes the entire agreement of the parties, as a complete and final integration thereof with respect to its subject matter. All written or oral understandings and agreements heretofore had between and among the parties are merged into this Agreement, which alone fully and completely expresses their understandings. No representation, warranty, or covenant made by any party which is not contained in this Agreement or expressly referred to herein has been relied on by any party in entering into this Agreement.

J. Force Majeure: Neither party to this Agreement shall hold the other party responsible for damages or delay in performance caused by acts of God, strikes, lockouts or other circumstances beyond the reasonable control of the other or the other party's employees, agents or contractors.

K. Amendment in Writing: This Agreement may not be amended, modified, altered, changed, terminated, or waived in any respect whatsoever, except by a further agreement in writing, properly executed by all of the parties.

L. Binding Effect: This agreement shall bind the parties and their respective personal representatives, heirs, next of kin, legatees, distributees, successors, and assigns.

M. Captions: The captions of this Agreement are for convenience and reference only, are not a part of this Agreement, and in no way define, describe, extend, or limit the scope or intent of this Agreement.

N. Construction: This Agreement shall be construed in its entirety according to its plain meaning and shall not be construed against the party who provided or drafted it.

O. Mandatory and Permissive: "Shall", "will", and "agrees" are mandatory; "may" is permissive.

P. Governing Laws: The laws of the State of Alabama shall govern the validity of this Agreement, the construction of its terms, the interpretation of the rights, the duties of the parties, the enforcement of its terms, and all other matters relating to this Agreement.

Q. Liability of the City or City Officials. Notwithstanding any provision hereof to the contrary, the parties agree and acknowledge that the liability and obligations of the City, City officials or City employees as set forth herein

Q. Liability of the City or City Officials. Notwithstanding any provision hereof to the contrary, the parties agree and acknowledge that the liability and obligations of the City, City officials or City employees as set forth herein are subject to the limitations imposed on municipalities by the Constitution and laws of the State of Alabama. No present or future official, officer or employee of the City shall ever be personally liable for the performance of any obligations hereunder.

R. Non Discrimination: The Contractor agrees that in performing the work and services as required herein under this agreement, not to discriminate against any person on the basis of race color, religion, sex, age or disability. (The Contractor shall fully comply with the Americans with Disabilities Act), the Fair Labor Standards Act and all other applicable laws and regulations).

S. Fines and Penalties: The Contractor shall be solely liable for any and all fines or penalties which may be levied by any governmental authority against the Owner and/or Contractor which are related to the Contractor's operations. The Owner shall deduct the amount of the levied fine or penalty from the Contract amount.

T. Agreement Date/Counterparts: The date of this Agreement is intended as and for a date for the convenient identification of this Agreement and is not intended to indicate that this Agreement was necessarily executed and delivered on said date. This instrument may be executed in any number of counterparts, each of which so executed shall be deemed an original, but all such counterparts shall together constitute but one and the same instrument.

U. Use of Words and Phrases. The following words and phrases, where used in this document, shall be given the following and respective interpretations: "Herein," "hereby," "hereunder," "hereof," and other equivalent words refer to this document as an entirety and not solely to the particular portion hereof in which any such word is used.

The definitions set forth in any portion of this Agreement unless the text or context indicates differently shall be deemed applicable whether the words defined are herein used in the singular or the plural. Wherever used herein any pronoun or pronouns shall be deemed to include both singular and plural and to cover all genders.

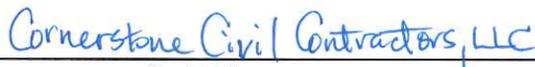
V. Severability. Each provision of this agreement shall be considered to be severable and, if for any reason, any such provision or any part thereof, is determined to be invalid and contrary to any existing or future applicable law, such invalidity shall not impair the operation of or affect those portions of this agreement that are valid, but this agreement shall be construed and enforced in all respects as if the invalid or unenforceable provision or part thereof had been omitted.

IN TESTIMONY WHEREOF, said Contractor has hereto affixed its signature and said City of Tuscaloosa has caused these presents to be executed by Walter Maddox, Mayor of the City of Tuscaloosa, and attested by the City Clerk, on the day and year first above written, in four counterparts, each of which shall, without proof or accounting for the other, be accepted as an original.

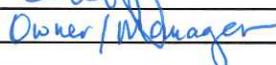


ATTEST

PARTY OF THE FIRST PART



Contractor

BY: 
ITS: 

ATTEST:

CITY OF TUSCALOOSA, A MUNICIPAL CORPORATION/PARTY OF THE SECOND PART/CITY, OWNER

Debbi K. Clement
Acting City Clerk

Walter Maddox
Walter Maddox, Mayor

STATE OF ALABAMA)
COUNTY OF TUSCALOOSA)

I, Ian S. Robbins, a Notary Public in and for said State at Large, hereby certify that Edmund H. Colgrove, Jr., who is named as Owner/Manager, is signed to the foregoing document, and,

- Who is known to me, or
- Whose identity I proved on the basis of _____, or
- Whose identity I proved on the oath/affirmation of _____, a creditable witness to the signer of the above document

and that being informed of the contents of the document, he/she, as such officer and with full authority, executed the same voluntarily on the day the same bears date.

Given under my hand and official seal this the 15th day of January, 20 16.

I. S. Robbins
Notary Public.

My Commission Expires: 10/29/17

STATE OF ALABAMA)
COUNTY OF TUSCALOOSA)

Before me, the undersigned, a Notary Public in and for the State of Alabama, appeared Walter Maddox, Mayor of the City of Tuscaloosa and acknowledged that his signature is affixed hereto in his capacity as Mayor of the City of Tuscaloosa.

Done this the 5th day of February, 20 16.

Vickie Hilliland
Notary Public in and for the
State of Alabama at Large

My Commission Expires: 2/3/19

[END OF CONTRACT AGREEMENT OFFICE OF THE CITY ATTORNEY]

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS
SECTION SIX
PERFORMANCE BONDS
(2015)

STATE OF ALABAMA)
TUSCALOOSA, COUNTY)

KNOWN ALL MEN BY THESE PRESENTS, that we, Cornerstone Civil Contractors, LLC as principal and Travelers Casualty and Surety Company of America (hereinafter called the "Surety"), as surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the City of Tuscaloosa, Alabama, (hereinafter called the "City") a municipal corporation existing under and by virtue of the laws of the State of Alabama, for the use and benefit of those entitled thereto, in the penal sum of \$1,565,440.50 for the payment of which well and truly be made in lawful money of the United States, we do hereby bind ourselves, our successors and assigns and personal representatives, jointly and severally, firmly by the presents.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS, the City has entered into a certain written contract with said Contractor for the Prince Avenue Improvements in accordance with contract documents therefore on file in the Office of the Burk-Kleinpeter, Inc. at the price of, to-wit:

One Million Five Hundred Sixty-five Thousand Four Hundred Forty And 50/100THS (\$ 1,565,440.50) as more fully appears in said written contract bearing the date of February 5, 2016, which contract is hereby referred to and made a part hereof to the same extent as if set out herein in full.

NOW, THEREFORE, if the Contractor shall fully and faithfully perform all the undertakings and obligations under the said agreement or contract herein before referred to and shall fully indemnify and save harmless the said City from all costs and damages whatsoever which it may suffer by reason of any failure on the part of said Contractor so to do, and shall fully reimburse and repay the said City any and all outlay and expense which it may incur in making good any such default, and shall guarantee all workmanship against defects for a period of one year, this obligation or bond shall be null and void, otherwise it shall remain in full force and effect.

And, for value received it is hereby stipulated and agreed that no change, extension of time, alteration or addition to the terms of said agreement or contract or in the work to be performed thereunder or the specifications accompanying the same shall in any wise affect the obligations of the principal or of the surety under this bond, and notice is hereby waived of any such change, extension of time, alternative of or addition to the terms of the agreement or contract or to the work or to the specifications.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers on the 5th day of February, 2016.

Cornerstone Civil Contractors, LLC
Principal
By [Signature] Owner/Manager
Title

Travelers Casualty and Surety Company of America
Surety
By [Signature]

Cheryl Camak, Attorney-in-Fact
Title

ATTEST:
[Signature]
Julie Tubbs



POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No. 229634

Certificate No. 006206205

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Timothy L. Donahue, T. Gary Fitts, J. David Fitts, Charles F. Horton Jr., R. Forrest Fitts, Cheryl Camak, and Julie Tubbs

of the City of Tuscaloosa, State of Alabama, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

The authority granted hereunder to sign, execute, seal and acknowledge any individual bond, recognizance, conditional undertaking, and other writing obligatory in the nature thereof is limited to the sum of TEN MILLION (\$10,000,000.00) DOLLARS per bond.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 7th day of July, 2015.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

By: [Signature]
Robert L. Raney, Senior Vice President

On this the 7th day of July, 2015, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.
My Commission expires the 30th day of June, 2016.



[Signature]
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this _____ day of _____, 20 ____.

WARNING: THIS POWER OF ATTORNEY IS INVALID WITHOUT THE RED BORDER

Kevin E. Hughes
Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at www.travelersbond.com. Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

SECTION SEVEN
LABOR AND MATERIAL BOND
(2015)

KNOWN ALL MEN BY THESE PRESENTS, that we, Cornerstone Civil Contractors, LLC
(hereinafter called the "Contractor") of 1268 James Road, Gallion, Alabama 36742
as principal and Travelers Casualty and Surety Company of America (hereinafter called the
"Surety"), as surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the City of
Tuscaloosa, Alabama, (hereinafter called the "City"), a municipal corporation, existing under and by virtue of the
Laws of the State of Alabama, for the use and benefit of those entitled thereto, in the penal sum of _____
One Million Five Hundred Sixty-five Thousand Four Hundred Forty And 50/100THS
(\$ \$1,565,440.50) for the payment of which well and truly to be made in lawful money of the
United States, we do hereby bind ourselves, or successors, assigns and personal representatives, jointly and
severally, firmly by these presents.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS: the City has entered into a certain written contract with said Contractor for the
Prince Avenue Improvements, in accordance with contract documents therefore on
file in the Office of the Burk-Kleinpeter, Inc. at the price of, to-wit:
One Million Five Hundred Sixty-five Thousand Four Hundred Forty And 50/100THS (\$ \$1,565,440.50)
as more fully appears in said written contract bearing date of February 5, 2016, which contract is
hereby referred to and made a part hereof to the same extent as if set out herein in full.

NOW, THEREFORE, if said Principal and all subcontractors to whom any portion of the work provided for in
said contract is sublet and all assignees of said Principal and of such subcontractors shall promptly make payment to
all persons supplying him or them with labor, foodstuffs, or supplies for or in the prosecution of the work provided for
in such contract, or in any amendment or extension of or addition to said contract, and for the payment of
reasonable attorney's fees, incurred by the claimant or claimants in suits on said bond, then the above obligation
shall be void; otherwise, it shall remain in full force and effect.

PROVIDED, however, that this bond is subject to the following conditions and limitations:

(a) Any person, firm or corporation that has furnished labor, foodstuffs, or supplies for or in the
prosecution of the work provided for in said contract, payment for which has not been made, shall have a direct right
of action in his or their name or names against the principal and surety on this bond, which right of action shall be
asserted in a proceeding, instituted in the county in which the work provided for in said contract is to be performed
and in any county in which said Principal or Surety does business. Such right of action shall be asserted in a
proceeding instituted in the name of the claimant or claimants for his or their use and benefit against said Principal
and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action
such claim or claims shall be adjudicated and judgment rendered thereon.

(b) In addition to any other legal mode of service, service of summons and other process in suits on
this bond brought in Tuscaloosa County may be had on the Principal or the Surety in accordance with Title 27,
Chapter 3, Section 24 of the Ala. Code (1975) by serving a copy of the summons and complaint or other pleading or
process, with the Commissioner of Insurance of the State of Alabama or his/ her designee and the Principal and
Surety agree to be bound by such mode of service above described and consents that such service shall be the
same as personal service on the Principal or Surety.

(c) The Surety shall not be liable hereunder for any damages or compensation recoverable under any workmen's compensation or employer's liability statute.

(d) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said contract.

(e) This bond is given pursuant to the terms of Title 39, Chapter 1, Section 1 of the Ala. Code (1975), and all the provisions of law with reference to this character of bond as set forth in said section or as may hereinafter be enacted are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers on the day of February 5, 2016.

Cornerstone Civil Contractors, LLC

Principal

By: _____

Owner/Manager

Title

Travelers Casualty and Surety Company of America

Surety

By: _____

Cheryl Camak

Cheryl Camak, Attorney-in-Fact

Title

ATTEST:

Julie Tubbs

Julie Tubbs

POWER OF ATTORNEY



Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No. 229634

Certificate No. 006206209

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Timothy L. Donahue, T. Gary Fitts, J. David Fitts, Charles F. Horton Jr., R. Forrest Fitts, Cheryl Camak, and Julie Tubbs

of the City of Tuscaloosa, State of Alabama, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

The authority granted hereunder to sign, execute, seal and acknowledge any individual bond, recognizance, conditional undertaking, and other writing obligatory in the nature thereof is limited to the sum of TEN MILLION (\$10,000,000.00) DOLLARS per bond.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 7th day of July, 2015.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

By: [Signature]
Robert L. Raney, Senior Vice President

On this the 7th day of July, 2015, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.
My Commission expires the 30th day of June, 2016.



[Signature]
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this _____ day of _____, 20 ____.

WARNING: THIS POWER OF ATTORNEY IS INVALID WITHOUT THE RED BORDER

Kevin E. Hughes
Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at www.travelersbond.com. Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

CONTRACTOR'S RELEASE OF LIENS AND CLAIMS
Project No. _____

THIS Contractor's Release of Liens and Claims is made in accordance with that certain contract between the CITY OF TUSCALOOSA, ALABAMA, a Municipal Corporation, (hereinafter the "City") and _____ (hereinafter the "Contractor" or undersigned), for a project known as _____ in regard to which the undersigned warrants and certifies to the City as follows:

1. That there are no amounts owed by the undersigned or any tier of subcontractor or supplier of the undersigned which could become the basis for a lien or suit against the properties of the Contractor or the property of the City or any funds held by or in the possession of the City in regard to the Project.
2. That the undersigned has satisfied all claims and indebtedness of every nature in any way connected with the work, including (but not limited to) all payrolls, amounts due to subcontractors, accounts for labor performed and materials furnished, incidental services, liens and judgments.
3. In consideration of the receipt by the undersigned from the City of final payment under the above mentioned contract, the undersigned hereby waives and relinquishes all liens and claims of lien which the undersigned may have against the aforesaid property or funds; and further, undersigned also hereby remises, releases and forever discharges the City, its officers, agents and employees, of any and all claims, demands and causes of action whatsoever which the undersigned has, might have or could have against the City by reason of or arising out of the above-mentioned contract. The undersigned further agrees to indemnify and hold the City, its officers, agents and employees harmless against any and all claims or demands from subcontractors or suppliers arising out of the aforementioned contract.

IN WITNESS WHEREOF, the undersigned has duly executed this release this the _____ day of _____, 20_____.

CONTRACTOR:

BY: _____
TITLE: _____

I, _____, after being duly sworn, depose and say as follows: That I am the _____ of the _____ Corporation and hereby certify that I am duly authorized to execute this Contractor's Release of Liens and Claims.

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
Sworn to and subscribed before me on this
the _____ day of _____, 20_____.

Notary Public

CONSENT OF SURETY:

SURETY
BY: _____
ATTORNEY-IN-FACT FOR SURETY

CITY OF TUSCALOOSA PUBLIC WORKS

ROOFING GUARANTEE

Project No. _____

Name of Project _____

Location _____

Owner _____ City of Tuscaloosa

General Contractor _____

Address _____

Date of Acceptance _____ Date of Expiration _____

1. The General Contractor does hereby certify to the City of Tuscaloosa that the roofing work included in this contract was installed in strict accordance with all requirements of the plans and specifications.

2. The General Contractor does hereby guarantee the roofing and associated work including all flashing, both composition and metal, against leaks due to faulty workmanship for a period of five (5) years and against leaks due to faulty or defective materials for twenty (20) years, starting on the date of acceptance of the Project by the City.

3. Subject to the terms and conditions listed below, the General Contractor guarantees that during the Guarantee Period he will at his own cost and expense, make or cause to be made such repairs to, or replacements of said work, as are necessary to correct faulty and defective work and materials as are necessary to maintain said work in watertight conditions, and further, to respond on or within three (3) calendar days upon proper notification of leaks or defects by the City or Architect.

A. Specifically excluded from this Guarantee are damages to the work, other parts of the building and building contents caused by: Lightning, windstorm, hail storm and other unusual phenomena of elements; and, Fire. When the work has been damaged by any of the foregoing causes, the Guarantee shall be null and void until such damage has been repaired by the General Contractor, and until the cost and expense thereof has been paid by the City or by the responsible party so designated.

B. During the Guarantee Period, if the City allows alteration of the work by anyone other than the General Contractor, including cutting, patching and maintenance in connection with penetrations, and positioning of anything on the roof, this Guarantee shall become null and void upon the date of said alterations. If the City engages the General Contractor to perform said alterations, the Guarantee shall not become null and void, unless the General Contractor, prior to proceeding with said work, shall have notified the City in writing, showing reasonable cause for claim that said alterations would likely damage or deteriorate the work, thereby reasonably justifying a termination of this Guarantee.

C. Future building additions will not void this guarantee, except for that portion of the future addition that might affect the work under this contract at the point of connection of the roof areas, and any damage caused by such addition. If this contract is for roofing of an addition to an existing building, then this guarantee covers the work involved at the point of connection with the existing roof.

D. During the Guarantee Period, if the original use of the roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray cooled surface, flooded basin, or other use of service more severe than originally specified, this Guarantee shall become null and void upon the date of said change.

E. The City shall promptly notify the General Contractor of observed, known or suspected leaks, defects or deterioration, and shall afford reasonable opportunity for the General Contractor to inspect the work, and to examine the evidence of such leaks, defects or deterioration.

IN WITNESS THEREOF, this instrument has been duly executed this the ___ day of _____, 20__.

General Contractor's Authorized Signature
NAME AND TITLE _____

CITY OF TUSCALOOSA
ASBESTOS AFFIDAVIT
Project No. _____

DATE: _____

BUILDING OWNER: _____

PROJECT: _____

TO WHOM IT MAY CONCERN:

The undersigned certifies that to the best of his knowledge, no products containing asbestos have been included in the construction of the captioned Project. Special care was exercised to avoid asbestos-containing products, including reviewing product data sheets, reviewing product labels, and visually verifying products in the field. Special care to avoid asbestos has been used in the selection, purchase, and installation of products, including, but not limited to, the following: concrete, batt insulation, roof insulation, building felts, mastics, waterproofing products, adhesives, resilient flooring products, ceiling tiles, interior coatings, exterior coatings, roofing, pipe insulation, duct insulation, and pre-assembled items of equipment.

Respectfully submitted,

Signature

Typed Name

Title

Firm Name

Address

Sworn to and subscribed before me on this the _____
day of _____, 20____.

Notary Public.
My Commission Expires:

County, State



CERTIFICATE OF LIABILITY INSURANCE

CORNE-9 OP ID: AA

DATE (MMDDYYYY)

02/03/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Fitts Agency, Inc. P O Box 20007 Tuscaloosa, AL 35402 Charles F. Horton, Jr., CIC		CONTACT NAME: Jackie Waldrop, CISR PHONE (A/C, No, Ext): 205-342-3549 FAX (A/C, No): 205-342-3467 E-MAIL ADDRESS: jwaldrop@fittsagency.com	
		INSURER(S) AFFORDING COVERAGE	
		INSURER A: Penn National Insurance	NAIC # 32441
		INSURER B:	
		INSURER C:	
		INSURER D:	
		INSURER E:	
		INSURER F:	
INSURED Cornerstone Civil Contractors, LLC Edmund Colgrove 1268 James Rd. Gallion, AL 36742			

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

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

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY			CL90660245	12/12/2015	12/12/2016	EACH OCCURRENCE \$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 Emp Ben. \$ 1,000,000
A	AUTOMOBILE LIABILITY			AU90660245	12/12/2015	12/12/2016	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS						BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (PER ACCIDENT) \$ \$
A	UMBRELLA LIAB			UL90660245	12/12/2015	12/12/2016	EACH OCCURRENCE \$ 5,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000 <input type="checkbox"/> CLAIMS-MADE						AGGREGATE \$ 5,000,000 \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N/A				<input type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	Leased or Rented			CL90660245	12/12/2015	12/12/2016	Limit 150,000
A	Installation Filtr			CL90660245	12/12/2015	12/12/2016	Limit 50,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Project: Prince Avenue Improvements

See attached holder notes

CERTIFICATE HOLDER		CANCELLATION
CITYT-6 City of Tuscaloosa P O Box 2089 Tuscaloosa, AL 35401		SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE

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NOTEPAD:HOLDER CODE CITYT-6
INSURED'S NAME Cornerstone Civil Contractors,CORNE-9
OP ID: AAPAGE 2
Date 02/03/2016

City of Tuscaloosa, its officers, agents and employees are listed as an additional insured in regards to General Liability when required by a written contract. Waiver of Subrogation applies in favor of City of Tuscaloosa, its officers, agents and employees in regards to General Liability when required by a written contract.
30 Days Notice of Cancellation is provided unless in the event of non-payment then only 10 days will be provided.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1/7/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER MRM, LLC. PO Box 43769 Birmingham, AL 35243 www.mrm-llc.com	CONTACT NAME: Debbie Grimm PHONE (A/C, No, Ext): 877-402-5246 E-MAIL ADDRESS: dgrim@mrm-llc.com	FAX (A/C, No): 205-824-9807	
	INSURER(S) AFFORDING COVERAGE		NAIC #
INSURED Cornerstone Civil Contractors, LLC 1268 James Raod Gallion AL 36742	INSURER A: Ala Branch of AGC of Amer Inc SIF #0100R A-VI		N/A
	INSURER B: Midwest Employers Casualty Company		23612
	INSURER C:		
	INSURER D:		
	INSURER E:		
	INSURER F:		

COVERAGES

CERTIFICATE NUMBER: 28041218

REVISION NUMBER:

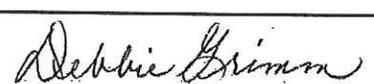
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$	
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$	
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED \$ RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$	
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory In NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	WA136-2016-AL	1/1/2016	1/1/2017	<input checked="" type="checkbox"/> PER STATUTE	<input type="checkbox"/> OTH-ER
B				EWVC009234	1/1/2016	1/1/2017	E.L. EACH ACCIDENT	\$ 1,000,000
						E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000	
							E.L. DISEASE - POLICY LIMIT	\$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Regarding effective and expiration, both days are at 12:01 Standard Time at the insured's address. Coverage under this program is limited to the Alabama Workers Compensation Act. Assoc. General Contractors SIF #0100R is rated by A.M. Best & their rating is A- VI. Midwest Employers Casualty Company is rated by A.M. Best and their rating is A+ XV.
 Project: Prince Avenue Improvements

CERTIFICATE HOLDER**CANCELLATION**

City of Tuscaloosa PO Box 2089 Tuscaloosa AL 35401	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE Debbie Grimm 

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ACORD 25 (2014/01)

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PROJECT NAME _____

PROJECT NO. _____

CONTRACTOR/INSURED _____

STATE OF ALABAMA)
)
TUSCALOOSA COUNTY)

AGENT'S VERIFICATION OF CONTRACTOR'S INSURANCE

This is to certify to the City of Tuscaloosa, Alabama, a Municipal Corporation, that the Contractor in the above referenced Project does possess a policy or policies of insurance reflected on the Certificate of Insurance issued for the Project by the undersigned agency of which I am an authorized representative. I have read the contract document as it relates to insurance requirements and said Contractor's insurance is effective as of the dates stated in the certificate and meets or exceeds all ratings, limits, and amounts as required by the same.

This the _____ day of _____, 20_____.

AGENCY: _____

BY: _____

ITS: _____

STATE OF ALABAMA)
TUSCALOOSA COUNTY)

NOTICE OF CONDITIONAL BID AWARD
CITY OF TUSCALOOSA, ALABAMA

VIA FACSIMILE:

TO: Cornerstone Civil Contractors, LLC
1268 James Road
Gallion, AL 36742

Project Name: Prince Avenue Improvements
Project Number: A15-0257
Date: 12/16/15

You are here notified pursuant to Ala. Code §39-2-6 (1975), that the City of Tuscaloosa has made a conditional bid award to you in regard to the above-referenced Project based upon your proposal of \$ 1,565,440.50.

The above bid award Does Does Not include the following additive and/or deductive alternates as requested in the bid documents:

Additive Alternates	Deductive Alternates
1. <u>Sanitary Sewer Improvements (\$ 50,248.25)</u>	1. _____ (\$ _____)
2. <u>Sanitary Sewer Improvements (\$ 132,899.00)</u>	2. _____ (\$ _____)
3. _____ (\$ _____)	3. _____ (\$ _____)

Pursuant to Ala. Code §39-2-8 (1975), you are required to enter into a written contract on the form included in the proposal, plans and specifications, furnish a performance bond and a payment bond executed by a surety company authorized and qualified to make such bonds in the State of Alabama, in the amount required in the bid documents, and present evidence of insurance also as required by the bid documents, within the period of time stated therein or, if no period of time is stated, within thirty (30) days after the prescribed forms have been presented to you for signature.

Pursuant to Ala. Code §39-2-11 (1975), if you fail to execute the contract and furnish acceptable contract securities and evidence of insurance as required by the bid documents within the period of time as set forth, the awarding authority may retain all or a part of the proposal guarantee and may award the contract to the second lowest responsible responsive bidder. Under such circumstances, the owner will be entitled to consider all rights arising out of its acceptance of your proposal as abandoned.

DONE this 16th day of December, 20 15.

CITY OF TUSCALOOSA, ALABAMA
A MUNICIPAL CORPORATION
Post Office Box 2089
Tuscaloosa, Alabama 35403-2089

By: [Signature]
City's Representative/Engineer/Architect

ACCEPTANCE OF NOTICE

I, on behalf of the above named contractor, do hereby accept receipt of the above notice of conditional bid award and acknowledge the contents of the same on this the 16th day of December, 20 15.

CONTRACTOR:
[Signature]
By its: _____

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

NOTICE TO PROCEED WITH PUBLIC WORKS PROJECT
CITY OF TUSCALOOSA, ALABAMA

Project Name: Prince Avenue Improvements
Project No.: A15-0257
Date: 2/15/16

TO: Cornerstone Civil Contractors, LLC
1268 James Road
Gallion, AL 36742

Pursuant to Ala. Code §39-2-10 (1975), you are hereby notified to immediately commence work in full accordance with the terms and conditions of the Contract Documents in the above referenced Project, dated February 5, 20 16, on or before February 15, 20 16, and you are to complete the work within the time specified therein.

CITY OF TUSCALOOSA, ALABAMA
A MUNICIPAL CORPORATION
Post Office Box 2089
Tuscaloosa, Alabama 35403-2089

By: Clay Randolph
City's Representative

ACCEPTANCE OF NOTICE

I, on behalf of the above named contractor, do hereby accept receipt of the above notice to proceed with the referenced Project and acknowledge the contents of the same on this the _____ day of _____ 20____.

CONTRACTOR: [Signature]
By Its: [Signature]

CONTRACT CHANGE ORDER NO.

City of Tuscaloosa, Office of the City Attorney

DATE: _____ PROJECT: _____

TO: _____

(Contractor)

TERMS: You are hereby authorized, subject to the provisions of your Contract for this Project, to make the following changes thereto in accordance with the attached Change Order Request and supporting documents and to:

FURNISH the necessary labor, materials and equipment to:

TOTAL ADDITION OR REDUCTION TO CONTRACT PRICE:

(Note: Numbers in parentheses are deductions).

ORIGINAL CONTRACT PRICE	\$	_____
LESS CONTINGENCY/ALLOWANCE	\$	_____
NET ORIGINAL CONTRACT PRICE	\$	_____
Net total of previous Change Orders	\$	_____
Previous revised Contract Price	\$	_____
This Change Order No. _____ <input type="checkbox"/> Add <input type="checkbox"/> Deduct	\$	_____
Revised Contract Price this date	\$	_____

Extension of time resulting from this Change Order _____ (Indicate number of calendar days).

The amount of this Change Order will be the responsibility of _____

This Contract Modification constitutes full and mutual accord and satisfaction for all time and all cost related to this change. By acceptance of this Contract Modification, the Contractor hereby agrees that the modification represents an equitable adjustment to the Contract, and further, agrees to waive all right to file any further claims or changes arising out of or as a result of this change, or the accumulation of executed Contract Modifications on this Contract.

The Contractor and Owner(s) hereby agree to the terms of this Change Order as contained herein.

CONSENT OF SURETY

CONTRACTING PARTIES

(Company)

(Contractor)

By: _____

By: _____

(Authorized Representative)

RECOMMENDED

CITY OF TUSCALOOSA

By: _____

By: _____

(Design Engineer or Architect)

(Mayor)

CITY OF TUSCALOOSA
OFFICE OF THE CITY ATTORNEY

**CHANGE
ORDER
REQUEST**

OWNER: CITY OF TUSCALOOSA

ARCHITECT/ENGINEER: _____

CONTRACTOR: _____

PROJECT: _____

CHANGE ORDER REQUEST NO. _____ DATE: _____

1. DESCRIPTION OF CHANGE:

2. CHANGE ORDER COSTS: _____

Proposal Attached _____ Cost Estimated/Proposal Required

<i>Item</i>	<i>Quantity</i>	<i>Material Unit Price</i>	<i>Labor (Hours)</i>	<i>Labor Unit Price</i>	<i>Sub-Total Cost</i>
a.					
b.					
c.					
d.					
e.					
f.*					
TOTAL:					

*If more than 6 items, provide attachments.

3. INSTITUTED BY:

4. JUSTIFICATION OF NEED:

5. JUSTIFICATION OF CHANGE ORDER VERSUS COMPETITIVE BIDDING:

6. COSTS REVIEW:

7. THIS CHANGE ORDER IS SUBMITTED FOR REVIEW AND APPROVAL AND IS CLASSIFIED AS THE FOLLOWING TYPE:

- Minor change of a total monetary value less than required for competitive bidding.
 - Changes for matters relatively minor and incidental to the original contract necessitated by unforeseeable circumstances arising during the course of work.
 - Emergencies arising during the course of work.
 - Change or alternates provided for in the original bidding where there is no difference in price of the Change Order from the original best bid on the Alternate.
 - Change of relatively minor terms not contemplated when the plans and specifications were prepared and the Project was bid and which are in the public interest and do not exceed 10% of the Contract Price.
-

8. EXTENSION OF TIME REQUESTED: Calendar Days:

RECOMMENDED:

BY: _____
Tuscaloosa's Consulting Engineer/Architect

BY: _____
City Representative

APPROVED:

BY: _____
Contractor

BY: _____
Owner's Legal Advisor

BY: _____
Owner's Authorized Representative

STATE OF ALABAMA)
COUNTY OF TUSCALOOSA)
CITY OF TUSCALOOSA)

**LEGAL NOTICE
NOTICE OF COMPLETION OF PUBLIC WORKS PROJECT
(Over \$50,000)**

Pursuant to Ala. Code §39-1-1 (1975), notice is hereby given that
_____ has completed its contract with
(Name of Company)
the City of Tuscaloosa, Alabama, for the _____
(Name of Project)
located at _____. This notice will be
(Location of the Project)
published for a period of four (4) successive weeks beginning: _____
(Date)

A final settlement will not be made upon the contract until the expiration of thirty (30) days after completion of notice. Any person or firm having claims on said Project for materials or labor should contact the above contractor at:

(Address of Contractor)

in the time and manner as required by law.

**CITY OF TUSCALOOSA
OFFICE OF THE CITY ATTORNEY
P. O. BOX 2089
TUSCALOOSA, ALABAMA 35403**

DATED: _____

CITY OF TUSCALOOSA
SPECIAL CONDITIONS FOR
FEDERALLY FUNDED CONTRACTS

I. DEFINITIONS

“Construction Contract” means a contract for construction, rehabilitation, alteration, and/or repair, including painting and decorating.

“Contractor” means an entity that has entered into an agreement with the local government for the performance of specific work on a project or activity, the provision of professional services, or for the supply of equipment and/or materials.

“ _____ ” means _____ (Federal Agency).

“Local Government” means the City of Tuscaloosa.

“Program” means the _____
(Federal Program) operated under the provisions of _____

“Projects/Activities” means those undertakings which are included in the Program and are funded wholly or in part by _____

“Project Area” means the corporate limits of the City of Tuscaloosa.

“Subcontractor” means a person, firm or corporation supplying services or labor and materials or only labor or only materials for work at the site of the project, for and under contract or agreement with the Contractor.

II. CONFLICT OF INTEREST

A. Interest of Members of the Local Government. No officer, employee or agent of the local government who exercises any function or responsibilities in connection with the planning and carrying out of the program, or any other person who exercises any functions or responsibilities in connection with the program, shall have any personal financial interest, direct or indirect, in this contract, and the Contractor shall take appropriate steps to assure compliance.

B. The Contractor agrees that it will incorporate into every subcontract required in writing the following provision: Interest of Contractor and Employees. The Contractor agrees that no person who presently exercises any functions or responsibilities in connection with the program, has any personal financial interest, direct or indirect, in this contract. The Contractor further covenants that he presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of his services hereunder.

The Contractor further covenants that in the performance of this contract no person having any conflicting interest shall be employed. Any interest on the part of the Contractor or his employees must be disclosed to the City. Provided, however, that this paragraph shall be interpreted in such a manner so as not to unreasonably impede the statutory requirement that maximum opportunity be provided for employment of and participation by low income residents of the area.

C. Provisions of the Hatch Act. Neither the funds provided by this agreement nor the personnel employed in the administration of the agreed upon work shall be in any way or to any extent engaged in the conduct of political activities in contravention of Chapter 15 of Title 5, U. S. Code.

III. EQUAL OPPORTUNITY REQUIREMENTS: During the performance of this contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, or disability. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, national origin, age, or disability. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment, or recruitment advertising; layoff or termination; rates of pay or other forms of compensations; and selection of training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, or disability.

3. The Contractor will send to each labor union or representative of workers with which he has collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

5. The Contractor will furnish to the local government all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the local government, HUD, and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules regulations, and orders.

6. In the event of the Contractor's non-compliance with the nondiscrimination clauses of this agreement or with any of the said rules, regulations, or orders, this agreement may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further local government contracts in accordance with procedures authorized in Executive Order 11246 of September 24 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the City, Secretary of Labor, or as otherwise provided by law.

7. The Contractor will include the provisions of paragraph 1 through 6 above in every subcontract or purchase order unless exempted by rules, regulations, or orders of the local government or the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed as a means of enforcing such provisions, including sanctions for noncompliance: Provided however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the City, the Contractor may request the local government to enter into such litigation to protect the interests of the local government.

8. The Contractor agrees that it will assist and cooperate actively with the local government and the Secretary of Labor in obtaining the compliance of subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the local government and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the local government in the discharge of its primary responsibility for securing compliance.

9. The Contractor further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the

Executive Order. In addition, the agency agrees that if it fails or refuses to comply with these undertakings, the local government may take any or all of the following actions: terminate or suspend in whole or in part this contract; refrain from extending any further assistance to the Contractor under the program with respect to which the failure or refusal occurred until satisfactory assurance of future compliance has been received from such Contractor.

10. Non-segregated Facilities. The Contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Contractor covenants that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. As used in this paragraph, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise.

11. No person in the United States shall, on the ground of race, color, religion, sex, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity made possible by or resulting from this contract. The agency and each employer will comply with all requirements imposed by or pursuant to Title VI of the Civil Rights Act of 1964.

12. The Contractor shall maintain data which records its affirmative action in equal opportunity employment, including but not limited to employment, upgrading, demotions, transfers, recruitment or recruitment advertising, layoffs or terminations, pay or other compensation, and selection for training.

IV. LABOR STANDARDS PROVISIONS - CONSTRUCTION CONTRACTS ONLY

A. Contract Work Hours and Safety Standards Act

1. Overtime Requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic in any work-week in which he is employed on such work to work in excess of forty hours in any work-week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of forty hours in any work-week.
2. Violations; Liability for Unpaid Wages; Liquidated Damages. In the event of any violation of the clause set forth in subparagraph 1, the Contractor and any subcontractor responsible therefore shall be liable to any affected employee for his unpaid wages. In addition, such Contractor and subcontractor shall be liable to the City for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph 1 in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work-week of forty hours without payment of the overtime wages required by the clause set forth in subparagraph 1.
3. Withholding for Unpaid Wages and Liquidated Damages. The local government may withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages.

B. Employment of Certain Persons Prohibited. No person under the age of sixteen years and no person who at the time, is serving sentence in a penal or correctional institution shall be employed on the work covered by this contract.

C. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the labor standards provisions of this contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceedings or has testified or is about to testify in any proceedings under or relating to the labor standards applicable under this contract.

D. Questions Concerning Certain Federal Statutes and Regulations. All questions arising under this contract which relate to the application or interpretation of the aforesaid Contract Work Hours and Safety Standards Act, the regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to said Act, or the labor standards provisions of any other pertinent Federal statute, shall be referred, through the City of Tuscaloosa and the Secretary of Housing and Urban Development, to the Secretary of Labor, United States Department of Labor, for said Secretary's appropriate ruling or interpretation which shall be authoritative and may be relied upon for the purpose of this contract.

V. ENVIRONMENTAL PROTECTION REQUIREMENTS

A. The Contractor hereby agrees that any facility to be utilized in the performance of any nonexempt contract or subcontract shall not be a facility included on the list of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.

B. The Contractor also agrees to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.

C. As a condition of the award of the contract, the Contractor agrees to give prompt notice to the City of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized or to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

D. The Contractor agrees that it will include or cause to be included the criteria and requirements in subparagraph A through D of this section in every nonexempt subcontract and that it will take such action as the City or the EPS may direct as a means of enforcing such provisions.

VI. FINANCIAL MANAGEMENT: The Contractor shall maintain effective control over and accountability for all funds, property, and other assets that are provided for by this agreement. The Contractor shall adequately safeguard all such assets and shall assure that they are used solely for authorized purposes.

A. Ineligible Costs. In addition to any costs that are ineligible under other criteria included herein the following costs are specifically ineligible:

1. Bad Debts. Any losses arising from uncollected accounts and other claims, and related costs.
2. Contingencies. Contributions to a contingency reserve or any similar provisions for unforeseen events.
3. Contributions and Donations.
4. Entertainment. Costs of amusements, social activities, and incidental costs, such as meals, beverages, lodgings, and gratuities, relating to entertainment.
5. Fines and Penalties. Costs resulting from violations of or failure to comply with Federal, State, and local laws and regulations.

6. Interest and Other Financial Costs. Interest on borrowing (however represented), bond discounts, cost of financing and refinancing operations, and legal and professional fees paid in connection herewith.
7. Legislative Expenses. Salaries and other expenses of local government bodies such as county supervisors, city councils, school boards, etc., whether incurred for purposes of legislation or executive direction.
8. Membership Expenses. Cost of membership in an organization which devotes a substantial part of its activities to influencing legislation.
9. Travel. Costs in excess of those allowed by the Contractor for its equivalent employees. In any case, the difference in cost between first-class air accommodations and less-than-first-class air accommodations are not available and is so documented.
10. Meeting Attendance. Costs of attending meetings which are not open for attendance on a non-segregated basis.

B. Property Management Standards. The Contractor's property management standards for non-expendable personal property acquired under this contract shall include the following procedural requirements:

1. Property records shall be maintained accurately and provide for: a description of the property; manufacturer's serial number or other identification number; acquisition data, cost, and source of property; percentage of Federal funds used in the purchase of property; location, use and condition of the property; and ultimate disposition data including sales price or the method used to determine current fair market value.
2. A physical inventory of property shall be taken and the results reconciled with the property records at least once each year to verify the existence, current utilization, and continued need for the property.
3. A control system shall be in effect to ensure adequate safeguards to prevent loss, damage, or theft to the property. Any loss, damage, or theft of non-expendable property shall be investigated and fully documented.
4. Adequate maintenance procedures shall be implemented to keep the property in good condition.

C. Procurement Standards

1. The Contractor shall maintain a code or standard of conduct which shall govern the performance of its officers, employees, or agents in contracting with and expending grant funds. Local government officers, employees, or agents shall neither solicit nor accept gratuities, favors, or anything of monetary value from Contractors or potential Contractors.
2. All procurement transactions regardless of whether negotiated or advertised and without regard to dollar value shall be conducted in a manner so as to provide maximum open and free competition.

VII. GENERAL REQUIREMENTS

A. Retention of Records. All records maintained by the Contractor that pertain to this agreement shall be retained by the Contractor for a period of three years or such longer period as the local government or HUD may require in specific cases.

B. Reports and Information. The Contractor, at such times as the local government may require, shall furnish such statements, reports, records, data and information, as may be requested pertaining to matters covered by this agreement.

C. Audit Requirements. The local government, the Comptroller General of the United States, and/or _____ (Federal Agency), or any of the duly authorized representatives shall have access to all tasks, accounts, records, reports, files and other papers or property of the Contractor pertaining to funds provided under this agreement for the purpose of making surveys, audits, examinations, excerpts, and transcripts. The Contractor's financial management system shall be audited at least once a year. Audits may be made at less frequency considering the nature, size and complexity of the activity. The Contractor shall implement a systematic method to assure timely and appropriate resolution of audit findings and recommendations.

D. Breach of Contract Terms and Conditions. In the event of the Contractor's noncompliance with the terms and conditions of this contract or with any of the said rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or in part. Provided, that the right of the Contractor to proceed with this contract shall not be terminated or the Contractor charged with liquidated damages because of delays in the completion of the work due to unforeseeable causes 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 the Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather or delays of subcontractors due to such causes, if the Contractor shall within ten days from the beginning of any such delay notify the City in writing of the cause of the delay. The City shall ascertain the facts and the extent of the delay and extend the time for completing the work when, in the City's judgment, the findings of fact justify such an extension, and the City's findings of fact thereon shall be final and conclusive on the parties hereto, subject only to appeal, within thirty days, by the Contractor to the City whose decision on such appeal as to the facts of delay and the extension of time for completing the work shall be final and conclusive on the parties hereto.

E. Safety Standards. No Contractor or subcontractor contracting for any part of a construction contract shall require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety, as determined under construction safety and health standards promulgated by the Secretary of Labor.

F. Lead-based Paint Regulations. The construction or rehabilitation of residential structures with assistance provided under this contract is subject to the HUD Lead-based Paint regulations, 24 CFR part 35. Should this contract include activities involving the construction or rehabilitation of residential structures, the Contractor hereby agrees to comply with the regulations of 24 CFR part 35.

G. Subcontracts. The Contractor shall insert in any subcontracts all of the terms and conditions set forth in this contract and also a clause requiring the subcontractors to include these terms and conditions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

H. Davis-Bacon. As applicable, Contractors shall comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR Part 5), the provisions of which are incorporated by reference into this contract as if contained herein.

I. Debarment of contactors/subcontractors / City's right to monitor. All contracting and subcontracting agencies shall be actively registered in the sam.gov system and have a non-debarred status to perform work. The City of Tuscaloosa shall have all rights to any and all documentation related to the project. Periodic monitoring visits will be performed by City of Tuscaloosa staff to ensure all federal and contract requirements are followed.

J. Green Building Standard for Replacement and New Construction of Residential Housing. Contractors must meet the Green Building Standard in this subparagraph for: (i) all new construction of residential buildings; and (ii) all replacement of substantially-damaged residential buildings. Replacement of residential buildings may include reconstruction (i.e., demolishing and re-building a housing unit on the same lot in substantially the same manner) and may include changes to structural elements such as flooring systems, columns or load bearing interior or exterior walls. For purposes of this Notice, the Green Building Standard means the contractor will require that all construction covered by subparagraph, above, meet an industry-recognized standard that has achieved certification

under at least one of the following programs (i) ENERGY STAR (Certified Homes or Multifamily High Rise); (ii) Enterprise Green Communities; (iii) LEED (NC, Homes, Midrise, Existing Buildings O&M, or Neighborhood Development); (iv) ICC-700 National Green Building Standard; (v) EPA Indoor AirPlus (ENERGY STAR a prerequisite); or (vi) any other equivalent comprehensive green building program, including regional programs. Standards for rehabilitation of non-substantially-damaged residential buildings: For rehabilitation other than that described in subparagraph, above, contractors must follow the guidelines specified in the HUD CPD Green Building Retrofit Checklist, available on the CPD Disaster Recovery Web site. Contractors must apply these guidelines to the extent applicable to the rehabilitation work undertaken, including the use of mold resistant products when replacing surfaces such as drywall. When older or obsolete products are replaced as part of the rehabilitation work, rehabilitation is required to use ENERGY STAR- labeled, WaterSense labeled, or federal Energy Management Program (FEMP)- designated products and appliances. Implementation: For construction projects completed under construction, or under contract prior to the date that federal assistance was approved for the project the contractor is encouraged to apply the applicable standards to the extent feasible but the Green Building Standard is not required; (ii) for specific which an ENERGY STAR-or-WaterSense-labeled or FEMP-designated product does not exist, the requirement to use such products does not apply. The City encourages contractors to implement green infrastructure policies to the extent practicable.

VIII. ADECA-FUNDED CONTRACTS: The Contractor shall include the following provisions in all construction contracts funded by the Alabama Department of Economic and Community Affairs (ADECA). For all ADECA-funded construction contracts, in the event the provisions contained in this section conflict with provisions contained elsewhere in this document, the provisions contained in this section shall prevail.

A. Section 109 Clause, Housing and Community Development Act of 1974. No person in the United States shall on the grounds of race, color, national origin or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

B. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246) (applicable to contract/subcontracts exceeding \$10,000). Contractor’s attention is called to the “Equal Opportunity Clause” and the “Standard Federal Equal Employment Opportunity Construction Contract Specifications” set forth herein.

The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor’s aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for	Goals for
Minority	Female
Participation	Participation
(Insert Goals)	(Insert Goals)

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

The Contractor’s compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer

of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the Contract, the Executive Order and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

C. "Section 3" Compliance in the Provision of Training, Employment and Business Opportunities.

1. The work to be performed under this Contract is a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12, U.S.C. 1701u. Section 3 requires that to the greatest extent feasible, opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by, persons residing in the area of the project.
2. The parties to this Contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of this Contract. The parties to this Contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements.
3. The Contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understanding, if any, a notice advising the said labor organization or workers' representative of this commitment under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.
4. The Contractor will include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for or recipient of Federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the Subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR Part 135. The Contractor will not subcontract with any Subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR Part 135 and will not let any subcontract unless the Subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.
5. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR Part 135, and all applicable rules and orders of the Department issued hereunder prior to the execution of the Contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance, its successors and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its contractors and subcontractors, its successors and assigns to those sanctions specified by the grant or loan agreement or contract through which Federal assistance is provided, and to such sanctions as are specified in 24 CFR Part 135.

D. Section 402 Veterans of the Vietnam Era (if \$10,000 or over). Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era.

1. The Contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat

qualified disabled veterans and veterans of the Vietnam era without discrimination based on their disability or veteran status in all employment practices such as the following: employment upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

2. The Contractor agrees that all suitable employment openings of the Contractor which exist at the time of the execution of this Contract and those which occur during the performance of this Contract, including those not generated by this Contract and including those occurring at an establishment of the Contractor other than the one wherein the Contract is being performed but excluding those of independently operated corporate affiliates, shall be listed at an appropriate local office of the State employment service system wherein the opening occurs. The Contractor further agrees to provide such reports to such local office regarding employment openings and hires as may be required. State and local government agencies holding Federal contracts of \$10,000 or more shall also list all their suitable openings with the appropriate office of the State employment service, but are not required to provide those reports set forth in paragraphs 4 and 5.
3. Listing of employment openings with the employment service system pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and non-veterans. The listing of employment openings does not require the hiring of any particular job applicant or from any particular group of job applicants, and nothing herein is intended to relieve the Contractor from any requirements in Executive Orders or regulations regarding nondiscrimination in employment.
4. The reports required by paragraph 2 of this clause shall include, but not be limited to, periodic reports which shall be filed at least quarterly with the appropriate local office or, where the Contractor has more than one hiring location in a State, with the central office of that State employment service. Such reports shall indicate for each hiring location (1) the number of individuals hired during the reporting period, (2) the number of nondisabled veterans of the Vietnam era hired, (3) the number of disabled veterans of the Vietnam era hired, and (4) the total number of disabled veterans hired. The reports should include covered veterans hired for on-the-job training under 38 U.S.C.1787. The Contractor shall submit a report within 30 days after the end of each reporting period wherein any performance is made on this Contract identifying data for each hiring location copies of the reports submitted until the expiration of one year after final payment under the Contract, during which time these reports and related documentation shall be made available, upon request, for examination by any authorized representatives of the contracting officer or of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruitment and placement.
5. Whenever the Contractor becomes contractually bound to the listing provisions of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these provisions and has so advised the State system, there is no need to advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by the contract clause.

6. This clause does not apply to the listing of employment openings which occur and are filled outside of the 50 states, the District of Columbia, Puerto Rico, Guam and the Virgin Islands.
7. The provisions of paragraphs 2, 3, 4 and 5 of this clause do not apply to openings which the Contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside of his own organization or employer-union arrangement for that opening.
8. As used in this clause:
 - a. "All suitable employment openings" includes, but is not limited to, openings which occur in the following job categories: production and nonproduction; plant and office; laborers and mechanics; supervisory and nonsupervisory; technical; and executive, administrative, and professional openings that are compensated on a salary basis of less than \$25,000 per year. This term includes full-time employment, temporary employment of more than three days' duration, and part-time employment. It does not include openings which the Contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement nor openings in an educational institution which are restricted to students of that institution. Under the most compelling circumstances an employment opening may not be suitable for listing, including such situations where the needs of the Government cannot reasonably be otherwise supplied, where listing would be contrary to national security, or where the requirement of listing would otherwise not be for the best interest of the Government.
 - b. "Appropriate office of the State employment service system" means the local office of the Federal-State national system of public employment offices with assigned responsibility for serving the area where the employment opening is to be filled, including the District of Columbia, Guam, Puerto Rico and the Virgin Islands.
 - c. "Openings which the Contractor proposes to fill from within his own organization" means employment openings for which no consideration will be given to persons outside the Contractor's organization (including any affiliates, subsidiaries, and the parent companies) and includes any openings which the Contractor proposed to fill from regularly established "recall" lists.
 - d. "Openings which the Contractor proposes to fill pursuant to customary and traditional employer-union hiring arrangements" means employment openings which the Contractor proposes to fill from union halls, which is part of the customary and traditional hiring relationship which exists between the Contractor and representatives of his employees.
9. The Contractor agrees to comply with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.
10. In the event of the Contractor's non-compliance with the requirements of this clause, actions for non-compliance may be taken in accordance with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.
11. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by

or through the contracting officer. Such notice shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era for employment, and the rights of applicants and employees.

12. The Contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Vietnam Era Veterans Readjustment Assistance Act, and is committed to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era.
13. The Contractor will include the provisions of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations or orders of the Secretary issued pursuant to the Act, so that such provisions will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any subcontractor or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for non-compliance.

E. Certification of Compliance with Air and Water Acts (applicable to Federally assisted construction contracts and related subcontracts exceeding \$100,000). Compliance with Air and Water Acts. During the performance of this Contract, the Contractor and all Subcontractors shall comply with the requirements of the Clean Air Act, as amended, 42 USC 1857 et seq., the Federal Water Pollution Contract Act, as amended, 33 USC 1251 et seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, as amended. In addition to the foregoing requirements, all nonexempt Contractors and Subcontractors shall furnish to the Owner, the following:

1. A stipulation by the Contractor or Subcontractors that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.
2. Agreement by the Contractor to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
3. A stipulation that as a condition for the Contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, or EPA indicating that a facility utilized, or to be utilized for the Contract, is under consideration to be listed on the EPA List of Violating Facilities.
4. Agreement by the Contractor that he will include, or cause to be included, the criteria and requirements in paragraphs A through D of this section in every nonexempt subcontract and requiring that the Contractor will take such actions as the Government may direct as a means of enforcing such provisions.

F. Compliance with Copeland Act Requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.

G. Drug-Free Workplace Requirements. The Drug-Free Workplace Act of 1988 (42 U.S.C. 701) requires grantees (including individuals) of federal agencies, as a prior condition of being awarded a grant, to certify that they will provide drug-free workplaces. Each potential recipient must certify that it will comply with drug-free workplace requirements in accordance with the Act and with HUD's rules at 24 CFR part 24, subpart F.

H. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.

IV. **DISASTER RECOVERY FUNDED CONTRACTS:**___The Contractor shall include the following provisions in all Disaster Recover (DR) funded construction contracts. For all DR-funded construction contracts, in the event the provisions contained in this section conflict with provisions contained elsewhere in this document, the provisions contained in this section shall prevail.

A. The Contractor agrees to abide by all applicable Federal regulations in receiving, disbursing and accounting for Community Development Block Grant funds including, but not limited to all applicable sections of 24 CFR 570.

B. ADA Compliance. The Contractor hereby covenants and agrees that, in performing its responsibilities and obligations hereunder, the Contractor, its officers, agents or employees will not, on the grounds of race, color, sex, religion, national origin, disability or age, discriminate or permit discrimination against any person or groups of persons in any manner. The Contractor further agrees to comply with all applicable State and Federal ordinances and regulations, including but not limited to, the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA), the Civil Rights Act of 1964 and any regulations promulgated there under.

C. Section 3 Compliance. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. Contractor agrees to send to each labor organization or representative of workers with which the Contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the Contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. Contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. Contractor will not subcontract with any subcontractor where the Contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135. Contractor will certify that any vacant employment positions, including training positions, that are filled (1) after Contractor is selected by before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the Contractor's obligations under 24 CFR part 135. Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from

future HUD assisted contracts.

D. Section 109 Compliance. No person in the United States will, on the ground of race, color, national origin, religion, or sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity administered or provided under this Agreement, pursuant to Section 109 of title I of the Housing and Community Development Act of 1974 (Title I) (42 U.S.C. 5309).

E. Section 402 Compliance. Contractors and subcontractors shall take affirmative action to employ and advance in employment qualified covered veterans. Disabled veterans, recently separated veterans (veterans within 3 years of their discharge or release from active duty), veterans who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized (referred to as "other protected veterans"), and Armed Forces service medal veterans are covered veterans under VEVRAA, pursuant to the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended (VEVRAA).

F. Copeland Anti-Kickback Act Compliance. Pursuant to The Copeland "Anti-Kickback" Act, 40 USC §3145 and 18 USC §874, no contractor or subcontractor operating under this agreement shall induce an employee to give up any part of the compensation to which he or she is entitled under his or her contract of employment. Contractors and subcontractors shall submit a weekly statement of the wages paid to each employee performing on covered work during the preceding payroll period.

G. Affirmative Action. During the performance of this contract, the contractors and subcontractors operating under this agreement shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Contractors and subcontractors operating under this agreement shall comply with Affirmative Action laws and regulations to ensure equal employment opportunities, including, but not limited to 41 CFR Part 60-1; 41 CFR Part 60-2; 41 CFR Part 60-250; 41 CFR Part 60-741; compliance with E.O. 11246, "Equal Employment Opportunity," as amended by E.O. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity."

H. Compliance with Goals for Minority and Female Participation. The City of Tuscaloosa has voluntarily adopted a Minority / Disadvantaged Business Enterprise ("MBE/DBE/WBE") Program designed to encourage the participation and development of minority and disadvantaged business enterprises and to promote equal business opportunities to the fullest extent allowed by state and federal law. It is the intent of the City to foster competition among contractors, suppliers, and vendors that will result in better quality and more economical services rendered to the City. Under this policy, the City of Tuscaloosa has established a goal of ten to twenty percent (10-20%) inclusion of minority and disadvantaged business enterprises for all services required to deliver City projects. In no case shall the stated percentage be the determining factor in contract awards. Rather, contractors must demonstrate a good faith effort to attain the desired percentage goal. The Developer is encouraged to adopt corresponding goals to those of the City's Minority / Disadvantaged Business Enterprise ("MBE/DBE/WBE") Program.

I. Compliance with Environmental Laws; including The Clean Air Act and Clean Water Act. Contractors and subcontractors operating under this agreement shall be responsible for ensuring compliance with Federal, State, or local pollution control laws and related requirements, including but not limited to the Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 et seq.). If a contracting officer becomes aware of noncompliance with clean air or water standards in facilities used in performing nonexempt contracts, that contracting officer shall notify the agency head, or a designee, who shall promptly notify the EPA Administrator or a designee in writing.

J. Byrd Anti-Lobbying Agreement. Contractors operating under this agreement shall file the required certification under the Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.

K. HUD Form 4010 See next page.

Federal Labor Standards Provisions

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

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) **Minimum Wages.** All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section (b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

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

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

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

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

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

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract in the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (l) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been

communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(II) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

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

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

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

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

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

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

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who

is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

Previous editions are obsolete

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

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

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

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

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

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

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

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

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

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

L. Davis Bacon-Wage Rates

(Insert applicable Davis-Bacon Wage Rates Here)

General Decision Number: AL150002 01/02/2015 AL2

Superseded General Decision Number: AL20140002

State: Alabama

Prince Avenue

Construction Type: Highway

Counties: Blount, Calhoun, Etowah, Shelby, St Clair and Tuscaloosa Counties in Alabama.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, bulding structures in rest areas projec, and railroad construction; bascule, suspension & spandrel arch bridges desgned for commercial navigation; bridges involving marine construction; other major bridges)

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015

* SUAL2011-001 01/04/2011

	Rates	Fringes
Carpenter.....	\$ 13.88	
Concrete finisher.....	\$ 13.26	
Electrician.....	\$ 19.73	
Laborers:		
Asphalt Raker.....	\$ 11.23	
Concrete Laborer.....	\$ 10.84	
Grade Checker.....	\$ 12.58	
Guardrail Erector.....	\$ 12.47	
Pipe Layer.....	\$ 12.58	
Side Rail/Form Setter.....	\$ 11.97	
Traffic Control Specialist..	\$ 11.27	
Unskilled.....	\$ 9.84	

Power equipment operators:		
Aggregate Spreader.....	\$ 14.17	
Asphalt Distributor.....	\$ 14.27	
Asphalt Paver.....	\$ 11.85	
Asphalt Spreader.....	\$ 13.65	
Backhoe, Clamshell,		

Dragline, and Shovel.....	\$ 15.87
Broom (Sweeper).....	\$ 11.68
Bulldozer.....	\$ 14.73
Crane & Derrick.....	\$ 20.63
Front End Loader.....	\$ 13.38
Mechanic.....	\$ 17.54
Milling Machine.....	\$ 12.31
Motor Grader and Motor	
Patrol.....	\$ 16.10
Oiler/Greaseman.....	\$ 13.33
Roller (Self-Propelled).....	\$ 12.38
Scraper.....	\$ 13.00
Striping Machine.....	\$ 15.20
Track Hoe/Excavator.....	\$ 14.64
Tractor and Loader (farm	
rubber tired).....	\$ 11.40
Tractor/Loader (all other	
work).....	\$ 11.22

Truck drivers:

Multi-Rear Axle.....	\$ 12.25
Single Rear Axle.....	\$ 11.54

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

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

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the

most current negotiated rate, which in this example is July 1, 2014.

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

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

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

Union Average Rate Identifiers

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

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

WAGE DETERMINATION APPEALS PROCESS

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

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

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour

Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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

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

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

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

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

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

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

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

=====

END OF GENERAL DECISION





ALABAMA DEPARTMENT OF REVENUE
SALES AND USE TAX DIVISION
P.O. Box 327710 • Montgomery, AL 36132-7710

ST: EXC-01
8/14

Application For Sales and Use Tax Certificate of Exemption

FOR GOVERNMENT ENTITY PROJECT

This Certificate of Exemption will be limited to purchases which qualify for an exemption of sales and use taxes pursuant to Rule No. 810-6-3-.77

PROJECT INFORMATION:

PROJECT NAME		PROJECT OWNER'S FEIN (EXEMPT ENTITY)	
STREET ADDRESS OF PROJECT (CITY AND COUNTY INCLUDED)	CITY	ZIP	COUNTY

APPLICANT'S INFORMATION:

RELATION: (CHOOSE ONE) <input type="checkbox"/> Exempt Entity <input type="checkbox"/> General Contractor <input type="checkbox"/> Sub-Contractor		NAICS CODE
APPLICANT'S LEGAL NAME		FEIN
DBA		CONSUMER'S USE TAX ACCOUNT NUMBER
MAILING ADDRESS		
CONTACT PERSON		BUSINESS TELEPHONE NUMBER ()
ESTIMATED START DATE	ESTIMATED COMPLETION DATE	
REASON EXEMPTION IS CLAIMED		
JOB DESCRIPTION		
WILL ANY POLLUTION CONTROL EXEMPTION BE APPLICABLE? <input type="checkbox"/> Yes <input type="checkbox"/> No		ESTIMATED POLLUTION CONTROL COST \$
TOTAL BID AMOUNT \$	LABOR COST \$	MATERIAL COST \$

PROJECT NAME	PROJECT OWNER'S FEIN (EXEMPT ENTITY)
--------------	--------------------------------------

FORM OF OWNERSHIP:

Individual
 Partnership
 Corporation
 Multi member LLC
 Single member LLC

If applicant is a corporation, a copy of the certified certificate of incorporation, amended certificate of incorporation, certificate of authority, or articles of incorporation should be attached. If the applicant is a limited liability company or a limited liability partnership, a copy of the certified articles of organization should be attached.

OWNERSHIP INFORMATION:

Corporations – give name, title, home address, and Social Security Number of each officer.

Partnerships – give name, home address, Social Security Number or FEIN of each partner.

Sole Proprietorships – give name, home address, Social Security Number of owner.

LLC – give name, home address, and Social Security Number or FEIN of each member.

LLP – give name, home address, and Social Security Number or FEIN of each partner.

NAME (PLEASE PRINT) _____ SIGNATURE _____

TITLE _____ DATE _____

REVENUE DEPARTMENT USE ONLY

Examiner's Remarks _____

Examiner _____ Date _____

Supervisor's Recommendation _____

Supervisor _____ Date _____

**Instructions For Preparation of Form ST: EXC-01
Sales and Use Tax Certificate of Exemption for Government Entity Project**

In order to expedite the processing of your application, please include the following documentation when submitting your application:

Exempt Entity:

1. Signed Application
2. Copy of Executed/Signed Contract and/or Letter of Intent

General Contractor:

1. Signed Application
2. Copy of Executed/Signed Contract and/or Letter of Intent
3. List of Sub-Contractors
4. Alabama Board of General Contractor's License
5. State/County Business License (usually obtained through county probate office)
6. Any other municipal business licenses associated with the project

Sub-Contractor:

1. Application
2. Alabama Board of General Contractor's License
3. State/County Business License (usually obtained through county probate office)
4. Any other municipal business licenses associated with the project
5. List of Sub-Contractors (if any)

General contractors and sub-contractors:

Any updates regarding the sub-contractors working on a project, additions and/or deletions, must be submitted to the Department within 30 days of occurrence.

If an extension is needed for a project, please contact the Department of Revenue at the address, numbers, or emails listed below.

THERE IS A FILING REQUIREMENT IF YOUR APPLICATION IS APPROVED. The return will be filed through the Consumer's Use Tax account. If you do not currently have a Consumer's Use Tax account, one will be opened for you. The return should be filed every filing period that the Contractor's Exemption Certificate is active/open and should include the Project No., Exemption No., and the total amount of purchases for the filing period. If there is no product purchased with the exemption certificate, then a zero return must be filed for the period. There is a requirement of one entry for each exemption certificate that is active for each filing period. The information associated with the Contractor's Exemption Certificates is input at the bottom of the return.

The application and applicable documentation may be mailed, faxed, or emailed to the following:

Fax: (334) 353-7867

Emails: amber.hartley@revenue.alabama.gov brenda.wallace@revenue.alabama.gov

Mailing Address: ATTN: Contractor's Exemption
Alabama Dept. of Revenue
Sales & Use Tax Division - Room 4303
PO Box 327710
Montgomery, AL 36132-7710

Exhibit A

THE CITY OF TUSCALOOSA MINORITY ENTERPRISE/DISADVANTAGED BUSINESS ENTERPRISE (MBE/DBE/WBE) POLICY FOR PUBLIC WORKS PROJECTS OVER \$50,000

General Mission Statement

THE CITY OF TUSCALOOSA (hereinafter, "City") has voluntarily adopted a Minority/Disadvantaged Business Enterprise (MBE/DBE/WBE) Program designed to encourage the participation and development of minority and disadvantaged business enterprises and to promote equal business opportunities in the City to the fullest extent allowed by state and federal law.

It is the intent of the City to foster competition among contractors, suppliers, and vendors that will result in better quality and more economical services rendered to the City. Under this policy, the City of Tuscaloosa has established a goal of ten to twenty percent (10-20%) inclusion of minority and disadvantaged business enterprise (hereinafter sometimes "MBE/DBE/WBE") for all services required to deliver City projects. In no case shall the stated percentage be the determining factor in contract awards. Rather, contractors must demonstrate a good faith effort to attain the desired percentage goal.

Program Goals

It is the goal of this program:

- To ensure non-discrimination in the award and administration of City contracts.
- To help to remove barriers to the participation of DBE/MBE/WBE's in competing for City contracts.
- To ensure a level playing field exists on which DBE/MBE/WBE's can compete fairly for City contracts.

Definition

1. "Minority Business Enterprise" ("MBE") means a business which is an independent and continuing enterprise for profit, performing a commercially useful function and is at least fifty-one percent (51%) owned and controlled by an African American, or Black American.

2. "Women-owned Business Enterprise" ("WBE") means a business which is an independent and continuing enterprise for profit, performing a commercially useful function and is at least fifty-one percent (51%) owned, operated and controlled on a daily basis by one or more female American citizens.

3. "Disadvantaged Business Enterprise" (DBE) means a business which is an independent and continuing enterprise for profit, performing a commercially useful function and is owned by a majority of persons who are United States citizens or permanent resident aliens (as defined by the Immigration and Naturalization Service) of the United States, and who are Asian, Black, Hispanic or Native Americans, according to the following definitions:

"Asian" – means persons having origins in any of the original people of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

“African American” or “Black American” means persons having origins in any black racial group of Africa.

“Hispanic” means persons of Spanish or Portuguese culture with origins in Mexico, South of Central America, or the Caribbean Islands regardless of race.

“Native American” means persons having origins in any of the original people of North America, including American Indians, Eskimos and Aleuts.

Equal Business Opportunity

It is the policy of the City to promote full and equal business opportunities for all persons doing business with the City, regardless of race, sex or national origin. It is the ultimate goal of this policy to promote an equitable business climate district. The City will seek to increase minority and women participation for contracts that require formal bids. These efforts will be for contracts above \$50,000 as allowed by the Alabama Public Works law. These efforts are designed to help prevent discrimination against minorities and disadvantaged businesses and promote more completion among vendors, suppliers, and contractors of the City of Tuscaloosa.

The City has established a goal of ten to twenty percent (10-20%) of the total construction related expenditures to be provided by minority and disadvantaged business enterprises. While the policy provides for voluntary participation by the City and is dependent upon race-neutral and gender-neutral considerations, contractors are encouraged to comply with the City’s policy. The City of Tuscaloosa shall periodically review the policy, including race/gender-neutral remedies, to determine its effectiveness.

Good Faith Effect

The City require contractors to demonstrate a good faith effort to attain the goal of 10-20% participation of MBE/DBE/WBE’s in all levels of the Public Works contracting process. Contractors shall document their efforts to obtain minority and disadvantaged business participation in the bid documents. Contractors should note that failure to document a good faith effort to the satisfaction of the City may subject the contractor to bid rejection for non-responsiveness.

The following process shall constitute a good faith effort under the City’s policy:

(1) Contractors deciding to bid on a City project shall submit the MBE/DBE/WBE Documentation Statement and Acknowledgement (Form1). Submission of Form 1 confirms the commitment of the contractor to participate in the inclusion effort for the project. Form 1 must be submitted to the City of Tuscaloosa Office of Resilience and Innovation no later than seven (7) days prior to the bid, or at the pre-bid conference, whichever is earlier. The City reserves the right to modify the submittal deadline as-needed.

(2) Contractors shall submit MBE/DBE/WBE Bid Solicitation Notice (Form 2). Form 2 must be submitted to the City of Tuscaloosa Office of Resilience and Innovation no later than seven (7) days prior to the bid, or at the pre-bid conference, whichever is earlier. The City reserves the right to modify the submittal deadline as-needed.

(3) Contractors shall submit a brief plan for achieving the stated MBE/DBE/WBE Participation Goal for his/her trade (Form 3). Form 3 must be submitted in the contractor’s sealed bid.

(4) Contractor shall submit a listing of all MBE/DBE/WBE contractors that submitted bids (Form 4). Form 4 must be submitted in the contractor’s sealed bid. (Note: In the event a MBE/DBE/WBE contractor submits a bid after the general contractor has sealed the bid, contractors should write on the envelope the name(s) and scope of work of the MBE/DBE/WBE contractor who submitted the bid.)

(5) Contractors shall be required to work in cooperation with the City in the implementation of this program. Failure to do so, in the discretion of the City, may result in a rejection of bid due to non-responsiveness.

Following compliance with item (5) above, submission of Form 1, Form 2, Form 3, and Form 4 at the above-prescribed times shall satisfy the good faith effort requirement. Failure to do so may result in rejection of bid due to non-responsiveness.

Additional Administrative Requirements/Procedure

(1) Once a tentative contract award has been made, the successful contractor shall submit a list of all MBE/DBE/WBE firms the contractor proposes to utilize during the execution of the contract (Form 5). In addition, the contractor shall include on Form 5 all firms that the major subcontractors propose to utilize.

(2) If the successful contractor will be subcontracting less than the started percentage goal, the Contractor must complete a "MBE/DBE/WBE Unavailability Certification" (Form 6). Form 6 is due once a tentative contract award has been made.

(3) Contractors shall obtain the listing of certified MBE/DBE/WBE business by contacting the City of Tuscaloosa Office of Resilience and Innovation to assist in soliciting MBE/DBW/WBE participation for the project.

(4) Contractors shall not be required to use a MBE/DBE/WBE subcontractor who cannot display reasonable technical and financially qualifications to perform the work in question.

(5) In addition to the above requirements, contractors should note that the City reserves the right to periodically audit payroll records to ensure compliance with the program. The City employs the services of a Compliance Director.

(6) Upon completion of the project and prior to release of retainage or final payment, the contractor shall submit a Project Closeout Report (Form 7) that includes final accounting of all MBE/DBE/WBE firms utilized on the project.

(7) On a monthly basis, contractors shall submit updated MBE/DBE/WBE reports (Monthly Report Form) to identify any changes in MBE/DBE/WBE firm utilization (Form 8). Contractors shall submit Form 8 directly to the City of Tuscaloosa Office of Resilience and Innovation.

Race/Gender – Neutral Remedies

The City recognizes that race/gender – neutral remedies may be effective tools used to increase MBE/DBE/WBE participation. Therefore, the City will continue to explore these remedies. The remedies will include, but will not be limited to, the following:

1. Technical assistance techniques to identify and increase the participation of MBE/DBE/WBE's in the City's contracting, subcontracting and purchasing opportunities.
2. Continuation of the certification process.

The City will periodically review the success of these measures in order to determine the extent to which the measures provide equitable access to the City's contracting, subcontracting and purchasing opportunities.

The City has determined that this policy complies with all applicable local, state and national laws concerning the contracting and purchasing process. The City shall not sacrifice product quality for lower pricing, but

shall make all awards in accordance with applicable law. It shall be the primary responsibility of the City to insure that this policy is followed, and that all actions regarding the contracting and purchasing process comply with all applicable statutes as well as the defined goals relative to MBE/DBE/WBE participation on all construction projects.

Contact Information:

City of Tuscaloosa Office of Resilience and Innovation
Robin Edgeworth, Chief Resilience Officer
(205) 248-5725
redgeworth@tuscaloosa.com

Form 1 (one page)
Documentation Statement and Acknowledgement

(Due no later than seven (7) days prior to the bid, or at the pre-bid
conference, whichever is earlier)

PROJECT NAME: _____

The City of Tuscaloosa has adopted a program to encourage the participation of Minority Business Enterprises/Disadvantaged Business Enterprises (MBE/DBE/WBE) on its public works construction projects. The signed statement serves as a commitment by the undersigned company to comply with this program as outlined by the City, relative to the involvement of MBE/DBE/WBE firm in City guidelines.

The undersigned Company will adhere to City program guidelines set forth to utilize MBE/DBE/WBE businesses in all construction projects, and all program forms (1-8) have been reviewed and understood.

Company Representative (Signature)

Date

Company Representative (Printed)

Title

Company Name

Telephone Number

City, State, Zip

Fax Number

Form 2 (6 pages)
Bid Solicitation Notice

(Due no later than seven (7) days prior to the bid, or at the pre-bid
Conference, whichever is earlier)

BID DATA

1. GENERAL CONTRACTOR: _____

ADDRESS: _____

CONTACT (S): _____

PHONE: _____

FAX: _____

E-MAIL: _____

2. OWNER: _____

3. NAME OF PROJECT: _____

4. SCHEDULE PRE-BID MEETING

DATE/TIME: _____

LOCATION: _____

5. DATE/TIME FOR RECEIPT OF BIDS: _____

6. SCHEDULE BID OPENING

DATE/TIME: _____

LOCATION: _____

7. ESTIMATED JOB START DATE: _____

8. ESTIMATED COMPLETION DATE: _____

PROJECT: _____

LOCATION: _____

BID DATE: _____

GENERAL CONTRACTOR CONTACT:

NAME _____

ADDRESS: _____

TELEPHONE: () _____

FAX: () _____

EMAIL: () _____

DEADLINE FOR PROPOSALS

DATE/TIME

* Estimated Contract Opportunity Value:
{1} 0-25,000 {2} 25,000-50,000 {3} 50,000-100,000 {4}
100,000 - 500,000 {5} over 500,000

DIVISION 02 – EXISTING CONDITIONS
{1} {2} {3} {4} {5} *

- 02 21 SURVEYS
- 02 32 GEOTECHNICAL INVESTIGATIONS
- 02 41 DEMOLITION
- 02 42 REMOVAL and SALVAGE of CONSTRUCTION MATERIALS
- 02 43 STRUCTURE MOVING
- 02 56 SITE CONTAINMENT
- 02 65 UNDERGROUND STORAGE TANK REMOVAL
- 02 61 TRANSPORTATION and DISPOSAL of HAZARDOUS MATERIALS
- 02 62 ASBESTOS REMEDIATION
- 02 63 LEAD REMEDIATION
- 02 65 MOLD REMEDIATION
- 02 61 CHEMICAL SAMPLING, TESTING and ANALYSIS

02 _____
(Please fill-in other opportunity)

DIVISION 3 - CONCRETE {1} {2} {3} {4} {5}

- 03 01 MAINTENANCE OF CONCRETE
- 03 11 CONCRETE FORMING
- 03 15 CONCRETE ACCESSORIES
- 03 21 REINFORCING STEEL
- 03 22 WELDED WIRE FABRIC REINFORCING

- 03 30 CAST-IN-PLACE CONCRETE
- 03 31 STRUCTURAL CONCRETE
- 03 35 CONCRETE FINISHING
- 03 37 SPECIALTY PLACED CONCRETE
- 03 39 CONCRETE CURING
- 03 41 PRECAST STRUCTURAL CONCRETE
- 03 45 PRECAST ARCHITECTURAL CONCRETE
- 03 47 SITE-CAST CONCRETE
- 03 62 NON-SHRINK GROUTING
- 03 63 EPOXY GROUTING
- 03 81 CONCRETE CUTTING
- 03 82 CONCRETE BORING
- 03 _____
(Please fill-in for other opportunity)

DIVISION 4 - MASONRY {1} {2} {3} {4} {5}

- 04 21 CLAY UNIT MASONRY
- 04 22 CONCRETE UNIT MASONRY
- 04 25 UNIT MASONRY PANELS
- 04 30 MULTIPLE-WYTHE MASONRY
- 04 43 STONE MASONRY
- 04 67 MASONRY FIREPLACES
- 04 71 MANUFACTURED BRICK MASONRY
- 04 73 MANUFACTURED STONE MASONRY
- 04 _____
(Please fill-in for other opportunity)

DIVISION 5 - METALS {1} {2} {3} {4} {5}

- 05 12 STRUCTURAL STEEL FRAMING
- 05 14 STRUCTURAL ALUMINUM FRAMING
- 05 15 WIRE ROPE ASSEMBLIES
- 05 21 STEEL JOIST FRAMING
- 05 31 STEEL DECKING
- 05 35 RACEWAY DECKING ASSEMBLIES
- 05 41 STRUCTURAL METAL STUD FRAMING
- 05 42 COLD-FORMED METAL JOIST FRAMING
- 05 44 COLD-FORMED METAL TRUSSES
- 05 61 METAL STAIRS
- 05 62 METAL RAILINGS
- 05 63 METAL GRATINGS
- 05 65 METAL STAIR TREADS & NOSING
- 05 66 METAL CASTINGS
- 05 68 FORMED METAL FABRICATIONS
- 05 71 DECORATIVE METAL STAIRS
- 05 73 DECORATIVE METAL RAILINGS
- 05 75 DECORATIVE FORMED METAL
- 05 _____
(Please fill-in for other opportunity)

DIVISION 6 – WOODS, PLASTICS & COMPOSITES {1} {2} {3} {4} {5}

- 06 11 WOOD FRAMING

- 06 12 STRUCTURAL PANELS
- 06 15 WOOD DECKING
- 06 16 SHEATING
- 06 17 SHOP FABRICATED STRUCTURAL WOOD
- 06 22 MILLWORK
- 06 25 PREFINISHED PANEL
- 06 26 PANELING
- 06 43 WOOD STAIRS & RAILINGS
- 06 44 ORNAMENTAL WOODWORK
- 06 48 WOOD FRAMES
- 06 _____

(Please fill-in for other opportunity)

DIVISION 7 – THERMAL & MOISTURE PROTECTION
 {1} {2} {3} {4} {5}

- 07 11 DAMPPROOFING
- 07 12 BUILT-UP BITUMINOUS WATERPROOFING
- 07 13 SHEET WATERPROOFING
- 07 16 CEMENTIOUS & REACTIVE WATERPROOFING
- 07 19 WATER REPELLANTS
- 07 21 THERMAL INSULATION
- 07 22 ROOF & DECK INSULATION
- 07 24 EXTERIOR INSULATION & FINISH SYSTEMS
- 07 25 WEATHER BARRIERS
- 07 26 VAPOR RETARDERS
- 07 31 SHINGLES & SHAKES
- 07 32 ROOF TILES
- 07 33 NATURAL ROOF COVERINGS
- 07 41 ROOF PANELS
- 07 42 WALL PANELS
- 07 46 SIDING
- 07 51 BUILT-UP BITUMINOUS ROOFING
- 07 52 MODIFIED BITUMINOUS MEMBRANE ROOFING
- 07 53 ELASTOMETRIC MEMBRANE ROOFING
- 07 54 THERMOPLASTIC MEMBRANE ROOFING
- 07 56 FLUID APPLIED ROOFING
- 07 58 ROLL ROOFING
- 07 61 SHEET METAL ROOFING
- 07 65 FLEXIBLE FLASHING
- 07 71 ROOF SPECIALTIES
- 07 72 ROOF ACCESSORIES
- 07 81 APPLIED FIREPROOFING
- 07 84 FIRESTOPPING
- 07 91 PREFORMED JOINT SEALS
- 07 92 JOINT SEALANTS
- 07 95 EXPANSION CONTROL
- 07 _____

(Please fill-in for other opportunity)

DIVISION 8 - OPENINGS {1} {2} {3} {4} {5}

- 08 11 METAL DOORS & FRAMES
- 08 12 METAL FRAMES
- 08 13 METAL DOORS
- 08 14 WOOD DOORS
- 08 16 COMPOSITE DOORS
- 08 17 INTEGRATED DOOR OPENING ASSEMBLIES
- 08 31 ACCESS DOORS & PANELS
- 08 32 SLIDING GLASS DOORS
- 08 33 COILING DOORS & GRILLES
- 08 34 SPECIAL FUNCTION DOORS
- 08 36 PANEL DOORS
- 08 38 TRAFFIC DOORS
- 08 41 ENTRANCES & STOREFRONTS
- 08 42 ENTRANCES
- 08 43 STOREFRONTS
- 08 44 CURTAIN WALL & GLAZED ASSEMBLIES
- 08 51 METAL WINDOWS
- 08 52 WOOD WINDOWS
- 08 53 PLASTIC WINDOWS
- 08 54 COMPOSITE WINDOWS
- 08 56 SPECIAL FUNCTION WINDOWS
- 08 62 UNIT SKYLIGHTS
- 08 63 METAL-FRAMED SKYLIGHTS
- 08 71 DOOR HARDWARE
- 08 74 ACCESS CONTROL HARDWARE
- 08 75 WINDOW HARDWARE
- 08 79 HARDWARE ACCESSORIES
- 08 81 GLASS GLAZING
- 08 83 MIRRORS
- 08 84 PLASTIC GLAZING
- 08 88 SPECIAL FUNCTION GLAZING
- 08 91 LOUVERS
- 08 95 VENTS
- 08 _____

(Please fill-in for other opportunity)

DIVISION 9 - FINISHES {1} {2} {3} {4} {5}

- 09 21 PLASTER & GYPSUM ASSEMBLIES
- 09 22 SUPPORTS FOR PLASTER & GYPSUM
- 09 23 GYPSUM PLASTERING
- 09 24 CEMENT PLASTERING
- 09 26 VENEER PLASTERING
- 09 28 BACKING S & UNDERLAYMENTS
- 09 29 GYPSUM
- 09 30 TILING
- 09 51 ACOUSTICAL CEILINGS
- 09 54 SPECIALTY CEILINGS
- 09 62 SPECIALTY FLOORING
- 09 63 MASONRY FLOORING
- 09 64 WOOD FLOORING

- 09 65 RESILIENT FLOORING
- 09 66 TERRAZZO FLOORING
- 09 68 CARPETING
- 09 72 WALL COVERINGS
- 09 77 SPECIAL WALL SURFACING
- 09 91 PAINTING
- 09 93 STAINING & TRANSPARENT FINISHING
- 09 96 HIGH PERFORMANCE COATINGS
- 09 97 SPECIAL COATINGS
- 09 _____

(Please fill-in for other opportunity)

DIVISION 10 - SPECIALTIES {1} {2} {3} {4} {5}

- 10 11 VISUAL DISPLAY UNITS
- 10 14 SIGNAGE
- 10 22 PARTITIONS
- 10 26 WALL & DOOR PROTECTION
- 10 28 TOILET, BATH & LAUNDRY ACCESSORIES
- 10 44 FIRE PROTECTION SPECIALTIES
- 10 51 LOCKERS
- 10 71 EXTERIOR PROTECTION
- 10 74 MANUFACTURED EXTERIOR SPECIALTIES
- 10 75 FLAGPOLES
- 10 81 PEST CONTROL DEVICES
- 10 88 SCALES
- 10 _____

(Please fill-in for other opportunity)

DIVISION 11 - EQUIPMENT {1} {2} {3} {4} {5}

- 11 11 VEHICLE SERVICE EQUIPMENT
- 11 12 PARKING CONTROL EQUIPMENT
- 11 13 LOADING DOCK EQUIPMENT
- 11 14 PEDESTRIAN CONTROL EQUIPMENT
- 11 24 MAINTENANCE EQUIPMENT
- 11 31 RESIDENTIAL APPLIANCES
- 11 33 RETRACTABLE STAIRS
- 11 41 FOODSERVICE STORAGE EQUIPMENT
- 11 42 FOOD PREPARATION EQUIPMENT
- 11 43 FOOD DELIVERY CARTS AND CONVEYORS
- 11 44 FOOD COOKING EQUIPMENT
- 11 46 FOOD DISPENSING EQUIPMENT
- 11 47 ICE MACHINES
- 11 48 CLEANING & DISPOSAL EQUIPMENT
- 11 52 AUDIO-VISUAL EQUIPMENT
- 11 53 LABORATORY EQUIPMENT
- 11 66 ATHLETIC EQUIPMENT
- 11 67 RECREATIONAL EQUIPMENT
- 11 82 SOLID WASTE HANDLING
- 11 _____

(Please fill-in for other opportunity)

DIVISION 12 - FURNISHINGS {1} {2} {3} {4} {5}

- 12 21 WINDOW BLINDS
- 12 22 CURTAINS & DRAPES
- 12 23 INTERIOR SHUTTERS
- 12 24 WINDOW SHADES
- 12 32 MANUFACTURED CASEWORK
- 12 35 SPECIALTY CASEWORK
- 12 36 COUNTERTOPS
- 12 46 FURNISHING ACCESSORIES
- 12 48 RUGS & MATS
- 12 51 OFFICE FURNITURE
- 12 52 SEATING
- 12 54 HOSPITALITY FURNITURE
- 12 56 INSTITUTIONAL FURNITURE
- 12 61 FIXED AUDIENCE SEATING
- 12 63 STADIUM & ARENA SEATING
- 12 67 PEWS & BENCHES
- 12 92 INTERIOR PLANTERS & ARTIFICIAL PLANTS
- 12 93 SITE FURNISHINGS
- 12 _____

(Please fill-in for other opportunity)

DIVISION 13 - SPECIAL CONSTRUCTION {1} {2} {3} {4} {5}

- 13 11 SWIMMING POOLS
- 13 17 TUBS & POOLS
- 13 18 ICE RINKS
- 13 21 CONTROLLED ENVIRONMENT ROOMS
- 13 24 SPECIAL ACTIVITY ROOMS
- 13 28 ATHLETIC & RECREATIONAL SPECIAL CONSTRUCTION
- 13 31 FABRIC STRUCTURES
- 13 34 FABRICATED ENGINEERED STRUCTURES
- 13 36 TOWERS
- 13 42 BUILDING MODULES
- 13 48 SOUND, VIBRATION, & SEISMIC CONTROL
- 13 49 RADIATION PROTECTION
- 13 _____

(Please fill-in for other opportunity)

DIVISION 14 - CONVEYING SYSTEMS {1} {2} {3} {4} {5}

- 14 11 MANUAL DUMBWAITERS
- 14 12 ELECTRIC DUMBWAITERS
- 14 21 ELECTRIC TRACTION ELEVATORS
- 14 24 HYDRAULIC ELEVATORS
- 14 27 CUSTOM ELEVATOR CABS & DOORS
- 14 28 ELEVATOR EQUIPMENT & CONTROLS
- 14 31 ESCALATORS

- 14 32 MOVING WALKS
- 14 42 WHEELCHAIR LIFTS
- 14 51 CORRESPONDENCE & PARCEL LIFTS
- 14 91 FACILITY CHUTES
- 14 92 PNEUMATIC TUBE SYSTEMS
- 14 _____
(Please fill-in for other opportunity)

DIVISION 21 –FIRE SUPPRESSION {1} {2} {3} {4} {5}

- 21 11 FIRE-SUPPRESSION WATER SERVICE PIPING &METHODS
- 21 12 FIRE SUPPRESSION STANDPIPES
- 21 13 FIRE SUPPRESSION SPRINKLER SYSTEMS
- 21 21 CARBON-DIOXIDE FIRE EXTINGUISHING SYSTEMS
- 21 22 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
- 21 31 CENTIFUGAL FIRE PUMPS
- 21 _____
(Please fill-in for other opportunity)

DIVISION 22-PLUMBING {1} {2} {3} {4} {5}

- 22 07 PLUMBING INSULATION
- 22 11 FACILITY WATER DISTRIBUTION
- 22 13 FACILITY SANITARY SEWERAGE
- 22 14 FACILITY STORM DRAINAGE
- 22 41 COMMERCIAL PLUMBING FIXTURE
- 22 42 COMMERCIAL PLUMBING FIXTURES
- 22 45 EMERGENCY PLUMBING FIXTURES
- 22 47 DRINKING FOUNTAINS & WATER COOLERS
- 22 51 SWIMMING POOL PLUMBING SYSTEMS
- 22 66 CHEMICAL-WASTE SYSTEMS FOR LAB & HEALTHCARE FACILITIES
- 22 _____
(Please fill-in for other opportunity)

DIVISION 23-HEATING VENTILATION AIR CONDITIONING {1} {2} {3} {4} {5}

- 23 07 HVAC INSULATION
- 23 09 INSTRUMENTATION & CONTROL FOR HVAC
- 23 13 FACILITY FUEL-STORAGE TANKS
- 23 21 HYDRONIC PIPING & PUMPS
- 23 22 STEAM & CONDENSATE PIPING & PUMPS
- 23 31 HVAC DUCTS & CASINGS
- 23 33 AIR DUCT ACCESSORIES
- 23 34 HVAC FANS
- 23 37 AIR OUTLETS & INLETS
- 23 38 VENTILATION HOODS

- 23 41 PARTICULATE AIR FILTRATION
- 23 52 HEATING BOILERS
- 23 54 FURNACES
- 23 56 SOLAR ENERGY HEATING EQUIP.
- 23 57 HEAT EXCHANGES FOR HVAC
- 23 62 PACKAGED COMPRESSOR & CONDENSOR UNITS
- 23 63 REFRIGERANT CONDENSORS
- 23 64 PACKAGED WATER CHILLERS
- 23 65 COOLING TOWERS
- 23 73 INDOOR CENTRAL-STATION AIR-HANDLING UNITS
- 23 74 PACKAGED OUTDOOR HVAC EQUIP
- 23 82 CONVECTION HEATING & COOLING UNITS
- 23 84 HUMIDITY CONTROL EQUIPMENT
- 23 _____
(Please fill-in for other opportunity)

DIVISION 26-ELECTRICAL {1} {2} {3} {4} {5}

- 26 09 INSTRUMENTATION & CONTROL FOR ELECTRICAL SYSTEMS
- 26 12 MEDIUM VOLTAGE TRANSFORMERS
- 26 22 LOW VOLTAGE TRANSFORMERS
- 26 24 SWITCHES & PANELS
- 26 25 ENCLOSED BUS ASSEMBLIES
- 26 27 LOW VOLTAGE DISTRIBUTION EQUIPMENT
- 26 28 LOW VOLTAGE CIRCUIT PROTECTIVE DEVICES
- 26 29 LOW VOLTAGE CONTROLLERS
- 26 32 PACKAGED GENERATOR ASSEMBLIES
- 26 35 POWER FILTERS & CONDITIONERS
- 26 42 CATHODIC PROTECTION
- 26 51 INTERIOR LIGHTING
- 26 52 EMERGENCY LIGHTING
- 26 53 EXIT SIGNS
- 26 54 CLASSIFIED LOCATION LIGHTING
- 26 55 SPECIAL PURPOSE LIGHTING
- 26 56 EXTERIOR LIGHTING
- 26 61 LIGHTING SYSTEMS & ACCESSORIES
- 26 71 ELECTRICAL MACHINES
- 26 _____
(Please fill-in for other opportunity)

COMMUNICATIONS- 27 {1} {2} {3} {4} {5}

- 27 13 COMMUNICATIONS BACKBONE CABLING
- 27 41 AUDIO-VIDEO SYSTEMS
- 27 51 DISTRIBUTED AUDIO VIDEO
- 27 52 HEALTHCARE COMMUNICATIONS & MONITORING SYSTEMS
- 27 53 DISTRIBUTED SYSTEMS

27 _____
(Please fill-in for other opportunity)

ELECTRONIC SAFETY & SECURITY- 28 {1} {2} {3} {4} {5}

28 13 COMMUNICATIONS BACKBONE CABLING
 28 16 INTRUSION DETECTION
 28 23 VIDEO SURVEILLANCE
 28 31 FIRE DETECTION
 28 33 FUEL-GAS DETECTION
 28 39 MASS NOTIFICATION SYSTEMS
 28 _____
(Please fill-in for other opportunity)

EARTHWORK-31 {1} {2} {3} {4} {5}

31 06 SCHEDULES FOR EARTHWORK
 31 11 CLEARING & GRUBBING
 31 13 SELECTIVE TREE & SHRUB REMOVAL & TRIMMING
 31 14 EARTH STRIPPING & STOCKPILING
 31 22 GRADING
 31 23 EXCAVATION & FILL
 31 25 ERSION & SEDIMENTATION
 31 31 SOIL TREATMENT
 31 32 SOIL STABILIZATION
 31 33 ROCK STABILIZATION
 31 36 GABIONS
 31 37 RIPRAP
 31 41 SHORING
 31 43 CONCRETE RAISING
 31 45 VIBROFLORATION & DENSIFICATION
 31 46 NEEDLE BEAMS
 31 48 UNDERPINNING
 31 52 COFFERDAMS
 31 56 SHURRY WALLS
 31 62 DRIVEN PILES
 31 63 BORED PILES
 31 _____
(Please fill-in for other opportunity)

EXTERIOR IMPROVEMENTS- 32 {1} {2} {3} {4} {5}

32 11 BASE COURSES
 32 12 FLEXIBLE PAVING
 32 13 RIGID PAVING
 32 16 CURBS, GUTTERS SIDEWALKS & DRIVEWAYS
 32 17 PAVING SPECIALTIES
 32 18 ATHLETIC & RECREATIONAL SURFACING
 32 31 FENCES & GATES
 32 32 RETAINING WALLS
 32 34 FABRICATED BRIDGES
 32 35 SCREENING DEVICES
 32 84 PLANTING IRRIGATION
 32 91 PLANTING PREPARATION
 32 92 TURF & GRASSES

32 93 PLANTS
 32 94 PLANTING ACCESSORIES
 32 96 TRANSPLANTING
 32 _____
(Please fill-in for other opportunity)

UTILITIES-33 {1} {2} {3} {4} {5}

33 11 WATER UTILITY DISTRIBUTION PIPING
 33 12 WATER UTILITY DISTRIBUTION EQUIPMENT
 33 16 WATER UTILITY STORAGE TANKS
 33 21 WATER SUPPLY WELLS
 33 31 SANITARY UTILITY SEWERAGE PIPING
 33 36 UTILITY SEPTIC TANKS
 33 41 STORM UTILITY DRAINAGE PIPING
 33 42 CULVERTS
 33 44 STORM UTILITY WATER DRAINS
 33 46 SUBDRAINAGE
 33 49 STORM DRAINAGE STRUCTURES
 33 51 NATURAL GAS DISTRIBUTION
 33 52 LIQUID FUEL DISTRIBUTION
 33 71 ELECTRICAL UTILITY TRANSMISSION & DISTRIBUTION
 33 81 COMMUNICATIONS & STRUCTURES
 33 _____
(Please fill-in for other opportunity)

TRANSPORATION-34 {1} {2} {3} {4} {5}

34 11 RAIL TRACKS
 34 41 ROADWAY SIGNALING AND CONTROL EQUIPMENT
 34 71 ROADWAY CONSTRUCTION
 34 72 RAILWAY CONSTRUCTION
 34 _____
(Please fill-in for other opportunity)

MATERIAL PROCESSING & HANDLING

EQUIPMENT-41 {1} {2} {3} {4} {5}
 41 21 CONVEYORS
 41 22 CRANES & HOISTS
 41 _____
(Please fill-in for other opportunity)

POLLUTION CONTROL EQUIP-44 {1} {2} {3} {4} {5}

44 11 PARTICULATE CONTROL EQUIPMENT
 44 _____
(Please fill-in for other opportunity)

WATER & WASTEWATER EQUIPMENT-46

{1} {2} {3} {4} {5}
 46 07 PACKAGED WATER & WASTEWATER TREATMENT EQUIPMENT
 46 _____
(Please fill-in for other opportunity)

FORM 3 (1page)

PARTICIPATION GOAL

(Must be submitted in the contractor's sealed bid)

General Contractor: Cornerstone Civil Contractors, LLC

Contact: Edmund H. Colgrove, Jr.

Name of Project: Prince Avenue Improvements

Date Submitted: 12/3/15

The project has a goal of ten to twenty percent (10-20%) MBE/DBE/WBE participation. Provide a brief summary of how this goal will be achieved. Failure to submit this form may result in a bid being rejected for non-responsiveness.

My goal for this project is 10 %.

I plan on achieving this goal by: Using DBE/WBE Contractors for
Curb & Gutter and Misc. Concrete.

Form 4
Contractors Submitting Bids
 (Must be submitted in the contractor's sealed bid)

General Contractor: Cornerstone Civil Contractors, LLC

Contact: Edmund H. Colgrove, Jr.

Name of Project: Prince Avenue Improvements

Date Submitted: 12/3/15

All MBE/DBE/WBE Firms Submitting Bids

Southern Service, LLC
Munford Enterprises
James Paving Company
RS Whisenant, LLC

Scope of Work

Concrete
Water/Erosion
Paving
Concrete

FORM 5
CONTRACTORS SUBMITTING BIDS
 (Must be submitted following tentative bid award)

General Contractor: _____

Contact: _____

Name of Project: _____

Total Contract Amount: \$ _____

Total Amount of All Subcontractors: \$ _____

Date Submitted: _____

All MBE/DBE/WBE firms to be utilized

Scope of Work

Contract Amount

(Use additional pages if necessary)

Form 6
Unavailability Certification
 (Must be submitted following tentative bid award)

I, _____ (Name/Title), of
 _____ (Company) certify that on
 _____ (Date) I contacted the following Minority/Disadvantaged Business
 Enterprise to obtain proposals/bids for the following work items:

<u>MDE/DBE/WBE Firm</u>	<u>Work Items Sought</u>	<u>Form of Proposal Sought</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

To the best of my knowledge and belief, said Minority/Disadvantaged Business Enterprises were unavailable for work on this project, or unable to prepare a proposal/bid for the following reason(s): _____

(This form to be completed by each MBE/DBE/WBE listed, which was contacted, but did not submit a bid/proposal)

_____ (Name of MBE/DBE/WBE) was offered an
 opportunity to submit a proposal on the above identified work on _____ (Date)
 by _____ (Company Name).

The above statement is a true and accurate account of why I did not submit a proposal/bid on this project.

_____ (Signature of MBE/DBE/WBE)

_____ (Date)

_____ (Title)

(Use additional pages if necessary)

Form 7
Project Closeout Report
(To be submitted upon completion of project)

General Contractor: _____
 Contact: _____
 Name of Project: _____
 Total Contract Amount: \$ _____
 Final Contract Amount: \$ _____
 Date Submitted: _____

<u>All MBE/DBE/WBE firms verified</u>	<u>Original subcontract amount</u>	<u>Final subcontract amount</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Form 8
Monthly Report Form
(To be submitted monthly directly to the City's consultant)

General Contractor: _____
 Contact: _____
 Name of Project: _____
 Total Contract Amount: \$ _____
 Date Submitted: _____

Billings

Each MBE/DBE/WBE Contractor utilized	Original subcontract amount	Previous amount	This period amount	Total Amount

(Use additional pages if necessary)

III. SPECIAL PROVISIONS

1. Pay Item 2, "Demolition, Clearing & Grubbing" consists of required clearing, grubbing, removing and disposing of vegetation, trees, and debris within the limits of the project areas as well as the removal of items for which there is no specific pay item. Some items included, but not limited to, are fence removal, sign removal, concrete block removal, etc.

Measurement for "Demolition, Clearing & Grubbing" shall be lump sum. Payment for "Demolition, Clearing & Grubbing" shall be made for the entire lump sum or percentage of item completed and will constitute full compensation for all labor, materials, equipment, and all other items necessary and incidental to completion of the work.

2. Pay Item 7, "Reset Mailbox, Single" consists of the removal, storage and re-installation of permanent post-mounted mailboxes.

Measurement for "Reset Mailbox, Single" shall be per each. Payment for "Reset Mailbox, Single" shall be made for each item installed and will constitute full compensation for all labor, materials, equipment and incidentals necessary to perform the work as shown in the construction plans. If the Engineer determines the existing mailbox post cannot be salvaged and reset, the mailbox shall be installed using a standard 4"x4" timber post at no additional cost.

3. Pay Item 8, "Reset Existing Sign" consists of the removal, storage and re-installation of permanent post-mounted signs as shown in the construction plans.

Measurement for "Reset Existing Sign" shall be per each. Payment for "Reset Existing Sign" shall be made for each item installed and will constitute full compensation for all labor, materials, equipment and incidentals necessary to perform the work as shown in the construction plans.

4. Pay Item 11, "Remove Existing Pavement (Asphalt & Concrete)" consists of the removal and legal disposal of asphalt and concrete pavement as shown in the construction plans and shall include the removal and legal disposal of the full pavement buildup to subgrade.

5. Measurement for "Remove Existing Pavement (Asphalt & Concrete)" shall be per square yard. Payment for "Remove Existing Pavement (Asphalt & Concrete)" shall be made for the square yardage of pavement removed and will constitute full compensation for all labor, materials, equipment and incidentals necessary to perform the work as shown in the construction plans.

6. Where the proposed storm pipe ties to an existing storm structure to be retained, the existing storm structure shall be thoroughly cleaned, walls wiped with grout to make water tight, inverts formed if necessary, existing piping/drains regouted, etc. Payment shall be a subsidiary obligation of Pay Item 36, Tie to Existing Storm Structure.

7. Pay Item 40, "Driveway Trench Drain" consists of the installation of a trench drain as shown in the construction plans.

Measurement for "Driveway Trench Drain" shall be per linear foot. Payment for "Driveway Trench Drain" shall be made per linear foot of item installed and will constitute full compensation for all labor, materials, equipment and incidentals necessary to perform the work as shown in the construction plans.

8. There shall be no separate measurement or payment for filter blanket. Filter blanket shall be a subsidiary obligation of Pay Item 41, Class 2 Riprap, 24" Thick.
9. There shall be no separate measurement or payment for sanitary sewer trench excavation, trench backfill, or trench pavement patching. These items shall be a subsidiary obligation of Pay Items 45 & 301, 8" PVC Pipe, SDR 26, Sanitary Sewer and Pay Items 46 & 302, 48" Dia. Stan. Precast Manhole.
10. There shall be no separate measurement or payment for sanitary sewer bypass pumping. Bypass pumping, if required, shall be a subsidiary obligation of Pay Item 46, 48" Dia. Stan. Precast Manhole.
11. Pay Item 101, "Pedestrian Push Button" consists of the installation of pedestrian push buttons at the locations shown in the construction plans.

Measurement for "Pedestrian Push Button" shall be per each. Payment for "Pedestrian Push Button" shall be made for each item installed and will constitute full compensation for all labor, materials, equipment and incidentals necessary to perform the work as shown in the construction plans. IMSA 20-1 No. 14 AWG, 5/C signal cable is required to power the pedestrian push buttons and pedestrian signal heads. There shall be no separate measurement or payment for signal cable. Signal cable shall be a subsidiary obligation of Pay Item 101, Pedestrian Push Button.

12. Pay Item 104, "ALDOT No. 57 Stone (Only as Directed by the Owner's Representative)" consists of the installation of ALDOT No. 57 Stone only as directed by the Owner's Representative in locations where ALDOT No. 57 has not been specified as part of the construction plans. This pay item shall not pertain to ALDOT No. 57 installed utility trenches or on maintenance roads, haul roads, laydown or storage yards, and detours.

Measurement for "ALDOT No. 57 Stone (Only as Directed by the Owner's Representative)" shall be per ton. Payment for "ALDOT No. 57 Stone (Only as Directed by the Owner's Representative)" shall be made for the tonnage installed and will constitute full compensation for all labor, materials, equipment and incidentals necessary to perform the work as shown in the construction plans.

13. Pay Item 106, "Utility Trench Foundation Material (ALDOT No. 57 Stone) (Only as Directed by the Owner's Representative)" consists of the installation of ALDOT No. 57 stone in the bottom of utility trenches only as directed by the owner's representative.

Measurement for "Utility Trench Foundation Material (ALDOT No. 57 Stone) (Only as Directed by the Owner's Representative)" shall be per ton. Payment for "Utility Trench Foundation Material (ALDOT No. 57 Stone) (Only as Directed by the Owner's Representative)" shall be made for the tonnage installed and will constitute full compensation for all labor, materials, equipment and incidentals necessary to perform the work as shown in the construction plans.

14. Payment for each item listed in the bid sheet shall be made at the unit price bid for each item installed and will constitute full compensation for all labor, materials, equipment and incidentals necessary to perform the work as shown in the construction plans.
15. It is the intent to construct the within described work as shown on the contract documents and specifications prepared by **Burk-Kleinpeter, Inc.** for the City Engineer, City of

Tuscaloosa, Alabama, in accordance with the State of Alabama Highway Department Standard Specifications for Highway Construction, 2012 edition. Should there be a direct conflict between the City of Tuscaloosa, Alabama Public Works Contract Documents and the State of Alabama Highway Department Standard Specifications for Highway Construction, 2012 edition, precedence shall be given to the City of Tuscaloosa, Alabama Public Works Contract Documents. Items of work pertaining to sanitary sewer system improvements shall be constructed in accordance with the City of Tuscaloosa Sanitary Sewer Standard Specifications attached herein. Items of work pertaining to water system improvements shall be constructed in accordance with the City of Tuscaloosa Standards as shown in the construction plans.

- 16.** In said specifications, where the words “State of Alabama”, “Governor”, “State”, “State Highway Department”, “Director”, etc. appear, substitute “City of Tuscaloosa”.
- 17.** Maintenance roads, haul roads, laydown or storage yards, and detours constructed for the Contractor’s use and convenience shall be constructed at the Contractor’s expense and shall be absorbed in other bid items. All construction entrances to the site of work shall have aggregate surfacing placed over filter fabric for a minimum of twenty (20) linear feet from the adjacent connecting roadway, by an appropriate width, in an effort to minimize the transportation of sediment onto existing roadways. All areas shall be restored to their preconstruction condition after project completion. Any damage to the asphalt wearing surface beyond the limits of construction, as determined by the Engineer or Owner, shall be repaired at no cost to the Owner. Any traffic control required to complete such repairs shall be in accordance with Manual on Uniform Traffic Control Devices, Latest Edition, Federal Highway Administration and at no cost to the Owner.
- 18.** The City of Tuscaloosa reserves the right to add to or reduce quantities or delete any item or items in this contract without any adjustment in unit price. Additional items of work necessary for the completion of this contract may be added by Change Order.
- 19.** Payment for any work incidental to the completion of this contract, for which no item was set up, shall be absorbed in other bid items.
- 20.** The Contractor shall provide maintenance for a period of one year from final acceptance of the work. This maintenance work shall include furnishing all materials, labor, equipment and incidentals necessary to maintain the project in an acceptable condition as determined by the City Engineer. This maintenance for a one-year period shall be provided with no additional compensation.
- 21.** Contractor shall remove and dispose of all waste and unsuitable material, from the project site. The Contractor will be held responsible for disposal of debris and construction materials in an appropriate manner and at an approved, permitted location. The Contractor will be responsible for compliance with applicable laws or ordinances regarding material type and disposal site. Disposal of construction materials and debris is specified in Subarticles 206.04(c) and 201.03(d) of the State of Alabama Highway Department Standard Specifications for Highway Construction, 2012 edition. There will be no additional compensation for disposing of such material off the project site.
- 22.** All salvageable material from the project shall be stored on the project at locations designated by the City Engineer. Any material not wanted by the City of Tuscaloosa shall be the property of the Contractor and shall be removed from the project. There will be no

direct payment for removing and storing the salvageable materials, nor removing unwanted materials from the project.

- 23.** Existing excavated material suitable for use as backfill, embankments, etc. shall be used on the project at no direct payment. Additional material required and compaction of the additional fill material shall be paid for under Item 210-D and Section 306.03 of the State of Alabama Highway Department Standard Specifications for Highway Construction, 2012 edition.
- 24.** Existing topsoil material suitable for use on the project shall be stockpiled and utilized at no direct payment. Additional topsoil required shall be paid for under Item 650-A, as designated in the State of Alabama Highway Department Standard Specifications for Highway Construction, 2012 edition.
- 25.** The project site shall be kept clean at all times. Loose dirt, materials, excavation, etc. shall be kept cleared from streets, walks, ditches, etc. The Owner reserves the right to demand that the Contractor's forces be diverted to clean up whenever conditions warrant such diversion. Diversion of Contractor's forces will not entitle the Contractor to any extension of time or additional compensation.
- 26.** Mix design for Bituminous Concrete Wearing Surface, Item 424-A, shall be based on the State of Alabama Highway Department Standard Specifications for Highway Construction, 2012 edition.
- 27.** The Contractor, at no cost to the Owner, shall replace any existing survey monument or property corner that is damaged during construction.
- 28.** The Contractor, at no direct payment, shall support any utilities encountered during construction which require support.
- 29.** The Owner reserves the right to reject any Bidder who has previously failed to perform properly, or complete on time, contracts of similar nature.
- 30. Project Documentation:**
 - A. General.** Prior to the start of construction, the Project right-of-way shall be documented by use of photographs and/or videotapes. Photos, in color, shall be taken at 100 feet on center and shall be taken along the centerline of the project looking up station. At least one station marker shall be visible for identification purposes. The Contractor shall set station markers. During the course of documentation, any features or items of interest or importance, which may be encountered, shall be videotaped and/or photographed. At least two (2) copies of video and/or photos shall be made. City Engineer shall retain one set. Prints and/or tapes shall be delivered to the City Engineer within one week after they are made.
 - B. Video Recordings.** The purpose of the video recordings shall be a supply of continuous visual and audio record of problem areas, items, and features found within any particular area. This video record may be supplemented with photographs to exactly identify and locate specific problem features and items. The video recorder shall be capable of recording and reproducing a picture having not less than 500 lines of resolution.
 - C.** The operating technician shall record the audio portion of the video report as it is produced and shall include the location or identification of the viewed section.
 - D.** No separate payment shall be made for the photographic and/or video work.

31. It shall be the Contractor's responsibility to determine if the required construction can be performed within the area provided and comply with requirements of the Occupational Safety and Health Regulations (OSHA) for construction projects of this type. Any safety measures or methods of construction that are necessary in the construction of this project to comply with these regulations are the Contractor's responsibility and shall be provided with all cost to be included in the various pay items of the contract (no direct payment).

32. Any fines, penalties, or judgements assessed to City of Tuscaloosa, its agents or representatives due to inadequately installed or maintained erosion control shall be the responsibility of the Contractor. The Contractor shall indemnify and hold harmless the Engineer, City of Tuscaloosa, its agents or representatives from all claims resulting, all or in part, from inadequately installed or maintained erosion control.

The Contractor shall provide, install and maintain all temporary erosion control measures shown on the drawings. Silt fences, wattle and other approved erosion control devices shall be installed by the Contractor and shall be maintained throughout the course of this project. Adjustments to the methods and types of erosion control will be necessary during the course of the construction and it will be the responsibility of the Contractor to provide, install and maintain these as well. The Engineer shall approve methods of erosion control. The design drawings depict the minimum erosion control devices required for this project. It will be the responsibility of the Contractor to satisfy himself that all Federal, State and Local Codes and Ordinances are abided by at all times during construction. Additionally, the Contractor shall implement any and all other Best Management Practices applicable per Federal, State, County and Municipal laws concerning water pollution.

33. Any damage to the existing bituminous asphalt surface and base structure on local streets in the project limits shall be repaired at no cost to the owner.

34. It is the contractor's responsibility to ascertain the location of all existing utilities, whether public or private, and make the necessary adjustments as required to construct the project. If any private utility line, including but not limited to irrigation lines, are encountered within the right-of-way, it is the contractor's responsibility to make the necessary adjustments of said facilities and coordinate with the property owner or private company. Such adjustments are considered incidental to the project (no said pay item).

35. It is the sole responsibility of the contractor to protect his/her equipment during down time. The owner or the engineer shall not entertain any claims by the contractor due to any damage to his or her equipment or materials.

36. The Contractor shall notify property owners prior to construction. The Contractor shall provide documentation to the Engineer that this has been accomplished. Notifying property owners is considered incidental to the project.

37. There shall be no adjustment to fuel or asphalt index for this project.

IV. AMENDED SPECIFICATIONS

Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, shall be amended as follows or as amended by Addendum:

1. PARAGRAPH 105.06(b) COOPERATION BY THE CONTRACTOR SHALL BE AMENDED TO INCLUDE THE FOLLOWING:

If requested by the ENGINEER, Contractor shall provide a résumé or other information necessary to insure that project superintendent is experienced in the type of work being performed. At the request of the ENGINEER in writing, Contractor shall immediately remove any superintendent or other employees whose lack of experience or conduct is detrimental to the project. Said removal shall not be cause for claim against the ENGINEER, City of Tuscaloosa or their agents.

2. SECTION 109, SUB-SECTION 109.07 PARTIAL PAYMENT SHALL BE REPLACED WITH THE FOLLOWING:

Once each month the ENGINEER will make an appropriate estimate on the regulation form of the work or portion of the work completed and the value thereof based on the contract Unit Prices, or proportional part thereof for Lump Sum items, less retainage or any assessed liquidated damages or other designated deductions.

The payment of any monthly estimate for any portion of the work as provided in the Specifications shall in no way affect the obligation of the Contractor to complete the work in accordance with the contract.

No Payment for stored materials will be included on the monthly estimates.

3. SECTION 210, EXCAVATION AND EMBANKMENT, SUB-SECTION 210.03 CONSTRUCTION REQUIREMENTS, SUB-SECTION (b) ROADWAY EXCAVATION, SUB-SECTION 4. UNDERCUTTING, SUB-SECTION a. Soil SHALL BE REPLACED WITH THE FOLLOWING:

Undercut areas shall be undercut to a depth necessary for the removal of soft or yielding soils as determined by the Engineer. The areas of undercutting shall be shaped to drain, backfilled with a suitable material and uniformly compacted to the density specified for embankment.

Areas where improved roadbed is not required shall also be undercut if the Engineer determines that this is necessary for the removal of soft or yielding areas. These areas shall also be shaped to drain, backfilled with suitable material and uniformly compacted to the density specified for embankment.

All depressions in undercut sections shall be cleaned out and provisions shall be made for drainage. The depressions shall be backfilled and compacted with selected materials approved by the Engineer.

4. SECTION 530, ROADWAY PIPE CULVERTS, SUB-SECTION 530.04 METHOD OF MEASUREMENT SHALL BE REPLACED WITH THE FOLLOWING:

The accepted length of pipe culverts laid as ordered will be measured along the bottom flowline, or invert, of the pipe complete in place. Measurements will be made between inside walls of designated structures (junction boxes, inlets, etc.) and along the centerline of the flowline of special fittings (elbows, wyes, etc.). The above applies to round or arch, beveled or unbeveled, pipe. However, in no case will measurement be made for lengths greater than the sum of the nominal laying lengths of the pipe sections used or for lengths greater than the length of culvert ordered by the Engineer. No separate measurement for payment will be made for the excavation and/or backfill volume needed to reroute water for temporary drainage which might be necessary for the proper installation of the pipe or to perform the imperfect trench method of installation.

There shall be no separate measurement for Structure Excavation, Foundation Backfill and backfill utilizing existing local on-site materials.

5. SECTION 530, ROADWAY PIPE CULVERTS, SUB-SECTION 530.05(a) BASIS OF PAYMENT SHALL BE REPLACED WITH THE FOLLOWING:

The accepted length of pipe culverts, measured as above provided, will be paid for at the respective contract unit prices for the various sizes, and types of pipe provided in the proposal, complete in place, which shall be payment as herein provided and also for all work, equipment, materials, and incidentals necessary to complete the work. There shall be no separate payment for Structure Excavation, Foundation Backfill and backfill utilizing existing local on-site materials. Payment for these items shall be a subsidiary obligation of the roadway pipe culvert being installed.

6. SECTION 618, CONCRETE SIDEWALKS AND DRIVEWAYS, SUB-SECTION 618.05(a) BASIS OF PAYMENT SHALL BE **AMENDED** TO INCLUDE THE FOLLOWING:

Raised curbs, truncated domes and any other items required to meet ADA standards for handicap ramps, shall be a subsidiary obligation of Pay Item 29, Concrete Sidewalk, 4" Thick.

7. SECTION 619, PIPE CULVERT END TREATMENTS, SUB-SECTION 619.05(a) BASIS OF PAYMENT SHALL BE **REPLACED WITH THE FOLLOWING**:

The ordered and accepted pipe culvert end treatment of the designated class for each size and appropriate type of pipe to which the end treatment is attached, measured as noted above, will be paid for at the contract unit price bid for the end treatment. Such price shall be full compensation for the furnishing of all materials and the installation and construction thereof necessary for the complete construction of the end treatment, and for all labor, tools, equipment, and incidentals necessary to complete the work.

8. SECTION 621, INLETS, JUNCTION BOXES MANHOLES , AND MISCELLANEOUS DRAINAGE STRUCTURES, SUB-SECTION 621.04(a) INLETS AND JUNCTION BOXES, METHOD OF MEASUREMENT SHALL BE **REPLACED WITH THE FOLLOWING**:

Inlets and junction boxes will be measured as individual units including footings, bottom slab, walls, cover, lid, grating, etc., of the type, size, and shape shown on the plans.

9. SECTION 623, CURB, GUTTER, AND COMBINATION CURB AND GUTTER, SUB-SECTION 623.04(a) CURB, GUTTER, AND COMBINATION CURB AND GUTTER, METHOD OF MEASUREMENT SHALL BE **REPLACED WITH THE FOLLOWING**:

Accepted Concrete Gutter, Concrete Curb, and Combination Curb and Gutter will be measured in linear feet, complete in place, to the nearest 0.1 foot along the base of the curb face or along the flow line of the gutter. Measurement for Concrete Curb, and Combination Curb and Gutter shall not extend across driveways. Measurement for separate payment for Foundation Backfill will only be made when Item 214-B is provided in the proposal.

10. SECTION 654, PAY ITEM 654-A SOLID SODDING; SUB-SECTION 654.05 BASIS OF PAYMENT SHALL BE **REPLACED WITH THE FOLLOWING**:

Payment will be based on the respective unit bid price for solid sodding, complete-in-place, which shall be payment in full for furnishing the individual solid sodding, for hauling, preparation, placing, and maintenance (including watering) of the solid sodding and for all labor, equipment, tools and incidentals necessary to complete this item.

11. SECTION 665, TEMPORARY SOIL EROSION AND SEDIMENT CONTROL; SUB-SECTION 665.04 SILT FENCE AND SILT FENCE REMOVAL, METHOD OF MEASUREMENT SHALL BE **REPLACED WITH THE FOLLOWING**:

Silt fence will be measured along the top of the fence in linear feet to the nearest foot. There shall be no separate measurement for silt fence removal. Silt fence removal shall be a subsidiary obligation of Pay Item 85, Silt Fence.

12. SECTION 665, TEMPORARY SOIL EROSION AND SEDIMENT CONTROL; SUB-SECTION 665.05(a) UNIT PRICE COVERAGE, BASIS OF PAYMENT, PARAGRAPH 1 SHALL BE **REPLACED** WITH THE FOLLOWING:

The payment for all temporary erosion control items shall include the maintenance of the items until their removal.

13. SECTION 665, TEMPORARY SOIL EROSION AND SEDIMENT CONTROL; SUB-SECTION 665.05(a) UNIT PRICE COVERAGE, BASIS OF PAYMENT, LAST PARAGRAPH SHALL BE **REPLACED** WITH THE FOLLOWING:

The unit price shall be full compensation for furnishing all materials unless otherwise noted, the construction and installation of the materials into complete erosion or sediment control measures, and shall include all equipment, tools, labor, and incidentals necessary to complete the work, to maintain all work in an acceptable condition as long as deemed necessary by the Engineer, and to remove all items as directed.

SECTION 02250 - TRENCHING, BACKFILL AND COMPACTION

PART 1 - GENERAL

1.1 Summary:

- A. This Section of Specifications deals with the requirements for Trenching, Backfill, and Compaction for utility lines placed in roadways, lawns or unimproved property or any other area.

1.2 Related Sections:

- A. Section 02500 – Asphalt Paving
- B. Section 02607 – Precast Concrete Manholes
- C. Section 02622 – Polyvinyl Chloride Gravity Sewer Pipe
- D. Section 02722 – Sanitary Sewer System

1.3 Payment:

- A. Payment for trenching, bedding, backfill, and compaction shall be considered incidental to the cost of the pipe, and no separate payment shall be made.
- B. No separate payment shall be made for sloping back of trench walls, shoring, blasting, fence removal and replacement, or the protection and/or replacement of plants, trees, structures, etc. In general, the condition after construction shall be as good, or better, than before construction. No payment will be made unless specifically itemized in the Bid Schedule.

1.4 References:

- A. U.S. Department of Labor, Occupational Safety and Health Administration.
- B. State of Alabama Department of Transportation Standard Specifications for Highway Construction.

1.5 Project Conditions:

- A. Environmental Requirements:
 - 1. The Contractor shall maintain all drainage ways, gutters, etc., at all times. The Contractor at his own expense shall remove any eroded or washed material that enters pipes, ditches, or streams.
 - 2. The Contractor shall provide erosion control as required to protect surrounding areas from damage. Erosion control measures shall meet all requirements of the City of Tuscaloosa.
 - 3. All areas damaged as a result of erosion shall be repaired to a condition equal or better than the condition prior to construction, as determined by the Engineer.
 - 4. The contractor shall comply with the City of Tuscaloosa Municipal Code in regards to all environmental best management practices.

PART 2 - PRODUCTS

2.1 Materials:

A. Select Backfill:

1. Select Backfill where specified or required shall be crushed limestone. Crushed stone shall meet or exceed the requirements of the Alabama Department of Transportation Standard Specifications for Highway Construction, Section 801, Type No. 57 Crushed Limestone.

B. Standard Backfill:

1. Standard backfill shall consist of native soils of good earth, sand, and gravel and shall be free of large rocks, boulders and other deleterious substances.

C. Bedding:

1. Class "1" Bedding shall be Alabama Department of Transportation Standard Specifications for Highway Construction, Section 801, as follows:

Gravity Pipe (ALL materials) - No. 57 crushed limestone
Pressure Pipe (material NOT PLASTIC) - No. 57 crushed limestone
Pressure Pipe (PLASTIC material) - No. 8910 crushed limestone

2. Class "2" Bedding shall be reinforced concrete 3000 psi design mix.

3. Class "3" Bedding shall be native soil.

D. Trench Foundation

1. Trench foundation material shall be Alabama Department of Transportation Standard Specifications for Highway Construction, Section 801, No. 57 crushed limestone. This material shall only be used when approved in advance by the Engineer.

2.2 Source Quality Control:

- A. The Contractor shall supply gradation analysis for each type of crushed stone used.

PART 3 - EXECUTION

3.1 Examination of Conditions:

- A. The Contractor shall examine the area to be trenched and verify his requirements for trenching.

3.2 Protection and Removals:

A. Fences:

1. All fences in conflict with the proposed construction shall be removed in a neat and workmanlike manner and then replaced immediately following construction operations.

Where materials removed are not suitable for reuse, they shall be replaced with new material of equal or better quality and construction. All fences shall be rebuilt to line, with posts well set, wires fastened with new staples or ties and well stretched. All corner and end posts shall be well braced and set a minimum of 30 inches in the ground.

B. Utility Poles, Guy Wires, Miscellaneous Poles, Etc.:

1. All utility poles, guy wires, sign posts and similar private obstructions which are indicated on the plans or existing on the ground shall be removed and replaced by the Contractor at his own expense. In the event street signposts or signs are damaged or destroyed by the Contractor's operations, they may be replaced by the Owner at the Contractor's expense.
2. When it is necessary to remove or adjust any utilities, representatives of the utilities involved shall be notified to decide the method and nature of work to be done. The Contractor shall make satisfactory arrangements with other utilities for the required removal or adjustments at the Contractor's expense, unless otherwise specified.
3. The Contractor shall be held liable for damage, including negligent or willful damage to any other utility and shall pay for the cost of all necessary repairs and any damages resulting to public or private property resulting therefrom.
4. The Contractor shall take whatever means necessary to support sewer mains to their true line and grade when they are encountered during excavation. The pipe shall be supported so that no leakage will occur and under no circumstances will the Contractor be allowed to bypass raw sewage or allow raw sewage to leak into the trench. If a repair becomes necessary the contractor shall use materials of the same type and class of pipe or PVC pipe and fittings conforming to the City of Tuscaloosa Sanitary Sewer Construction Specifications. All couplings to existing pipe shall be manufactured couplings and all metal parts shall be stainless steel.

C. Ornamental Shrubs and Trees in Public Right of Ways:

1. Ornamental shrubs and trees shall not be removed unless directed by the Engineer. When ornamental shrubs and/or trees are to be removed and replaced, the following steps shall be followed:
 - a. Remove all trees, shrubs or plants, which interfere with construction with root system intact and protect from drying during construction period.
 - b. Replace plant to original location as soon as possible, ensure that hole is large enough, and no damage is done to root system.
 - c. Fill hole with good topsoil and tamp lightly and firmly into place and water plant.
2. Contractor shall replace any plant, tree, or shrub which is disturbed by construction and dies within one (1) year with like kind and size, at no cost to the Owner.

D. Adjacent Property:

1. The Contractor shall confine his operations to the rights-of-ways and/or easements designated. The Contractor shall repair any damage to adjacent property at no additional cost to the Owner.

E. Private Drives and Sidewalks:

1. The Contractor shall keep all private drives and sidewalks open and accessible at all times.
2. All streets and public roads shall be kept open and accessible to emergency vehicles at all times.

F. Existing Underground Utilities:

1. The Contractor shall protect all existing utilities during the trenching operation. The Contractor shall cooperate fully with the utility's requests for temporary and permanent supports during the trenching operation and shall furnish and install supports at no additional cost to the Owner.
2. Storm sewers in conflict with the proposed trench may be carefully dislodged and stockpiled. The pipes shall be cleaned and replaced immediately after new construction is clear. Storm sewers damaged by the Contractor shall be replaced with new pipe at no additional cost to the Owner. All storm sewers removed shall be re-laid to proper grade on a firm bedding so that settlement will not occur.

3.3 Trench Preparation:

A. Clearing and Grubbing:

1. Where clearing or partial clearing of the right-of-way or easements is necessary, such work shall be completed prior to trench excavation. Projecting materials such as trees, logs, brush, hedges, etc., shall be cut as near to the surface of the ground as possible, and all stumps and roots shall be grubbed out unless specifically stated otherwise. All materials so cleared and grubbed shall be removed from the site. In no case shall excavated materials be allowed to cover brush or trees prior to disposal.
2. The Contractor shall bear all costs of disposing of all cleared and grubbed materials. Unless otherwise specified, all merchantable timber cut from the area designated to be cleared shall become the property of the Contractor.
3. Burning will be permitted, provided the Contractor obtains permits and meets the requirements of the proper fire authorities and any other state, county or local ordinances. Burning on private property will not be permitted without written permission of the Owner of the property. The authority to burn shall in no way relieve the Contractor from damages, which may result from his operations.
4. In no case shall any materials from clearing and grubbing operations be left on the project, or be pushed onto abutting private properties, or be buried in embankments or trenches on the project.

5. On public property, existing trees or limbs over 2 inches in diameter shall not be cut unless they are within 7 feet of pipe centerline or specific permission is received from the Engineer. On private easements or in lawns, no trees or brush shall be cleared or cut without prior approval of the Engineer or Inspector. The Contractor shall be required to remove trees, shrubs or plants on private property intact, and to ball the roots, keep watered as required, and replant in their original location upon completion of pipe laying operations, unless written permission is obtained from the Engineer, or unless otherwise specified. The Contractor shall replace, at his own expense, any trees, shrubs, or plants which are damaged as a result of his operations, or which die within 1 year of the time it was disturbed or damaged.

B. Saw Cutting:

1. Prior to beginning the trenching operation in paved areas such as roads, drives, and parking lots, all paving shall be saw cut to a minimum depth of 2 inches. All paving materials shall be removed and disposed of prior to the trenching operation.
2. Prior to beginning the saw cutting, all traffic control devices, barricades, cones and permits required shall be obtained and in place.

C. Verification of Existing Utilities:

1. Prior to the excavation but after the saw cutting in paved areas, the Contractor shall unearth all known utilities and confirm the location and depth of such utility sufficiently far enough in advance to adjust the vertical or horizontal alignment of the pipeline if necessary.

3.4 Trench Construction:

A. General:

1. Trenching or excavation for pipe lines shall consist of the excavation necessary for the installation of sanitary sewers and all appurtenant facilities, including manholes, junction boxes, inlets, outlets, thrust blocks, and pipe protection as called for on the Drawings.
2. Trench excavation shall be made in an open cut unless tunneling or other construction methods are specifically authorized, and shall be true to the lines and grades shown on the plans or established by the Engineer.
3. When vertical banks for trench excavation are not practical to construct or create dangerous conditions to workmen, the banks may be sloped provided that such excavation does not damage adjacent structures. However, when trench banks are sloped, such banks shall be cut to vertical planes as specified above for that part of the ditch below the level of one (1) foot above the top of the pipeline. All side slopes shall conform to the requirements established by OSHA.
4. All streets, sidewalks, crossings, fire hydrants, water valves, fire alarm boxes and other similar public utilities are to be kept open or accessible for their intended use.

5. Every drain, gutter, culvert, or sewer for surface drainage encountered is to be kept open for both temporary and permanent flow, or if necessarily closed, other adequate provision for drainage is to be made.
6. In all cases where materials are deposited along open trenches, they shall be placed so that in the event of rain, no damage will result to the work and/or to adjacent property.
7. Pipe trenches shall not be excavated more than 300 feet in advance of pipe laying and temporary bridges or cross walks shall be constructed where required to maintain vehicular or pedestrian traffic.
8. Trench widths shall be confined to dedicated rights-of-way or construction easements, unless special written agreements have been made with the affected property owner. Place all excavated materials within easements or rights-of-way, and do not obstruct any public or private roadways or streets.
9. Where select backfill is specified or required, all excavated materials shall be promptly removed and disposed of by the Contractor.

B. Rock Excavation:

1. Rock encountered in trench excavation for pipe lines shall be removed for the over-all width of trench and to a depth of 6-inches below the bottom of the barrel of pipe 24-inches in diameter and smaller, and 8-inches below the bottom of pipe 24 to 36 inches in diameter, and 12-inches below pipe larger than 36-inches in diameter, if rock extends to such depths.
2. Where pipelines are constructed on concrete cradles, rock shall be excavated to the bottom of the cradle as shown on the plans. When necessary to provide sufficient working space, rock shall be excavated to additional depth for bell holes.
3. After the Engineer has inspected the completed excavation, the space below the ultimate pipe or structure grade shall be filled with an approved foundation material and compacted to the proper grade.
4. Drilling and blasting methods used in rock excavation shall be optional with the Contractor but shall be conducted with due regard to the safety of persons and property in the vicinity of the work and in strict conformity with all laws, ordinances, or regulations governing blasting and the use of explosives.
5. Rock excavation near existing structures of all types shall be conducted with the utmost care, and every precaution shall be taken to prevent damage to such structures. Any damage or injury of whatever nature to persons or property caused directly or indirectly by blasting operations shall be promptly repaired, replaced, or compensated for by the Contractor at his own expense and to the satisfaction of the persons injured or the owners of the property damaged.
6. Safety During Blasting:
 - a. Take all precautions necessary to prevent personal injury, damage to real or

personal property, or interference with use and enjoyment of any property resulting from blasting or the vibration or concussions caused by blasting. These precautions shall include, but are not limited to, investigations by the Contractor to establish limits of the size and nature of individual blasts which may be safely accomplished without damage or interference with the use of property.

- b. All drilling and blasting operations shall be performed in strict conformity with all laws, ordinances and regulations governing blasting and the use of explosives. The Contractor or blasting subcontractor shall be licensed for this type of blasting and shall take out and maintain, during the term of its contract or subcontract and any extension thereof, insurance equal to that specified for the Contractor in the General Conditions.
- c. The Contractor shall notify the fire department at least 48 hours in advance of any blasting.

7. Damage From Use of Explosives:

- a. Immediately inform the explosive specialist orally and in writing of all matters concerning complaints and claims between the public, or government, and the Contractor. If the contractor causes damage, injury or interference, as stated herein, the Contractor shall modify his blasting procedure.
- b. The Contractor hereby assumes all liability for all personal injury, and damage to real or personal property, or interference with the use or enjoyment of any property, or interference with the use or enjoyment of any property by reason of blasting or the resulting vibration or concussion. The Contractor assumes full responsibility for operating all equipment and performing all blasting in conformance with Federal and State laws, and regulations prescribed by any other governmental authority limiting the amount of vibration or concussion.

8. Pre-Blast Survey:

- a. The Contractor will conduct a pre-blast survey of the surrounding structures within 500 feet of any blasting operation on either side of the centerline of the blasting right-of-way and document the condition before any blasting or excavation begins. The documentation will include a written description of all defects, digital color photographs of each of these defects, and a complete inspection of all structures on the property. This includes outside structures, walls, sidewalks, etc. No video cameras will be allowed for pre-blast surveys where interior finished surfaces are concerned.
- b. In special situations, crack monitors may be located over existing cracks at selected locations to be measured before and after blasting to determine if widening or displacement has taken place.
- c. Before carrying out the inspection, the Contractor or his consultant shall notify the Owners of buildings or structures to be inspected and request permission to carry out the inspection. Should any building Owner refuse permission to carry out this inspection, the Contractor shall notify the Engineers in writing, giving the Owner's reason for refusal.

9. Blasting Program:
 - a. The Contractor shall furnish the Engineers the name and qualifications of its blasting consultant for approval.
 - b. The Contractor's consultant shall formulate and make recommendations in a written blasting program furnished to the engineer. Criteria for the selection of this program shall be the prevention of damage to existing structures and the prevention of any interruption of their services.
 - c. The blasting program shall include, but not be limited to, data on the locations, hole size, depth, overburden, pattern and inclination of the blast holes, the type, strength, amount, distribution, and powder factor for the explosives used, per hole and per blast, the sequence and pattern of delays, maximum amount of explosives in any one period, depth of rock, and depth of overburden, in any, and the description and purpose of special methods to be used. This data shall be accepted by the contractor as the general procedure of blasting on this job.
 - d. Explosion and firing devices shall be of a type that is commercially available, suitable for the use intended, in good condition resulting from proper storage and maintenance.
 - e. Blasting mats shall be of a size and type to be suitable for the use intended. All blasts should be covered with at least 2 feet of overburden. Fly-rock will not be permitted at any time. If a fly-rock incident does occur, the job will be stopped immediately and a written plan will be submitted by the Contractor to explain how this recurrence of fly-rock will be prevented in the future.
10. Blasting Preparation:
 - a. Conduct a pre-blast survey of existing structures as specified herein.
 - b. Prepare a written blasting program as specified herein.
11. Trial Blasting:
 - a. Conduct a trial blasting program as directed by the Contractor's consultant before general excavation blasting may commence. The maximum explosive charge weight per delay period utilized shall be limited to the submitted in the blasting plan.
 - b. Trial blasting shall consist of determining the relationship between peak particle velocities and weight of the explosive charges by a planned program of trial blasts. Beginning with small weights of explosive, successively greater explosive weights shall be detonated and the particle velocities measured at several distances from the blast. The trial blasting and field observations are intended to develop a relationship between size of the explosive charge, distance from the explosion, and particle velocity. This data shall be used as a basis for controlling the blasting program.

- c. The initial blasts in any blasting area shall be considered test blasts. These test blasts will be monitored, at nearest structures, and modifications of the maximum explosive charge weight per delay may be allowed providing that the vibration effects, at the nearest structure, are maintained below the specified levels. These modifications to the maximum charge weight per delay will only be allowed on the advice of the vibration consultant.

12. General Blasting Procedures:

- a. A blast shall be defined as a predetermined number of shots. A period of at least 5 minutes shall elapse between each blast and a minimum delay time of 8 milliseconds shall elapse between each individual shot within a blast. The interval between individuals shots may be increased or decreased if requested by the contractor and approved in writing by the Contractor's consultant. The contractor must, however, remain within the vibration limits hereinafter described.

- b. Blast Vibration Limits:

- 1. Blasting vibrations as recorded adjacent to the foundation of the nearest above ground structure shall be limited as follows:
 - a. A peak particle velocity (on any component of a 3 component particle velocity recording seismograph) of 2.00 inches/seconds shall not be exceeded for the structure closest to the blast site when vibration frequencies are greater than 40 hertz. Frequencies less than 40 hertz will be limited to a peak particle velocity of 0.50 inch/second.
 - b. Compliance with the Bureau of Mines blast level chart, as noted in RI 8507, will suffice for the previously mentioned limits.
- 2. When the existing structures are very close to the blasting area, very slight changes in any blasting variable will result in large changes in vibration intensities. Modifications of the blasting method and reduction of the explosive charge weight per delay shall be used to ensure that one of the above limits is met.
- 3. At any time the Engineer reserves the right to reduce or increase explosive amounts, change blasting patterns on any blasting, or eliminate blasting in certain areas should conditions warrant.
- 4. The maximum peak particle velocity may be increased with the written approval of the Contractor's consultant providing that the contractor and his consultant prove that no damage to existing structures will result.

13. Air Blast Limits:

- a. Air blast from blasting shall be controlled such that:

1. The maximum allowable air blast at any inhabited structure resulting from blasting operation shall not exceed 128 decibels peak when measured by an instrument having a flat response ± 3 decibels) over the range of at least 2 to 200 Hz.
 - b. Air blast shall be monitored with an approved instrument having the required frequency response and capable of providing a permanent record of the air blast effects. These records, identified by time and recording location shall be made available upon request to the Engineers on a monthly basis or in a tabulated form at other times as required.
14. Documentation of Blasting Program:
- a. All recommendations, guidelines, findings, and correspondences for the blasting program will be documented in writing and compiled into a final report.
 - b. Copies of ground vibration measurements recorded by seismographs will be analyzed and verified by the Consultant and included in the appendix of the final report.
- C. Sheeting, Shoring and Bracing:
1. The sides of all trenching excavations shall be sufficiently sheeted, shored, and braced whenever necessary to prevent slides, cave-ins, settlements or movement of the banks and to maintain the excavation clear of obstructions that will, in any way, hinder or delay the progress of the work.
 2. Wood or steel sheet piling of ample design and type shall be used when necessary.
 3. All sheeting, shoring, and bracing shall have sufficient strength and rigidity to withstand the pressures exerted and to maintain the walls of the excavation properly in place and protect all persons and property from injury or damage.
 4. Where excavations are made adjacent to existing buildings or other structures, or in paved streets or alleys, the Contractor shall take particular care to sheet, shore and brace the sides of the excavation adequately so as to prevent any undermining of or settlement beneath such structures or pavement. Underpinning of adjacent structures shall be done when necessary. The Contractor will be liable for any damage to any structure that results from his operations.
 5. Sheeting, shoring or bracing materials shall not be left in place unless so shown by the plans or ordered by the Engineer. Such materials shall be removed in such manner as will not endanger or damage the new structure or any existing structures or property, either public or private, in the vicinity, and so as to avoid cave-ins or slides. No trench sheeting and bracing shall be removed until the trench has been backfilled one foot above the top of the pipe.
- D. Trenching Through Dikes or Fill Sections:
1. Trenching through existing dikes or fill sections shall be accomplished in accordance

with general trenching requirements as specified elsewhere.

2. Trenching for pipe lines or other utilities through dikes or fill sections under construction shall not begin until the new dike or fill section has been constructed, enlarged, or otherwise improved to an elevation 3 feet above the top of the pipe or other utility being installed.
3. Where existing dikes or fill sections are being used for the storage of liquids such as a lagoon, reservoir, pond, lake, canal, or other structure, the Contractor shall take whatever means necessary to preserve the integrity of the structure. No leakage of the stored liquid out of the structure will be allowed without the written approval of the owners of said structure.

E. Minimum Trench Widths:

1. All excavations shall be made to the lines and grades as established by the drawings, and shall be open cut through whatever material encountered. The Engineer may, if requested, make changes in the trench alignment to avoid major obstructions, if such changes can be made within the easement right-of-way without adversely affecting the intended function of the facility. In areas where soil conditions permit normal excavation of the trench, the sides shall be cut as nearly vertical as possible from the bottom of the trench to a point at least 12 inches above the top of the pipe. The trench width shall conform to Table 2 of the AWWA C600 Specification. For pipes larger than listed in Table 2, the overall width of the trench shall be determined from the formula $4/3d$ plus 12 inches, in which "d" is the diameter of the pipe in inches.

3.5 Dewatering:

- A. The Contractor shall at all times provide and maintain the necessary equipment and means for removal of all water from excavated areas. All excavated areas shall be kept free of water while any work is in progress. Particular precautions shall be taken to prevent the displacement of structures or pipelines as a result of accumulated water.
- B. Bedding material or pipe shall not be placed in wet or unstable trenches. Soil that cannot be properly dewatered shall be excavated and dry material tamped in place to such a depth as may be required to provide a firm trench bottom.
- C. All water removed or diverted from excavations shall be disposed of in a manner that will prevent damage to adjacent property or any flooding of streets or property. Disposal of trench water through the pipeline under construction shall not be allowed.
- D. Water shall be removed and disposed of so as to not damage adjacent property or existing drainage ways.

3.6 Trench Foundation Material:

- A. Where unsuitable materials for supporting pipe cushion are encountered, these materials shall be removed and replaced with trench foundation material, as directed by the Engineer.
- B. Trench foundation material shall be placed at the specified trench width from the bottom of the

excess excavation to the bottom grade line of the pipe cushion.

- C. Trench foundation material so placed shall be as shown on the trench detail drawings or specified herein. If not shown on the drawings, trench foundation material shall consist of Alabama Department of Transportation Standard Specifications for Highway Construction, Section 801, No. 57 crushed limestone.
- D. Payment for trench foundation material will be limited to situations approved in advance by the Engineer.

3.7 Bedding and Backfill:

A. General:

1. All areas where bedding is not specifically called for or required by the Engineer, the pipe shall be bedded in native soils. Bell holes shall be excavated so that the entire pipe length rests on firm soil.
2. Areas undercut by the Contractor through negligence, or his convenience, shall be backfilled and tamped with approved materials at the expense of the Contractor. In paved areas, the backfill material shall be select backfill.
3. Bedding shall meet the requirements of Paragraph 2.01 of these specifications.
4. Backfilling shall not begin before the Engineer or Inspector has inspected the grade and alignment of the pipe.
5. If select backfill is not specified, backfilling to a point 12-inches above the top of the pipe, defined as the pipe zone, shall be done with good earth, sand or gravel and shall be free from large rocks or hard lumpy materials. Large rocks shall be defined as any larger than 2-inches in diameter. No materials of perishable, spongy or otherwise unsuitable nature shall be used in backfilling. It is essential that the completed backfill be done in such a manner as to minimize voids in the backfill.
6. Place trench backfill material at approximately the same rate along both sides of the pipe and compact by tamping in layers not to exceed 8 inches of loose fill up to the horizontal centerline of the pipe. The intent is to cradle the pipe so that the full length is uniformly supported on firm bedding and the weight of the pipe and backfill is borne uniformly by the lower half of the pipe barrel. Special attention should be given to the backfilling and tamping procedures to insure that no voids or un-compacted areas occur beneath the pipe. After this, fill and compact the trench as specified below, depending upon the location of the work and danger from subsequent settlement.
7. All backfilling shall be done in such a manner that will not disturb or injure the pipe or structure over or against which it is being placed. Any pipe or structure injured, damaged, or moved from its proper line or grade during backfilling operations, shall be replaced or repaired and then re-backfilled as herein specified, at the expense of the Contractor.

B. Trench Backfill and Pipe Bedding:

1. Pipe bedding and trench backfill shall be constructed as shown on the drawings for trench details. If no trench details are shown on the drawings, then the Contractor shall install the utilities as described in Paragraphs 3.07 B.3 and 3.07 B.4.
2. Where pipes are installed in unpaved areas, unless specifically shown on the drawings or called out in the Bid Schedule to be unimproved, the areas shall be considered to be **Improved** areas and shall be constructed accordingly.
3. Pipe Bedding and Trench Backfill – **GRAVITY** Pipe:

- a. Under Pavement (Asphalt or Concrete and/or Gravel Drives):

Pipe Material – Ductile Iron and Concrete

- Bedding – 6” ALDOT No. 57 crushed limestone
- Initial Backfill – Select Backfill ALDOT 825 Type “A” from bottom of pipe to springline in maximum 8” loose layers compacted to 95% SPD
- Final Backfill – Select backfill ALDOT 825 Type “A” to top of trench in maximum 8” layers compacted to 95% SPD

Pipe Material – PVC

- Bedding – 6” ALDOT No. 57 crushed limestone
- Initial Backfill – Select Backfill ALDOT 825 Type “A” from bottom of pipe to 12” above top of pipe in maximum 8” loose layers compacted to 95% SPD
- Final Backfill – Select backfill ALDOT 825 Type “A” to top of trench in maximum 8” layers compacted to 95% SPD

- b. Improved Areas:

Pipe Material – Ductile Iron

- Bedding – 6” ALDOT No. 57 crushed limestone
- Initial Backfill – ALDOT No. 57 crushed limestone from bottom of pipe to springline in max. 8” loose layers, mechanically consolidated
- Final Backfill – Standard backfill to top of trench in maximum 8” loose layers compacted to 90% SPD

Pipe Material – PVC

- Bedding – 6” ALDOT No. 57 crushed limestone
- Initial Backfill – ALDOT No. 57 crushed limestone from bottom of pipe to 12” above top of pipe in maximum 8” loose layers, mechanically consolidated
- Final Backfill – Standard backfill to top of trench in max 8” loose layers compacted to 90% SPD.

- c. Unimproved Areas:

Pipe Material – Ductile Iron

- Bedding – 6” ALDOT No. 57 crushed limestone
Initial Backfill – ALDOT No. 57 crushed limestone from bottom of pipe to springline in max. 8” loose layers, mechanically consolidated
Final Backfill – Standard backfill to top of trench , loose.

Pipe Material – PVC

- Bedding – 6” ALDOT No. 57 crushed limestone
Initial Backfill – ALDOT No. 57 crushed limestone from bottom of pipe to 12” above top of pipe in maximum 8” loose layers, mechanically consolidated
Final Backfill – Standard backfill to top of trench, loose

4. Pipe Bedding and Trench Backfill – **PRESSURE** Pipe:

a. Under Pavement-Asphalt or Concrete and/or Gravel Drives:

Pipe Material – Ductile Iron

- Bedding - Class 3 Native Material *
Initial Backfill – Select backfill ALDOT 825 Type “A” from bottom of pipe to springline in maximum 8” loose layers compacted to 95% SPD
Final Backfill – Select backfill ALDOT 825 Type “A” to top of trench in maximum 8” layers compacted to 95% SPD

Pipe Material – PVC

- Bedding - Class 3 Native Material *
Initial Backfill – ALDOT No. 8910 crushed limestone from bottom of pipe to 12” above top of pipe in maximum 8” loose layers compacted to 95% SPD
Final Backfill – Select backfill ALDOT 825 Type “A” to top of trench in maximum 8” layers compacted to 95% SPD

b. Improved Areas:

Pipe Material – Ductile Iron and/or PVC

- Bedding – Class 3 Native Material *
Initial Backfill – Standard backfill from bottom of pipe to springline in maximum 8” loose layers compacted to 90% SPD
Final Backfill – Standard backfill to top of trench in maximum 8” loose layers compacted to 90% SPD

c. Unimproved Areas:

Pipe Material – Ductile Iron and/or PVC

- Bedding – Class 3 Native Material *
Initial Backfill – Standard backfill from bottom of pipe to springline in

Final Backfill – maximum 8” loose layers compacted to 90% SPD
Standard backfill to top of trench , loose

** Where trench bottom is rock, excavate rock to depth according to Section 3.04 of this specification and provide Class 1 bedding.*

3.8 Cleaning:

- A. The Contractor shall thoroughly clean all areas damaged during construction of excess fill, construction debris, etc.
- B. All gutters and adjacent curbing shall be swept clean of debris and materials that may hinder storm water flow.

3.9 Protection:

- A. The Contractor shall protect the newly constructed pipeline from damage until final acceptance of the work.

END OF SECTION 02250

SECTION 02500 - ASPHALT PAVING AND PATCHING

PART 1 - GENERAL

1.1 Section Includes:

- A. This Section of Specifications covers the material and installation requirements for asphalt patching over excavated trenches in roads, parking lots and driveways.
- B. This Section of Specifications covers material and installation requirements for an asphalt overlay across the entire paving width if required in the proposal.

1.2 Related Sections:

- A. Section 02250 – Trenching, Backfill and Compaction

1.3 References:

- A. State of Alabama Department of Transportation Standard Specifications for Highway Construction, Latest Edition.

1.4 Quality Assurance:

- A. The work of asphalt paving shall be accomplished by skilled workmen experienced in the laying of asphalt.
- B. All equipment shall be of a design and size to successfully accomplish the work.

1.5 Project Conditions:

- A. The Contractor shall comply with all environmental laws and requirements pertaining to the work.
- B. The Contractor shall take adequate measures to control dust in the work area.
- C. The Contractor shall thoroughly inspect the backfilled trench and assure himself that proper laying conditions exist.
- D. The Contractor shall provide and maintain adequate and safe traffic control.

PART 2 - PRODUCTS

2.1 Materials:

- A. Prime Coat:
 - 1. Prime Coat shall be emulsified asphalt, Type AE-P, or cutback asphalt Types MC 250, RC 70 or RC 250 as defined in Section 401 and Section 804 of the Alabama Department of Transportation Standard Specifications.

2. Prime Coat shall be applied at the rate of 0.22 to 0.25 gallons per square yard over the entire area to be treated with asphalt.
- B. Tack Coat:
1. Tack coat shall be as per City of Tuscaloosa Standards provided by the OCE.
- C. Asphalt Patch:
1. Asphalt paving used in patching shall be as per City of Tuscaloosa Standards provided by the OCE.
- D. Asphalt Overlay:
1. Asphalt used as the overlay of an existing street shall be Improved Bituminous Concrete Wearing Surface, Mix "A" and all materials used shall conform to Article 424 of the State of Alabama Department of Transportation Specifications.
 3. The Contractor shall refer to the Bid Proposal or Drawings for the quantity of material to be applied per square yard.
- E. Traffic striping and control markings shall conform to Sections 701 and 703 of the State of Alabama Department of Transportation Standard Specifications for Highway Construction. All striping, delineations, markers, etc., damaged or destroyed during the construction shall be replaced by the Contractor at his expense.
- F. Before overlaying the street, the Contractor shall raise or lower all valve boxes, manholes and other embedded items, including items that have previously been paved over. No extra payment will be made for these adjustments.
- 2.2 Equipment:
- A. Equipment used in asphalt patching and/or asphalt paving shall meet the requirements of Article 410.03a of the State of Alabama Department of Transportation Specifications.
 - B. Equipment used in the application of Prime Coat and Tack Coat shall comply with Article 401.03a of the above mentioned Specifications.
- 2.3 Temperature and Weather Requirements:
- A. Prime and Tack Coat:
 1. Bituminous materials shall not be placed on wet surfaces or when the air temperature is below 60-degrees F.
 2. Bituminous materials shall not be placed when the temperature is expected to fall below freezing during the night regardless of the daytime temperature.
 - B. Asphalt Patching and Overlay:

1. The asphalt mixture shall be placed only upon an approved underlying course that is dry.
2. Asphalt layers of 200-pounds per square yard or less shall not be placed when the air temperature is below 40-degrees F. The air temperature must be 40-degrees F and rising before the spreading operation is started and the spreading operation shall be stopped when the air temperature is 45-degrees F and falling.
3. For asphalt layers over 200-pounds per square yard, the above temperatures shall be lowered by 5-degrees.

PART 3 - EXECUTION

3.1 Execution:

A. Prime and Tack Coat:

1. All loose material, dust and foreign material shall be removed from the surface. Cleaning shall be continued until all caked and loose dirt and dust are removed.

B. Asphalt Patching:

1. All designated areas to be patched shall be trimmed to neat vertical lines to the depth of patch specified. All loose material shall be removed. A prime or tack coat shall be applied as specified above. The asphalt shall be placed and compacted to a degree that further consolidation of the patch is not anticipated.
2. Any patched areas that do consolidate shall be replaced or additional material brought in to bring the patch up to the surrounding level.
3. All asphalt or concrete streets, parking areas and drives shall be patched the same day they are cut. Temporary or cold patch material may be used until the permanent patch can be placed; however, no extra payment will be made for temporary patching.

3.2 Application:

A. Prime and Tack Coat:

1. Prime and Tack Coat shall be uniformly applied at the rate specified by pressurized distributors.
2. All areas to be treated with an asphalt surface treatment shall be primed and/or tacked.

B. Asphalt Patch and Overlay:

1. Asphalt patching may be applied with spreaders, by hand, or with motor graders. All areas inaccessible to large equipment shall be spread by hand.
2. Asphalt patching shall be thoroughly compacted through the use of steel wheeled rollers and/or rubber tired rollers. Density shall be as specified on the drawings in the Bid

Proposal or in the State of Alabama Department of Transportation Standard Specifications.

3. Asphalt paving overlay shall be applied with spreaders; except in inaccessible areas spreading may be done by hand, uniformly placing the desired rate per square yard over the underlying surface.
4. As soon as the mixture has set sufficiently to prevent cracking, the mixture shall be rolled with steel wheel and rubber-tired rollers to compact the mixture. Density shall be as specified on the drawings or in the Bid Proposal.

3.3 Testing and Surface Requirements:

- A. Testing of the asphalt mixtures shall be performed at the discretion of the Engineer. Testing shall include but not be limited to density tests and extraction tests.
- B. The finished surface of asphalt overlays shall be checked with string, level and/or straightedge. The finished surface shall not vary more than 1/4" from the required sections as measured at right angles to the roadway centerline. The finished surface shall not vary more than 3/8" in any 25-foot section measured parallel to the centerline at the following locations: one foot inside of the edges of pavement, at the centerline and at other points as designated.

3.4 Maintenance:

- A. The contractor shall maintain and protect the newly laid asphalt until final acceptance of the work.

END OF SECTION 02500

SECTION 02520 - CURED-IN-PLACE PIPE LINER (CIPP)

PART 1 – GENERAL

1.1 Requirements:

- A. The Work of this Section includes providing a cured-in-place-pipe (CIPP) liner to stabilize structural defects and constructional inadequacies in sanitary sewer pipelines. The liner shall be smooth, hard, strong, and chemically inert. Additionally, the interior surface shall closely follow the contours of the host pipe.
- B. The scope of Work requires the CONTRACTOR to provide all materials, labor, equipment, and services necessary for: Bypass pumping or diversion of sewage flows, rehabilitation of existing sanitary sewers by lining the existing pipe, connecting into manhole, restoring affected manhole conditions, initial and final cleaning, pre- and post-installation CCTV inspection, restoring service lateral connections, and final testing of the pipe system.

1.2 Submittals:

A. Bid Submittals

1. The following submittals are to be included with the Bid package submitted to the Owner's Representative:
 - a. The design method shall be submitted for approval with the Bid Package.
 - b. An itemized list detailing the installation procedures shall be submitted. This shall include estimated times for each task, lateral reinstatement methods, the number of required excavations and any other items unique to each process.
 - c. CONTRACTOR shall submit certification from the "CIPP supplier"; evidence of being trained to install the product.
 - d. All related ASTM standards, or any nationally recognized standards, for installation of the product shall be submitted.
 - e. Detailed procedures for repairing the product in the event of failure or future damage. These procedures should not require specialized training and/or equipment for the OWNER's maintenance crews.
 - f. Detailed procedures for future tapping of service connections into the product. The procedures should not require specialized training and/or equipment for the OWNER's maintenance crews. Included in this submittal should be a list of materials necessary to make future service connections.
 - g. Manufacturer must submit evidence or a written statement indicating that at least 250,000 linear feet of the product has been supplied for installation in sanitary sewer main applications.
 - h. The CONTRACTOR shall submit documentation along with references indicating that at least 100,000 feet of mainline sewer lines have been rehabilitated by the CONTRACTOR with the particular product to be installed and at least 150 service lateral robotic reconnections have been made by the CONTRACTOR.
 - i. Documentation/successful experience references for materials to be used to seal the annular space between the host pipe and CIPP liner

- j. The CONTRACTOR and actual field superintendent shall have at least 5 years of experience installing the particular CIPP product to be installed, and shall submit verifying documentation.

B. Submit Prior to Mobilization for each Project:

1. Analysis of design criteria and calculations for CIPP thickness per ASTM F1216. The CONTRACTOR shall submit complete data and design calculations for each lining, together with an installation method statement to the OWNER. Approval of the calculations shall not relieve the CONTRACTOR of any contractual obligations.
2. The recommended inversion pressures for installation shall be provided as well as the minimum pressure required to hold the tube tight against the existing conduit, and the maximum allowable pressure so as not to damage the tube.
3. Installation and resin curing schedule as recommended by resin manufacturer including temperatures, times, and recommended cool down procedures. The CONTRACTOR shall include a typical schedule for "wet out" of the flexible tube with a typical insertion and curing schedule/plan at the outset of the Contract. For each and every lining subsequently proposed, the CONTRACTOR shall submit a schedule for "wet out" of the flexible tube together with the specific insertion and curing schedule/plan at least 24 hours in advance of installation.
4. Manufacturer's certifications of the resin material used for this Project.
5. Designation of testing lab and documentation of their experience/certification.
6. Designation of wet out facilities.
7. CIPP Field Samples: The manufacturer shall submit a minimum of 15 test results from previous field installations of the same resin system and tube materials as proposed for the actual installation documenting that the minimum specified properties have been obtained on previous installations.
8. Sample pre- and post video inspection DVDs and cataloging information shall be submitted for review and approval by the OWNER.
9. Specifications on bypass pumping equipment to be used during construction.
10. Descriptions on sealing methods and materials to be used to seal termination points of CIPP.
11. Material and construction methods for reconnection of service laterals by excavation (if proposed or required).
12. Spill control/response plan.
13. Pre-installation CCTV DVD with service connection location log.
14. Installation Plan/Diversion Pumping Plan (including Emergency Plans).
15. Traffic management plan, including provision for the safe passage of pedestrians and vehicular access to property affected by the proximity of the proposed work. This shall meet MUTCD.
16. Field safety plan including procedures for confined space entry.
17. Jet/Vacuum truck description (include plan to catch debris)

C. After Completion of Each Section:

1. Process Control Sheet to include Temperature/Time Log Information Tap Cut Information and Curing Cycle.
2. Post-installation CCTV inspection DVD's.
3. CIPP supplier certification of proper installation.

4. Certified copies of test reports on CIPP coupons obtained during actual installation in the presence of the CONTRACTOR.
5. Physical Samples. Samples removed for testing shall be individually labeled and logged to record the following:
 - a. OWNER's Project number and title.
 - b. Sample number.
 - c. Segment number of line as noted on plans.
 - d. Date and time of sample.
 - e. Name of CONTRACTOR.
 - f. Date, location and by whom tested.
 - g. Results of test.
 - h. Samples shall be Numbered as Follows:
 - 1) Sample No. A: Resin sample (not used).
 - 2) Sample No. B: Flat plate sample or surrogate host pipe sample.
 - 3) Sample No. C: Upstream thickness test.
 - 4) Sample No. D: Downstream thickness test.

1.3 Referenced Documents:

- A. This Specification references American Society for Testing and Materials (ASTM) and National association of sewer service companies (NASSCO) standards which are made part hereof by such reference, and shall be the latest edition and revision thereof. The materials, installation procedures and construction procedures and testing should be as specified in ASTM F1216 or ASTM F1743. If there is a conflict between these standards and this specification, this Specification shall govern.

1.4 Installer Qualifications:

- A. The CONTRACTOR or Subcontractor performing the work of this section shall be employees of the company manufacturing the CIPP system components, or shall be certified by the repair system manufacturer. Notwithstanding these requirements, every individual installing the repair material shall be certified by the lining system manufacturer.

1.5 Responsibility For Overflows Or Spills:

- A. It shall be the responsibility of the CONTRACTOR to schedule and perform the Work in a manner that does not cause or contribute to incidence of overflows or spills of sewage from the sewer system.
- B. In the event that the CONTRACTOR's work activities contribute to overflows or spills, the CONTRACTOR shall immediately take appropriate action to contain and stop the overflow, clean up the spillage, disinfect the area affected by the spill, and notify the OWNER's designated immediately.
- C. CONTRACTOR shall indemnify and hold harmless the OWNER for any fines or third-party claims for personal or property damage arising out of a spill or overflow that is fully or partially the responsibility of the CONTRACTOR, including the legal, engineering, and administrative expenses of the OWNER in defending such fines and claims.

1.6 Warranty:

- A. Material Warranty: A written guarantee of 5 years shall be provided by the manufacturer against any breakdown of the material effectiveness of the structural repair elements.
- B. Workmanship Warranty: A written guarantee of 2 years minimum shall be provided by the CONTRACTOR against any shortcoming in workmanship.

PART 2 - PRODUCTS

2.1 Materials:

C. Flexible Liner Tube:

1. The flexible liner shall be a composite tube with one or more layers of needled felt or equivalent woven or non-woven material manufactured under quality controlled conditions set by the manufacturer. Tube shall be sized so that, when installed, it will fit snugly and firmly inside the existing sewer and produce the required thickness after the resin is cured.
2. The outside of the tube shall be marked along its full length at regular intervals not to exceed 5 feet.
3. The flexible liner tube shall fit completely by length and diameter in the sewer, with allowance for proper longitudinal or circumferential stretching or shrinkage due to pressure or expansion being made. The lining shall be fabricated in such a length that when installed, it will occupy exactly the length of the pipeline between the launch and reception manholes. The lining shall be of the correct diameter so that after inversion it does not wrinkle.
4. The tube shall contain no intermediate layers that may delaminate after resin curing. It shall not be possible to separate any layers with a probe or knife blade such that the layers separate cleanly or the probe or knife blade moves freely between the layers. All layers, after curing, shall be completely saturated with resin. Where several layers of felt are required, the inner layer shall be stitched or spot-welded to form a tube. Each successive layer shall be individually wrapped around the previous one and spot-welded or stitched together. The outer layer of felt shall have an installation tube pre-bonded to it, or a sheet of this material shall be wrapped around the completed felt tube. Where a pre-bonded material is used, a covering strip shall be bonded over the seam to form an airtight joint.
5. The dimensions of the lining shall take account of any loss of the host pipe wall thickness due to hydrogen sulfide corrosion and deformation of the pipe to be lined where this is less than 10 percent of diameter.

D. Resin:

1. The resin used to impregnate the tube shall produce a cured tube that shall be resistant to shrinkage, shall not corrode or oxidize, and shall also be resistant to abrasion from solids, grit, and sand in wastewater. The resin shall have proven resistance to the municipal wastewater environment that may comprise, as a minimum, all of the following factors:
 - a. Immersion in septic sewage at temperatures up to 85 degrees F.

- b. Exposure in hydrogen sulfide gas from septic sewage at temperatures up to 85 degrees F.
 - c. Exposure to ultra-violet light (sunlight) at any stage prior to installation.
2. The internal wall color of the cured liner shall be white or light brown.
 3. The chemical resistance of the resin system selected shall have been tested by the resin manufacturer in accordance with ASTM C581. Exposure to the chemical solution listed below at temperatures of up to 85 degrees F, shall result in a loss of not more than 20 percent of the initial physical properties when tested in accordance with ASTM C581 for a period of not less than 1 year.

Chemical Solution	Concentration, %
Tap Water (pH 6-9)	100
Nitric Acid	5
Phosphoric Acid	10
Sulfuric Acid	10
Gasoline	100
Vegetable Oil	100
Detergent or Soap	0.1

4. The resin system shall be manufactured by a company selected by the CIPP supplier. Only polyester and vinyl ester resins complying with the following requirements shall be used.
5. Polyester Resin: A resin created by reaction products between isophthalic/terathalic acid, maleic anhydride, and a glycol characterized by reactive unsaturation located along the molecular chain. This resin is compounded with a reactive styrene monomer and reacted together with initiators/promoters to produce cross-linked copolymer matrices.
6. Vinyl Ester Resin: A resin created by reaction products of epoxy resins with methacrylic acid and characterized by reactive unsaturation located in terminal positions of the molecular chain. This resin is compounded with a reactive styrene monomer and reacted together with initiators/promoters to produce cross-linked copolymer matrices.

E. CIPP Properties:

1. The CIPP after curing shall meet the minimum structural properties listed below:

Property	Reference	Minimum Value
Flexural Strength	ASTM D790	4,500 psi
Short Term Flexural Modulus of Elasticity	ASTM D790	250,000 psi
Tensile Strength	ASTM D638	3,000 psi

F. CIPP Thickness:

1. The minimum thickness for the CIPP, after curing, shall be calculated based on the following design conditions:

- a. Fully deteriorated pipe condition.
 - b. The existing sewer is considered to have an ovality of no greater than 10 percent in circumference.
 - c. The CIPP is subjected to a full soil load of 120 pounds per cubic foot.
 - d. The CIPP is subjected to traffic live loads as calculated by AASHTO Standard Specifications for Highway Bridges, HS-20-44 Highway Loading. No vehicular loading if more than 4 feet below constructed pavement level, unless otherwise specified.
 - e. The modulus of soil reaction for pipe zone backfill material is 1,000 psi.
 - f. The CIPP is subject to a groundwater elevation at ground surface, unless approved by OWNER based on specific site conditions.
 - g. The long-term flexural strength and long-term flexural modulus of elasticity for CIPP shall be equivalent to 50 percent of the initial flexural strength and initial flexural modulus of elasticity, respectively, as measured in accordance with ASTM D790.
 - h. The minimum overall factor of safety is 2.0.
 - i. The design life of the CIPP repair shall be 50 years.
2. The thickness of the CIPP shall be within minus 5 percent and plus 10 percent of the design thickness.
 3. The minimum installed thickness shall be 6mm for pipes with diameter of 8 inches and larger and 4.5mm for pipes with diameter of 6 inches.

PART 3 - EXECUTION

3.1 Traffic Control And Safety:

- A. The CONTRACTOR is solely responsible for all traffic control and safety during the course of the project. Traffic Control shall meet the MUTCD.

3.2 Delivery, Storage, And Handling:

- A. If the flexible tube is impregnated with resin at the factory, it shall be transported, installed, and cured before expiration of the shelf life.
- B. Impregnated tube shall be stored and transported under refrigerated, ultraviolet light-free conditions.
- C. Each liner shall be accompanied with the appropriate documentation indicating time and date of liner manufacturing, felt thickness, number of layers, length of liner, resin type and name, hardener type and name, batch numbers, and mixing ratios.
- D. No cuts, tears, or abrasions shall occur during handling. The OWNER may inspect the tube before it is placed into the host pipe.

3.3 Temporary Flow Bypass And Diversion Pumping:

- A. Temporary Flow Bypass and Diversion Pumping shall be carried out in accordance with Section 02750, WASTEWATER FLOW CONTROL.

3.4 Private Service Lateral Shutdown:

- A. When it is necessary to shutdown a private service line while work is in progress and before the service lines are reconnected, the OWNER shall be notified by CONTRACTOR at least one week prior to the shutdown.
- B. The CONTRACTOR will notify building occupants twice regarding service lateral disconnection by placing door hangers: 1) not less than 1 week prior; and 2) not more than 24 hours prior to disconnection.
- C. When a service lateral must be disconnected from the main for more than 1 work day, the lateral shall be positively drained or pumped a minimum of once every 24 hours. Monitor status of flow and storage. Pump lateral more frequently where flows exceed the storage capacity of the lateral or such temporary storage as may be provided by CONTRACTOR.
- D. Temporarily restore services in uncompleted sections during nonwork hours.
- E. Notify building occupants when work is complete and full uninterrupted service restored.
- F. No service is to remain shutdown for more than a period of 8 hours, unless CONTRACTOR provides substitute services for the residents. If the service is to be shutdown for more than 8 hours and CONTRACTOR cannot provide substitute services, then CONTRACTOR shall be required to provide temporary living quarters (i.e., hotel) for the resident at no additional cost to OWNER or the resident.
- G. Commercial sewer services shall be maintained at all times while businesses are open.
- H. No sewage from the services or main line shall be allowed to be discharged on the ground or in waterways. Holding pits or tanks are not allowed unless permitted by OWNER.

3.5 Pre-Installation Procedures:

- A. All requisite pre-installation submittals shall be approved, including traffic management measures, safe pedestrian passage, provision of vehicular access to property, bypass/diversion pumping and emergency measures.
- B. Prior to entering access areas such as manholes, and performing inspection or cleaning operations, an evaluation of the atmosphere to determine the presence of toxic or flammable vapors or lack of oxygen must be undertaken in accordance with local, state, or federal safety regulations.
- C. Preconditioning and cleaning shall be carried out in accordance with Section 02511, CLEANING OF SEWER. In addition, the CONTRACTOR shall immediately, prior to installation of the lining: high pressure, flush and vacuum every sewer section to be rehabilitated and repaired including pertinent manholes, and remove any root, grease buildup or any other obstruction that may interfere with lining operations.

- D. All debris removed from the sewer during cleaning shall be transported in watertight containers to the OWNER's treatment plant as directed, unless directed otherwise, and discharged as directed by authorized personnel.
- E. Condition of existing line shall be verified following cleaning by CCTV inspection. CCTV inspection shall be performed in accordance with Section 02952 CLOSED-CIRCUIT TELEVISION INSPECTION.
- F. The accurate location and serviceability of any existing laterals or service connections (taps) shall be confirmed. Serviceability shall be confirmed by flowing water, dye testing or visually with CCTV inspection, if necessary.

3.6 General Installation Procedures:

A. Wet Out:

1. Thoroughly saturate flexible tube prior to installation. Catalyst system or additives compatible with the resin and flexible tube shall be as recommended by the manufacturer.
2. The tube should be vacuum-impregnated wet-out with resin under controlled conditions. The volume of resin used should be sufficient to fill all voids in the tube material at nominal thickness and diameter. The volume should be adjusted by adding excess resin for the change in resin volume due to polymerization and to allow for any migration of resin into the cracks and joints in the original pipe. A roller system shall be used to uniformly distribute the resin throughout the tube.
3. The CONTRACTOR shall designate a location where the CIPP will be vacuum impregnated prior to installation. Serial vacuum impregnation shall be utilized for maximum saturation. The CONTRACTOR shall allow the OWNER's representative to inspect the materials and procedures used to vacuum impregnate the tube.
4. Handle the resin impregnated flexible tube to retard or prevent resin setting until it is ready for insertion.

B. Insertion:

1. Insert flexible tube through an existing manhole by means of procedure approved by the manufacturer.
2. The addition of water pressure or steam shall be adjusted to cause the impregnated flexible tube to invert from manhole to manhole, holding the tube tight against the host sewer pipe.

C. Curing:

1. If feasible, gauges (thermocouples) shall be placed between impregnated tube and invert of the original pipe to monitor outside liner temperatures during resin curing process.
2. The CONTRACTOR shall complete a process control sheet for every lining (even steam cured lines) completed. The form of the process control sheet shall be approved by the OWNER. Initial cure may be considered completed when

exposed portions of the flexible tube pipe take a hard set and temperatures are adequate, as recommended by the manufacturer.

3. Steam curing is acceptable.

- D. The use of a lubricant during inversion is recommended to reduce friction. This lubricant should be poured into the water in the downtube or applied directly to the tube or inflation bladder. The lubricant used should be a nontoxic, oil-based product that has no detrimental effects on the tube or boiler and pump system, will not support the growth of bacteria, and will not adversely affect the fluid to be transported.
- E. The finished CIPP shall be continuous and free from visual defects such as foreign inclusions, dry spots, pinholes, delamination, and wrinkles specified above. Any section of lining with such defects shall be removed and replaced at no additional cost to the OWNER.

3.7 Manholes:

- A. CIPP connections at the manhole opening shall be completed as watertight seals. The annular space between the CIPP and host pipe shall be sealed with a high viscosity epoxy or expansive, preformed gasket material. Materials and methods shall be submitted for approval prior to implementing any work onsite.

3.8 Service Reinstatements:

- A. The exact location and number of service connections shall be determined from CCTV. It shall be CONTRACTOR's responsibility to accurately field locate all existing service connections. The CONTRACTOR shall reconnect all active service connections to the liner pipe. All initial internal service cut outs shall be made to the lesser of a 6-inch diameter opening or 90 percent of the original diameter of the connection. Reinstall the service to 100 percent of the original opening, and provide a smooth opening with no ragged edges.
- B. CONTRACTOR shall be responsible for restoring/correcting without any delay, all missed or faulty reconnections, as well as for any damage caused to property owners for not reconnecting the services soon enough or for not giving notice to the owners.
- C. The CONTRACTOR shall use a debris basket or vacuum truck to catch all debris and/or service cutouts in the downstream manhole.

3.9 Post-Televising Of Completed Work:

- A. Following completed installation of CIPP liner, a CCTV inspection shall be completed. The finished DVD shall be continuous over the entire length of the sewer between two manholes. The completed line shall be completely free from visual defects. The post television inspection shall be conducted to the owner's satisfaction.
- B. Submit to the OWNER a color DVD showing completed Work. The format of the video shall be compatible with Windows Media Player.

- C. Correction of failed CIPP or CIPP deemed defective from post-installation television inspection or test reports for structural values, thickness, etc., shall be repaired at no extra cost to the OWNER. Method of repair, which may require field or workshop demonstration, shall be approved by the OWNER.
 - D. An internal condition survey by the OWNER shall be allowed for in the CONTRACTOR's installation rates and work schedule, to be carried out 1 year following the installation of the repair. Should any fault be found with the repair, the fault shall be rectified as specified by OWNER. Rectification may include complete removal and renewal of the previously installed repair and re-inspection 1 year later. Correction of failed CIPP or CIPP deemed defective from mid-warranty internal condition inspection or test reports for structural values, thickness, etc., shall be repaired or replaced at no extra cost to the OWNER.
 - E. No smoking shall be allowed in the CCTV truck at any time while the truck is on the jobsite.
- 3.10 Testing:
- F. Field Thickness Testing:
 - 1. Two, 2-inch diameter core samples shall be taken for each section of CIPP installed. Samples shall be taken by the CONTRACTOR in locations approved and for testing by the OWNER. The coupon samples shall be taken from the top of the pipe, one from each end of the CIPP installation. Measurements of sample thickness shall be taken by the OWNER from four locations on each coupon after any inner/outer film has been removed. The average thickness of the eight measurements shall be equal to or greater than the required design thickness. The CONTRACTOR shall repair the CIPP liner/host pipe per the approved submittal as a part of the CIPP unit cost. Failure of the thickness test shall be grounds for rejection of the CIPP liner.
 - G. Laboratory Testing:
 - 1. For each inversion length designated by the OWNER, one CIPP sample shall be cut from a section of cured CIPP at an intermediate manhole or at the termination point that has been inverted through a like diameter pipe which has been held in place by a suitable heat sink such as sandbags. (Note: In areas with limited space and larger diameter pipes, other sampling techniques may be required). The CONTRACTOR should assume that 2 liners for each project would be designated for testing. All testing should be performed by an independent lab and should be considered incidental to the installation and shall be at no additional cost to the OWNER.
 - 2. The sample should be large enough to provide a minimum of three specimens and a recommended five specimens for flexural testing. The full CIPP sample wall thickness shall be tested, whenever possible. If the sample is irregular, distorted, or of such thickness that proper testing is inhibited, then the wall thickness shall be machined away from the inside pipe face of the sample only. Thus, the test specimen shall be cut from the outside pipe face of the CIPP sample. For specimens greater than ½ inch (12.70 mm) in depth, the width-to-

depth ratio of the specimen shall be increased to a minimum of 1:1 and shall not exceed 4:1.

3. Test specimens shall be oriented on the testing machine with the interior surface of the CIPP in tension. The following test procedure should be followed after the sample is cured and removed.
4. Flexural (Bending) Properties: The initial tangent flexural modulus of elasticity and flexural stress should be measured for gravity applications in accordance with Test Method D 790, Test Method I - Procedure A, and should meet the requirements of Section 4.3. Failure to meet the requirements of Section 4.3 shall be grounds for rejection of the CIPP liner.
5. Preparation and testing standards shall be performed in accordance with the approved submittals.

3.11 Cleanup:

- A. Upon acceptance of the installation, the CONTRACTOR shall reinstate, to original conditions, the Project area affected by the operations.
- B. All service cutouts shall be recovered using vacuum truck or basket.

3.12 Payment:

- A. Payment for the work included in this Section will be in accordance with the prices set forth in the proposal for the quantity of work performed. Final payment will be made after satisfactory review of all pre- and post-video DVD inspection material. The OWNER does reserve the right to classify any work incomplete without satisfactory completion of the post-video DVD inspections and delivery of such record to the OWNER.
- B. Traffic Control Shall be incidental to CIP work.

END OF SECTION 02520

SECTION 02607 – PRECAST CONCRETE MANHOLES

PART 1 - GENERAL

1.1 Section Includes:

- A. This section of specifications covers the material and installation requirements for precast concrete manhole sections with tongue-and-groove joints, masonry transition to manhole frame, covers, anchorage and accessories.
- B. The testing requirements for materials, in-place, specified under this section shall conform to Section 02722 – Sanitary Sewer System.

1.2 Related Sections:

- A. Section 02250 – Trenching, Backfilling and Compaction
- B. Section 02722 – Sanitary Sewer System

1.3 References:

- A. ASTM A48 – Standard Specification for Gray Iron Castings.
- B. ASTM C443 – Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
- C. ASTM C478 – Standard Specification for Precast Reinforced Concrete Manhole Sections.
- D. ASTM C923 - Resilient Connectors Between Reinforced Concrete Manhole Structures and Pipes.
- E. International Masonry Industry All-Weather Council (IMIAC): Recommended Practices and Guide Specification for Cold Weather Masonry Construction.

1.4 Qualifications:

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum of five years documented experience.

1.5 Environmental Requirements:

- A. Masonry construction shall not be performed when ambient temperatures are 40-degrees F and falling unless provisions for heating and protecting the work are approved. Protect new masonry from freezing for 48-hours after completion of the masonry work.

PART 2 - PRODUCTS

2.1 Materials:

- A. Precast Manhole Base and Sections:

1. All precast manholes shall be new, unused manholes delivered directly from the manufacturer to the job site. The date of manufacture and the name or trademark of the manufacturer shall be clearly marked on the outside of the barrel.
2. Precast concrete manholes shall be of reinforced concrete manhole sections conforming to the requirements of ASTM C478. The concrete when tested in compression shall not be less than 4000 psi and absorption shall not exceed 9%.
3. Precast manhole base and sections shall be a minimum of 48-inches inside diameter. Precast manhole base shall have a minimum wall thickness of 5 inches and minimum bottom thickness of 6 inches. Minimum wall thickness of the manhole riser sections shall be 5 inches for 48" I.D. sections, 6 inches for 60" I.D. sections, and 7 inches for 72" I.D. sections.
4. Manhole base, riser, transition, and cone sections shall have offset tongue and groove joints and shall be made watertight with prelubricated rubber gaskets conforming to ASTM C443 and butyl sealant waterstops. Pre-lubricated gaskets shall be Tylox Superseal as manufactured by Hamilton-Kent or equal; butyl sealant waterstop shall be Conseal CS-231 or equal, in widths as recommended by the manufacturer.
5. Manholes shall be assembled with the fewest number of sections to make up the required height, thereby reducing the number of joints. The use of more than one riser section of 16 inches or less shall be prohibited. The Engineer may require that any manhole not composed of the minimum number of sections be replaced.
6. Precast eccentric cone shall be provided at top section of manhole. Eccentric cone shall have the same reinforcing as manhole base and sections. Cone sections shall be made with a minimum 5-inch wall thickness at the bottom and 8-inch wall thickness at the top. Where watertight manhole frame and covers are indicated on the drawings, cone sections shall be supplied with four (4) stainless steel anchor bolts as shown in the City of Tuscaloosa Standard Detail drawing.
7. Two lift holes shall be cast into each cone or riser section for purposes of handling and placement.
8. Openings for inlet and discharge sewer pipes shall be provided in the manhole base section and in the riser section for drop manholes. Openings shall be at positions and elevations as indicated on the plans, and may be cast into the manhole wall or mechanically cored at the manufacturing facility. Openings shall be sized to accommodate the flexible manhole sleeve.

B. Precast Concrete Adjusting Rings:

1. Provide precast concrete adjusting rings, as required, between top of eccentric cone and finished grade.
2. Precast concrete adjusting rings shall be of same materials of construction as manhole bases and sections, grooved top and bottom.

3. Adjusting rings shall be 3 or 4 inches high by 5 inches thick. Maximum combined height of adjustment rings shall be limited to 8 inches.
- C. Flexible Manhole Sleeves:
1. Flexible manhole sleeves suitable for use in precast or cored openings utilizing premolded shapes positioned with expansion rings shall comply with the requirements of ASTM C923 and shall be manufactured by Kor-N-Seal or approved equal. Flexible connectors shall be installed as recommended by the manufacturer.
- D. Manhole Steps:
1. Manhole steps shall be Copolymer Polypropylene Plastic Coating over 1/2-inch minimum Grade 60 steel reinforcing, 12-inches wide, with slip resistant surface.
 2. Manhole steps shall conform to ASTM C478 as manufactured by M.A. Industries, Model PSI-PF, or equal. Steps shall be centered under the manhole cover opening and be vertically aligned on 16-inch centers.
- E. Manhole Frames and Covers:
1. Manhole frames and covers shall be close-grained, cast-iron, smooth, clean, free of blisters, blowholes and other defects and conform to ASTM A48, Class 30B. Plane or grind bearing surfaces to ensure a flat, fine surface. Castings judged to be defective by the Owner or Engineer will be rejected and shall be replaced by the Contractor.
 2. Covers and frames shall be "Heavy-Duty" type, rated for a minimum of H-20 loading. Covers and frames shall be made in the United States. All castings shall be clearly marked with the manufacturer's name, produce catalog No. and "Made in the U.S.A." in cast letters
 3. Manhole covers shall be cast with two non-penetrating type pick holes. Covers shall not have vent holes.
 4. Manhole frames and covers shall be of either Standard Type (non-bolted) or Watertight Type (bolt-down), as indicated on the drawings. If not indicated, manhole covers shall be standard type. In locations where the manhole rim elevation is below the 100-year flood elevation, manhole frame and covers shall be Watertight Type.
 5. Manhole frames and covers shall conform to the manufacturer dimensions shown on the City of Tuscaloosa Standard Detail drawings.
 6. When watertight frames are required, manhole joints shall be supplied with 3" x 16" x 1/2" bitumastic-coated steel strap anchors and bolts as shown in the City of Tuscaloosa Standard Detail drawings.

- E. Non-Shrink Grout
 - 1. Non-shrink grout shall be used to seal openings in the manhole base and riser sections such as lift holes and around flexible sleeve connections as shown on the standard details. Non-shrink grout shall be Thoro WaterPlug or approved equal.
 - 2. Surface preparation, mixing and application shall strictly adhere to manufacturer's recommendations.

PART 3 - EXECUTION

3.1 Excavation and Backfill:

- A. Perform excavation to lines and grades established by the Drawings. Construct excavation a minimum of two (2) feet in diameter larger than the outside dimensions of the manhole base and sections.
- B. If material in bottom of excavation is unsuitable for supporting manhole, excavate unsuitable material to a depth specified by the Engineer and backfill resulting void with Alabama Department of Transportation No. 57 crushed limestone.
- C. Backfill around manholes constructed in paved areas or areas to be paved with Alabama Department of Transportation 825, Type "A". Compact backfill in 8-inch loose lifts to minimum density of 98% Standard Proctor Density with vibratory compaction equipment.
- D. Backfill around manholes in unimproved areas and lawns with native materials, compacted in 8-inch loose lifts to minimum density of 95% Standard Proctor Density.

3.2 Granular Base:

- A. Remove standing water from excavation. Place 12-inches minimum of Alabama Department of Transportation #57 stone and mechanically consolidate with vibratory compaction equipment.
- B. Excavations deeper than 12-inches below required grade of manhole base, not approved by the Engineer, shall be filled with Alabama Department of Transportation No. 57 crushed limestone and mechanically consolidated by vibratory compaction equipment at no additional cost to the Owner.

3.3 Placing Manhole Base and Sections:

- A. Manholes shall be constructed to the sizes, shapes, dimensions, and at the locations shown on the plans and the City of Tuscaloosa Standard Detail drawings.
- B. Precast manhole bases shall be set plumb and true to the lines and grades specified by the plans. Manholes out of plumb in excess of 1/4-inch in eight (8) feet shall be reset.
- C. Clean ends of manhole sections of foreign materials and inspect ends for damage.

- D. Place prelubricated gasket into recess. Place butyl sealant waterstop as shown in the City of Tuscaloosa Standard Details. Follow gasket and waterstop manufacturers' installation instructions. Set manhole section.
- E. When new openings are required in existing manholes, openings shall be core drilled.
- F. Install flexible manhole sleeves on pipes at the precast or core drilled openings according to manufacturer's recommendations. Grout around flexible sleeve as shown on the City of Tuscaloosa Standard Detail drawing.
- G. Seal lifting holes and flexible manhole sleeves in manhole on the interior and exterior with non-shrink grout to divert infiltration.

3.4 Manhole Invert:

- A. Manhole inverts shall be constructed of cement mortar and shall have the same cross-section as the invert of the sewers which they connect. The manhole invert shall be carefully formed to the required size and grade by gradual and even changes in sections. Changes in direction of flow through the sewer shall be made to a true curve with as large a radius as the size of the manhole will permit.
- B. For pipe diameters less than 48 inches, a bench shall be constructed on each side of the flow channel. The bench shall slope one (1) inch per foot. Bench shall be made of non-shrink grout.
- C. Where the difference in the invert elevation of two or more sewers 18-inches in diameter or smaller intersecting in one manhole is 2-feet or more, a drop manhole shall be constructed in the manner shown on the City of Tuscaloosa Standard Detail drawing. They shall be similar in construction to the standard manhole except that a drop connection of pipe and fittings of the proper size and material shall be constructed outside the manhole and supported by 3,000 psi concrete. The manhole and drop connection shall be placed on a 12-inch reinforced concrete foundation base. The drop connection piping assembly shall be bolted to the barrel of the manhole riser. Drop connection piping shall be ductile iron. Refer to City of Tuscaloosa Standard Detail SD 080.
- D. When manholes are constructed over existing sewers and a full section of pipe is through manhole, break out top section of pipe and cover exposed edges of pipe with grout.

3.5 Manhole Frames and Covers:

- A. Install manhole frames and covers with top surface adjoining surrounding grade in improved areas, or 18 inches above grade in unimproved areas. Where manholes are constructed in paved areas, the top surface of the frame and cover shall be tilted so as to conform to the exact slope, crown and grade of the existing pavement adjacent thereto. Set manhole frames at the required elevation in a full bed of grout to provide for proper bonding to cone section and/or concrete adjusting rings.
- B. Where manhole frame elevation requires adjustment, precast concrete adjusting rings shall be used. A minimum 1/4-inch bed of non-shrinking grout shall be placed between the manhole

cone section and the adjusting ring. Same grout thickness shall be provided in between adjusting rings when multiple rings are necessary. Butyl sealant waterstop shall be placed beneath the frame and in between each concrete adjusting ring as shown on the City of Tuscaloosa Standard Detail drawings. Butyl sealant shall be Conseal CS-231.

- C. Manhole frame shall be positioned concentrically above the precast cone section or adjusting rings and set in a full bed of non-shrinking grout. A thick ring of non-shrinking grout extending to the outer edge of the precast cone section or adjusting ring shall be placed all around and on top of the manhole frame. The non-shrinking grout shall be smoothly finished and have a slight slope to shed water away from the frame and cover.
- D. Check manhole cover for fit in frame. If a manhole cover is either excessively loose or tight in the frame, or rocks, wobbles, or moves in the frame, the frame and cover shall be removed and replaced by the Contractor.

3.6 Protective Coatings

- A. Where shown on the drawings or directed by the Engineer, manholes shall be protected from corrosion by the use of factory applied ceramic epoxy linings.
- B. Epoxy coating shall be an amide cured ceramic epoxy, Permite PCS-9043 Type II or approved equal. The epoxy shall be applied to a 40 mils dry film thickness on the inside of the structure per the manufacturer's recommendations.

END OF SECTION 02607

SECTION 02622 - POLYVINYL CHLORIDE GRAVITY SEWER PIPE AND FITTINGS

PART 1 - GENERAL

1.1 Section Includes:

- A. This section of specifications covers the material requirements for polyvinyl chloride (PVC) pipe, fittings and laterals for use in gravity sewer applications.
- B. The installation requirements for pipe specified under this section shall conform to Section 02250 – Trenching, Backfill and Compaction.
- C. The testing requirements for materials, in-place, specified under this section shall conform to Section 02722 – Sanitary Sewer System.

1.2 Related Sections:

- A. Section 02250 – Trenching, Backfill and Compaction
- B. Section 02722 – Sanitary Sewer System

1.3 References

- A. ASTM D1784, latest revision, Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds.
- B. ASTM D3034, latest revision, Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
- C. ASTM D2412, latest revision, External Properties of Plastic Pipe by Parallel Plate Loading.
- D. ASTM D3212, latest revision, Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
- E. ASTM F477, latest revision, Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
- F. ASTM D2321, latest revision, Standard Recommended Practice for Installation of Flexible Thermoplastic Sewer Pipe.
- G. AWWA C900 – Polyvinyl Chloride (PVC) Pressure Pipe, and Fabricated Fittings, 4 inches–12 inches, for Water Distribution.

1.4 Quality Control and Assurance:

- A. All pipe and fittings shall be inspected at the factory and on the job site. The pipe shall be homogeneous throughout and free from cracks, holes, foreign inclusions, or other defects. The pipe shall be as uniform in color as commercially practical. PVC pipe shall have a ring painted around the spigot ends in such a manner as to allow field checking of setting depth of pipe in the socket.
- B. PVC sewer pipe shall be marked with the manufacturer's name, production lot number, ASTM designation, PVC cell classification or material code, dimension ratio or standard dimension ratio, and the nominal diameter. All PVC pipe shall be manufactured in the United States.
- C. All PVC pipe shall be new and unused and properly stored at the manufacturer to prevent

degradation of the pipe due the exposure to sunlight and excessive heat.

- D. Pipe must be delivered to job site by means, which will adequately support it, and not subject it to undue stresses. In particular, the load shall be so supported that the bottom rows of pipe are not damaged by “egging” or crushing. Pipe shall be unloaded carefully and strung or stored as close to the final point of placement as is practical. Pipe shall not be stored outside where subject to sunlight.
- E. Pipe which has been stored by the Contractor for three (3) months or longer shall not be acceptable.

PART 2 – MATERIALS

2.1 PVC Gravity Sewer:

- A. PVC gravity sewer pipe shall be made from compounds conforming to ASTM D1784. PVC pipe and fittings, 8 to 12 inches in diameter, shall conform to and be tested under all of the requirements of ASTM D3034. This designation specifies minimum requirements and test methods for materials, dimensions, workmanship, flattening resistance, impact resistance, pipe stiffness, extrusion quality, and pipe marking. PVC gravity sewer shall have a wall thickness equal to or greater than SDR 26.
- B. Minimum pipe stiffness ($F/ \Delta Y$) at 5 percent deflection shall be 115 for all sizes when calculated in accordance with ASTM D2412.
- C. PVC sewer pipe shall be supplied in standard lengths of at least 12 feet 6 inches. Longer lengths are permitted. PVC gravity sewer pipe shall be green in color.
- D. Fittings for service connections shall be of the factory made inline type conforming to the requirements of ASTM D3034 and shall have a wall thickness equal to or greater than SDR 26. Service connections shall be made with wye fittings. Saddle type fittings shall not be used.
- E. All pipe and fittings shall be joined by means of an integral wall bell and spigot with a flexible watertight elastomeric seal. Joint material and testing requirements shall conform to ASTM D3212 and ASTM F477.

2.2 PVC Laterals

- A. PVC service laterals for PVC sewer mains shall be of same material described in 2.1A above.
- B. PVC service laterals for ductile iron sewer mains shall be AWWA C-900 pipe and shall have a wall thickness equal to or greater than DR 25.
- C. Contractor shall provide an easily removable, watertight and airtight, gasketed plug at the end of the service lateral.

PART 3 – EXECUTION

3.1 PVC Gravity Sewer:

- A. In addition to the requirements for installation and testing specified in Section 02722 – Sanitary Sewer System, installation of PVC gravity sewer pipe shall conform to ASTM D2321 and manufacturer’s recommendations unless otherwise amended in these Specifications.
- B. Trenching, backfill, and compaction shall conform to Section 02250 – Trenching, Backfill and Compaction of these Specifications.
- C. The inside of all bells and outside of all spigots shall be wiped to remove all dirt, water, or other foreign matter so that their surfaces are clean and dry when the pipes are joined.
- D. Immediately before joining PVC pipe, the joining surfaces shall be completely coated by brushing with the lubricant sealer furnished by the pipe manufacturer. The spigot end shall then be centered to exact line and grade and then sealed by forcing the spigot into the bell in an approved manner.
- E. Pipe that has been field cut must be beveled for insertion into the gasketed joint. Bevel can be made with hand or power tool. In either case, the finished bevel should be the same as the factory bevel.

3.2 PVC Laterals

- A. In addition to the requirements for installation and testing specified in Section 02722 – Sanitary Sewer System, installation of PVC laterals pipe shall conform to ASTM D2321 and manufacturer’s recommendations unless otherwise amended in these specifications. Connection between service lateral and sewer main shall be watertight. PVC service laterals shall be installed for each lot and extend from the collector sewer to user’s property line.
- B. Trenching, backfill, and compaction shall conform to Section 02250 – Trenching, Backfill and Compaction of these Specifications.
- C. A PVC-coated electronic service marker shall be located six inches above the top of the lateral just beyond the curb.

END OF SECTION 02622

SECTION 02722 - SANITARY SEWER SYSTEM

PART 1 - GENERAL

1.1 Section Includes:

- A. This section of specifications covers installation requirements of gravity sewer pipe and pressure sewer pipe. Testing requirements for gravity sewers, manholes, and force mains are also provided in this section.
- B. All materials used in the construction of sewers shall be new and unused when delivered to the job site and shall be suitable for installation and operation under the conditions for which they are to be used.

1.2 Related Sections:

- A. Section 2250 – Trenching, Backfilling and Compaction
- B. Section 2607 – Precast Concrete Manholes
- C. Section 2622 – Polyvinyl Chloride Gravity Sewer Pipe

PART 2 – PRODUCTS (NOT USED)

PART 3 – INSTALLATION

3.1 Gravity Sewer Pipe Laying - General:

- A. Before sewer pipe is placed in position in the trench, the bottom and sides of the trench shall be carefully prepared and the necessary bracing and sheeting installed.
- B. Unless noted otherwise on the drawings, all gravity sewer lines shall be installed with a minimum thirty-six (36) inches of cover.
- C. A properly designed and operated laser beam device may be used to align and grade the pipe. Laser beam devices used shall be carefully calibrated at intervals not to exceed 30 calendar days.
- D. Air blowers must be used in conjunction with laser beam devices and must be sufficient to provide an air flow through the pipe of 4 to 6 mph.
- E. If approved by the Engineer, the batter board method may be used. A mason's line shall then be tightly stretched above ground level, parallel to and directly above the axis of the pipe to be installed; this line to be supported at intervals not exceeding 50 feet. The exact line and grade for each section of pipe shall be determined by measuring down from this line to the invert of the pipe in place. Each pipe shall be accurately placed to the exact line and grade called for on the plans. The Contractor shall furnish all labor and materials necessary for erecting batter boards.
- F. Water shall not be allowed to run or stand in the trench while pipe laying is in progress or before the joints are completed or before the trench has been backfilled. The Contractor shall not open up at any time more trench than his available pumping facilities are able to dewater.

- G. Each piece of pipe and special fitting shall be carefully inspected before it is placed and no defective pipe shall be laid in the trench. Pipe laying shall proceed up-grade, starting at the lower end of the grade and with the bells uphill.
- H. After pipe laying has begun, it shall continue progressively up-grade. No section of pipe installation will be skipped without a written request for such procedures from the Contractor and approved by the Engineer.
- I. Bell holes shall be of sufficient size to allow ample room for properly making the pipe joints. Bell holes shall be cut not more than five joints ahead of pipe laying. The bottom of the trench and the crushed stone cushion between bell holes shall be carefully graded so that the pipe barrel will rest on a solid foundation for its entire length. Each joint shall be laid so that it will form a close concentric joint with adjoining pipe and so as to avoid sudden offsets and inequalities in the flow line.
- J. Backfilling of trenches shall be started immediately after the pipe is in place and the joints completed and inspected by the Developer's Engineer.
- K. A metallic tape or wire shall be installed in the same trench with all non-metallic pipe (PVC) in order that the pipe may be located with electronic metal detection equipment. Wire shall be T.W. 12-gauge solid copper conforming to specifications for annealed copper, ASTM B-3 and Underwriters Laboratories Thermoplastic Insulated Wire Standard No. 83, latest revision. Wire shall be Simplex BW3001, or equal. Pipe detector tape shall be two (2) inch wide minimum metalized tape. Tape shall be Griffolyn Company, Inc., Terratape 2" D., or equal. Wire and/or Tape shall be secured to pipe at intervals of 20 feet.
- L. Manholes shall be installed according to Section 02607 – Precast Concrete Manholes.

3.2 Laterals Installation:

- A. Wyes shall be installed in sanitary sewer lines at all points shown on the plans or specified herein. If such branches are not to be used immediately, they shall be closed with gasketed plugs specifically designed for such purpose.
- B. If the work consists of the construction of a sewer that is to replace an existing sewer, all of the existing service lines shall be connected to the new line.
- C. Wyes shall be installed in sanitary sewers so as to properly serve each existing house and each vacant lot facing or abutting on the street or alley in which the sewer is being laid, and at such other locations as may be designated by the Engineer. The exact location of each connection shall be determined by the Engineer before backfilling.
- D. Should ductile pipe lining be scratched, chipped, or otherwise damaged during the tapping process, it shall be properly repaired or recoated by the Contractor.
- E. Laterals shall be bedded and backfilled according to Section 02250 – Trenching, Backfill, and Compaction.
- F. Where the depth of cut is over 8 feet or where the grade of a sanitary sewer is lower than necessary to drain abutting property, and when designated by the City Engineer, connecting

risers shall be installed to serve each existing house and each vacant lot facing or abutting on the street in which the sewer is being laid.

- G. Connecting risers shall be either 4 or 6 inches in diameter installed from a wye connection to the elevation designated by the Engineer. Open ends of connecting risers shall be closed, as herein before specified for wye branches. Backfilling shall be carefully done around these risers.

3.3 Pressure Sewer Pipe Laying – General

- A. Before sewer pipe is placed in position in the trench, the bottom and sides of the trench shall be carefully prepared and the necessary bracing and sheeting installed.
- B. Unless noted otherwise on the drawings, all pressure sewers shall be installed with a minimum of thirty-six (36) inches of cover.
- C. Water shall not be allowed to run or stand in the trench while pipe laying is in progress or before the joints are completed or before the trench has been backfilled. The Contractor shall not open up at any time more trench than his available pumping facilities are able to dewater.
- D. Each piece of pipe and special fitting shall be carefully inspected before it is placed and no defective pipe shall be laid in the trench. No section of pipe installation will be skipped without a written request for such procedures from the Contractor and approved by the Engineer.
- E. All pressure pipe 4 inches and over in diameter shall be provided with adequate thrust restraints. Thrust restraints, consisting of concrete thrust blocks and/or mechanical restraining rod attachment shall be furnished at all fittings, plugs, and all pipe bends as shown on the Standard Detail Drawing.
- F. Air release valves, Air/Vacuum release valves, and Combination air valves shall be installed at the locations shown on the drawings.
- G. A metallic tape or wire shall be installed in the same trench with all non-metallic pipe (PVC) in order that the pipe may be located with electronic metal detection equipment. The tape or wire shall be attached to the top of the pipe. Wire shall be T.W. 12-gauge solid copper conforming to specifications for annealed copper, ASTM B-3 and Underwriters Laboratories Thermoplastic Insulated Wire Standard No. 83, latest revision. Wire shall be Simplex BW3001, or equal. Pipe detector tape shall be two (2) inches wide minimum metalized tape. Tape shall be Griffolyn Company, Inc., Terratape 2" D or equal. Wire and/or Tape shall be secured to pipe at intervals of 20 feet.

3.4 Pipe Protection:

- A. Sewer pipe which, when completed, will have less than three (3) feet of cover, shall be provided with concrete protection and shall be constructed of ductile iron pipe.
- B. Where foundation conditions are not satisfactory, as determined by the Engineer, sewer pipe shall be either laid on a concrete cradle, sand backfill, foundation material, and/or constructed of ductile iron pipe as shown on the plans or as directed by the Engineer.

3.5 Testing of Gravity Sewers and Manholes:

A. General:

1. The approval and acceptance of gravity sewer lines and manholes shall be based on final testing. The Contractor must provide a 72-hour notice prior to final testing to the City Engineer. A representative from the Engineer and/or Owner must be present to witness final testing procedures. Tests performed in the absence of the Engineer's and/or Owner's representatives shall be considered invalid and shall be repeated by the Contractor.
2. Final testing of gravity lines shall only be performed after all work adjacent to and over the pipeline has been completed. Trench backfilling, grading, roadway sub-grade, concrete work, other utility installation, and any other superimposed loads shall be completed and in place prior to final testing.
3. Prior to any testing and final inspection, all gravity lines shall be cleaned of debris and flushed clean with water as necessary by the Contractor. Debris and flush water shall be contained at a lower manhole and removed from the line. Debris and flush water shall not be allowed to enter live existing sanitary sewers. Contractor shall be responsible for collection and proper disposal of debris and flush water.
4. All apparatus and equipment required for testing shall be furnished by the Contractor.
5. Contractor shall provide the City Engineer and Owner with copies of all field notes and documentation obtained during final testing.

B. Scope:

1. All gravity sewers shall be tested by one or more of the following methods as directed by the City Engineer:
 - a. Direct Visual Inspection by the Engineer
 - b. Exfiltration of water
 - c. Infiltration of water
 - d. Exfiltration of air under pressure (Low Pressure Air Testing)
 - e. Video Inspection.
2. In addition to the above testing requirements, all PVC gravity sewers shall pass mandrel testing to verify roundness and proper installation.
3. All manholes shall be vacuum tested.

C. Direct Visual Inspection by the Engineer

1. The Engineer and/or his Representative shall visually inspect all gravity sewer pipe installed to verify alignment and ensure the pipe is free from obstructions and debris.

Each segment of sewer shall be “flushed” using sunlight and mirrors. When the full diameter of the pipe is visible between adjacent manholes, the segment of pipe is deemed properly aligned and free of sags and debris.

2. If segment of pipe fails visual inspection, the pipe shall be cleaned and/or replaced and re-tested by the Contractor.

D. Exfiltration of Water

1. The section of sewer to be tested shall be sealed by inserting inflatable rubber bags or plugs in the pipes or by other means approved by the Engineer. Water shall then be introduced into a manhole until the pipeline section is completely filled. The Contractor shall fill the pipe to the required test level prior to the time of exfiltration testing to permit normal absorption into the pipe walls if concrete or concrete lined ductile iron pipe is being tested. Throughout the test period of two (2) hours minimum, the water level in the upper manhole shall be maintained at least 18-inches above the crown of the upper end of the pipe or at least 18-inches above the groundwater table, whichever is greater. The length of pipe tested shall be limited such that the pressure on the centerline of the lower pipe end tested does not exceed six (6) feet water column.
2. Exfiltration of water shall not exceed 100-gallons per mile of sewer per inch of inside diameter per 24-hours in any section of the completed work. In no case shall the exfiltration of water exceed 2500 gallons per mile per 24 hours. All observed leaks shall be corrected by the Contractor even though exfiltration is within the allowable limits.
3. The Engineer may direct the Contractor to test selected sections of the sewer in the following manner: after the selected sections of the sewer are laid in the trench and the joints completed but before any backfill is placed, the Contractor shall install suitable bulkheads or stoppers in each end of the sewer and fill the sewer with water. The sewer shall be filled through one length of sewer pipe installed vertically at a wye or at the end of the pipe being tested. Water shall be maintained in the line approximately to the top of the fill pipe until the Engineer can inspect the section of sewer being tested. Any leaks in the sewer system being tested shall be repaired by the Contractor. The total amount of sewer thus tested shall not exceed five percent (5%) of the total length of sewer constructed. Should the results of any of these tests indicate leakage, the Engineer may direct the Contractor to change the methods of construction to reduce the leakage on the remaining part of the work.

E. Infiltration of Water:

1. The section of sewer to be tested shall have been trench backfilled and the test conducted by inducing infiltration conditions by jetting the sewer trench for a sufficient length of time to insure that the water level in the trench is a minimum of eighteen (18) inches over the crown of the sewer pipe. The test must be performed before existing sewers are connected and before sewage load is allowed in the sewers.
2. Infiltration of ground water or other leakage into the sewer (including manholes) shall not exceed 100 gallons per mile of sewer per inch of inside diameter of the sewer per 24 hours in any section of the completed work, and in no case shall it exceed 2500 gallons

per mile per 24 hours.

3. Infiltration flow shall be measured in wet weather by a 90-degree “V-notch” weir with free discharge or other means acceptable to the Engineer. These weirs shall be furnished, installed, and removed by the Contractor.
4. Any leaks into the sewer that can be located shall be repaired or corrected by the Contractor as directed by the Engineer regardless of infiltration test results.

F. Exfiltration of Air Under Pressure (Low Pressure Air Testing):

1. Scope

- a. This recommended practice defines the proper procedures for acceptance testing of installed gravity sewer pipe, using low-pressure air, to provide assurance that the pipe, as installed, is free from significant leaks. Included are requirements for equipment accuracy, safety precautions, line preparation, test method, and minimum holding times. This recommended practice does not cover the testing of manholes. All new pipe shall be low-pressure air tested to insure the integrity of the pipe and joints
- b. Only lines tested after backfilling to final grade will be considered for acceptability. However, this test may also be used by the installer as a presumptive test to determine the condition of the line prior to backfilling. At no time will more than four manhole to manhole reaches of pipe be installed before air testing is performed.
- c. Low Pressure Air Testing shall be conducted in accordance with ASTM C828, C924, F1417 and UBPPA UNI-B-6.

2. Responsibilities

- a. Responsibility of the Contractor: Unless otherwise specified, the Contractor shall furnish all the necessary equipment and be responsible for conducting all low-pressure air tests. In addition, the Contractor is responsible for any necessary repair work on sections that do not pass the test. No sealant shall be used in any newly installed sewer without the prior approval of the Engineer. Proper structural repair work will be required by the Engineer or the Owner.
- b. Responsibility of the Engineer: The Engineer and/or a qualified inspector shall witness all low-pressure air tests and verify the accuracy and acceptability of the equipment utilized. The engineer should inform the Contractor regarding acceptable methods of repair in the event one or more sections fail to pass the low-pressure air test. The Engineer should also report to the Owner regarding the acceptability of the Contractor’s work.
- c. Responsibility of the Owner: The Owner shall make a final decision as to the acceptability of the Contractor’s work based upon the Engineer’s recommendation.

- d. Regulatory Agencies: Regulatory Agencies in the State, Federal, and/or local level may be legally entitled to witness any air testing and/or review the results. The Owner or his Engineer should check to see that the low-pressure air test specified for his installation is at least as stringent as those which may be required by such regulatory bodies.

3. Equipment

- a. Air testing shall be performed by the Contractor using equipment manufactured by Cherne Industries, Inc., or approved equal. Equipment used shall meet the following minimum requirements.
- b. Pneumatic plugs shall resist internal testing pressures without requiring external bracing or blocking. However, the Contractor should internally restrain or externally brace the plugs to the manhole wall as an added safety precaution throughout the test. No one shall be allowed in the manhole adjoining a line being tested so long as pressure is maintained in the line.
- c. Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be inspected.
- d. To facilitate test verification by inspecting Engineer, all air used shall pass through a single, aboveground control panel.
- e. The aboveground air control equipment shall include a shut-off valve, pressure regulating valve, pressure relief valve, input pressure gauge, and a continuous monitoring pressure gauge having a pressure range from 0 to at least 10 psi.
- f. Three individual hoses shall be used for the following connections:
 - 1. from control panel to pneumatic plugs for inflation.
 - 2. from control panel to sealed line for introducing the low pressure air.
 - 3. from sealed line to control panel for continually monitoring the air pressure rise in the sealed line.

4. Line Preparation

- a. During sewer construction, all service laterals, stubs, and fittings into the sewer test section shall be properly capped or plugged so as not to allow for air loss that could cause an erroneous air test result.
- b. A wetted interior pipe surface is desirable and will produce more consistent test results. Where practical, clean the line with cleaning balls, manufactured by Cherne Industries Incorporated or equal, prior to testing, to wet the pipe surface and eliminate debris.

5. Test Procedure

- a. All pneumatic plugs shall be seal tested before being used in the actual test installation. One length of pipe shall be laid on the ground and sealed at both

ends with the pneumatic plugs to be checked. Air shall be introduced into the plugs to the manufacturer’s recommended inflation pressure. The sealed pipe shall be pressurized to 9 PSIG. The plugs shall hold against this pressure without bracing and without movement of the plugs out of the pipe.

- b. After a manhole to manhole reach of the pipe has been backfilled and cleaned, and the pneumatic plugs are checked by the above procedure, the plugs shall be placed in the line at each manhole and inflated to manufacturer’s recommended inflation pressure. When plugs are being placed, the pipe adjacent to the manhole shall be visually inspected to detect any evidence of shear in the pipe due to differential settlement between the pipe and the manhole.
- c. Low pressure air shall be slowly introduced into this sealed line until the internal air pressure reaches 4.0 PSIG greater than the average back pressure of any groundwater above the pipe, but not greater than 9.0 PSIG. If groundwater is present, refer to the following Paragraph 6. Determination of Groundwater Elevation and Air Pressure Adjustment, of Section 3.5.F in this Specification.
- d. After a constant pressure of 4.0 PSIG (greater than the average groundwater back pressure) is reached, the air supply shall be throttled to maintain the internal pressure for at least 2 minutes.
- e. When the pressure has stabilized at 4.0 PSIG, the air hose from the control panel to air supply shall be shut off or disconnected. The continuous monitoring pressure gauge shall then be observed while the pressure is decreased to no less than 3.5 PSIG. At a reading of 3.5 PSIG, or any convenient observed pressure reading between 3.5 PSIG and 4.0 PSIG, timing for the test may begin.
- f. The portion of line being tested shall be termed “Acceptable” if the allocated line pressure decreases less than one PSI in the time shown for the given diameters and lengths in the following table. Consult the City Engineer for test lengths greater than those provided.

MINIMUM SPECIFIED TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP

PIPE DIA (INCHES)	SPECIFICATION TIME FOR LENGTH SHOWN (MIN:SEC)							
	100 FT	150 FT	200 FT	250 FT	300 FT	350 FT	400 FT	450 FT
8	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
21	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33

- g. If there has been no leakage (0 PSIG drop) after one hour of testing, the test section shall be accepted and the test complete. If there is any pressure drop, the complete test shall be run to determine whether or not the test section is

acceptable.

- h. If the pressure drops 1.0 PSIG before the appropriate time shown in the table has elapsed, the air loss rate shall be considered excessive and the section of pipe has failed the test.
- i. If the section fails to meet these requirements, the Contractor shall determine the source(s) of leakage, and he shall repair or replace all defective materials and/or workmanship to the satisfaction of the Engineer. The extent and type of repair which may be allowed, as well as results, shall be subject to the approval of the Engineer. The completed pipe installation shall then be retested and required to meet the requirements of this test.

6. Determination of Groundwater Elevation and Air Pressure Adjustment

- a. In areas where ground water is known to exist, the Contractor shall install a 1/2-inch diameter capped pipe nipple, approximately 10 inches long, through the manhole wall directly on top of one of the sewer lines entering the manhole. A permanent, watertight seal shall be provided around the pipe nipple at the manhole wall. This shall be done at the time the sewer line is installed.
- b. Immediately prior to the performance of the air testing, the ground water shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground so as to clear it, and then connecting a clear plastic tube to the nipple. The plastic tube shall be held vertically and a measurement of the height in feet of water over the invert of the pipe shall be taken after the water has stopped rising in this plastic tube. The height in feet shall be divided by 2.31 to establish the pounds of pressure that will be added to all readings. (For example, if the height of water is 11-1/2 feet, then the added pressure will be 5 psig. This will increase the 3.5 psig (mentioned in item e above) to 8.5 psig, and the 2.5 psig to 7.5 psig.)
- c. The allowable pressure drop of 1.0 PSIG and the timing in the previous table are not affected and shall remain the same.
- d. In no case shall the starting test pressure exceed 9.0 PSIG. If the average vertical height of groundwater above the pipe invert is more than 12.7 feet, the section so submerged may be tested using 9.0 PSIG as the starting test pressure.
- e. After determining the air pressure adjustment, the test shall resume according to Item 5 - Test Procedures stated above.
- f. After determining groundwater height, each pipe nipple shall be recapped and sealed to prevent future infiltration.

G. Video Inspection:

- 1. Prior to final acceptance, the sewer installation shall be video inspected by the City forces. Said inspection shall verify locations of service connections, and locations of

possible defects/infiltration. Any defects found shall be repaired by the Contractor in a manner acceptable to the City Engineer.

H. Mandrel Testing:

1. Mandrel test (deflection test) shall be performed by the Contractor in order to verify the roundness and proper installation of the PVC gravity sewer line.
2. Equipment systems used to perform mandrel tests shall be specifically designed for the pipe material being tested. Mandrels that do not specifically state the size and type of piping for which it is applicable shall not be allowed.
3. Deflection Test:
 - a. The deflection test shall consist of testing PVC gravity sewer pipe for proper installation by the method outlined (see ASTM D3034). The testing shall be accomplished prior to final acceptance, but at least 30 days after the pipe has been backfilled completely to permit stabilization of the soil-pipe envelope.
 - b. After the pipeline has been installed and backfill materials have been compacted to their required standard densities, the mandrel shall be pulled by hand through the pipeline with a suitable rope or cable that is connected to an eyebolt at one end of the gauge. A similar rope or cable shall be attached to the eyebolt at the opposite end of the mandrel and tension shall be applied to it. This will insure that the mandrel maintains its correct position during testing and also to remove the mandrel if it should become lodged in an excessively deflected pipeline. Winching or other mechanical means of forcing the mandrel through the pipeline is unacceptable. Pipeline deflection testing shall have a deflection not exceeding 5% of the base inside pipe diameter as established by ASTM Standards D3034 and F679.
 - c. Permanent record of all testing with locations where excessive pipeline deflections occur shall be kept by the Contractor and forwarded to the Engineer after completion of testing on each line.
 - d. The Contractor shall immediately correct or replace all sections of pipe which deflect more than 5%.
 - e. All material and labor required for testing and/or replacement of pipelines shall be furnished by the Contractor.
 - f. Pipelines requiring correction and/or replacement shall be retested after an additional 30 day backfill stabilization period.

I. Manhole Vacuum Testing:

1. Vacuum tests shall be conducted on newly constructed manholes. Preliminary manhole testing shall take place following construction after all connections are made, and before backfilling. Test results derived from this test will allow time for necessary

repairs to be completed before further construction proceeds and hinders such repairs. Final tests must be performed after the manhole has been backfilled.

2. Equipment:

- a. Manhole vacuum tester assembly and vacuum pumps shall be manufactured by Cherne Industries, Inc., or approved equal.
- b. Pneumatic plugs shall be manufactured by Cherne Industries, Inc. or approved equal. These plugs shall have a sealing length equal to or greater than the diameter of the connecting pipe to be sealed.

3. Procedures:

- a. Plug all manhole entrances and exits other than the manhole top access using suitably sized pneumatic or mechanical pipeline plugs and follow all manufacturer's recommendations and warnings for proper and safe installation of such plugs. Plugs should be inserted a minimum of 6" beyond manhole wall. Make sure such plugs are properly rated for the pressures required for the test. The standard test of 10" Hg. (mercury) is equivalent to approximately 5 PSIG (0.3 bar) backpressure. Unless such plugs are mechanically restrained, it is recommended that the plugs are used with a minimum of two times (2x) safety factor or a minimum of 10 PSIG (0.7 bar) backpressure usage rating.

CAUTION: BRACE INVERTS IF LINES ENTERING THE MANHOLE HAVE NOT BEEN BACKFILLED TO PREVENT PIPE FROM BEING DISLODGED AND PULLED INTO THE MANHOLE.

- b. Any other openings such as lifting holes shall be sealed with an approved non-shrink grout.
- c. Install the vacuum tester head assembly at the top of the manhole. Adjust the cross brace to insure that the inflatable sealing element inflates and seals against the straight top section of the manhole or the ring assembly, if possible. (If using a "plate" style manhole tester, position the plate on the manhole ring assembly).
- d. Attach the vacuum pump assembly to the proper connection on the test head assembly. Make sure the vacuum inlet/outlet valve is in the closed position.
- e. Following safety precautions and manufacturer's instructions, inflate sealing element to the recommended maximum inflation pressure.
CAUTION: DO NOT OVER INFLATE.
- f. Start the vacuum pump and allow pre-set RPM to stabilize.
- g. Open the inlet/outlet ball valve and evacuate the manhole to 10" Hg. (approximately negative 5 PSIG, 0.3 bar).

CAUTION: DO NOT PRESSURIZE MANHOLE! THIS MAY RESULT IN MANHOLE DAMAGE AND/OR RESULT IN MANHOLE TEST HEAD

DISLODGING FROM MANHOLE INLET!

- h. Close vacuum inlet/outlet ball valve and monitor vacuum for specified test period (see table). If vacuum does not drop in excess of 1” Hg., manhole is considered acceptable and the manhole passes the test. If manhole fails the test, Contractor shall complete necessary repairs and repeat test procedures until satisfactory results are obtained.

Minimum Test Times for Various Manhole Diameters

depth – feet	Manhole diameter – inches			
	48	60	72	96
8	20 sec	26 sec	33 sec	38
10	25 sec	33 sec	41 sec	48
12	30 sec	39 sec	49 sec	57
14	35 sec	46 sec	57 sec	67
16	40 sec	52 sec	67 sec	76
18	45 sec	59 sec	73 sec	86
20	50 sec	65 sec	81 sec	95
+ 2 ft incr.	+5 sec	+6.5 sec	+8.0 sec	+9.5 sec

(The values listed above are based upon ASTM Specification C1244 “Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test”.)

- 4. Repeat the above test procedure after backfilling manhole for final acceptance test.
- 5. All manholes that fail the test or have visible leaks, even if they pass the test, shall be repaired or replaced by the Contractor until the manholes pass the test, to the complete satisfaction of the City Engineer. Manholes that have any visible leaks will not be accepted.

3.6 Testing of Force Mains

A. General:

- 1. This Section shall cover testing of sanitary sewer force mains for pipe sizes of four inches (4”) in diameter and larger for flushing, hydrostatic pressure and leakage. Testing shall be accomplished so that all portions of the system are flushed and tested according to these requirements. These requirements are for both Ductile Iron and Polyvinyl Chloride (PVC) Pipe. The Contractor shall furnish test equipment, labor, materials, and water for all tests. All test equipment shall be approved by, and meet the requirements of, the City Engineer for the City of Tuscaloosa.
- 2. The Contractor must provide a 24-hour notice prior to final testing to the City Engineer.
- 3. All apparatus and equipment required for testing shall be furnished by the Contractor.
- 4. Contractor shall provide the Engineer and Owner with copies of all field notes, documentation, and recording charts obtained during final testing.

B. Flushing:

1. Prior to beginning the pressure test, the line shall be flushed to remove all dirt and debris trapped in the line.
2. All valves shall be partially opened and closed during the flushing process.
3. All lines shall be flushed with a velocity of at least two and one-half feet per second (2.5 fps).
4. The Contractor is responsible for the proper disposal of all flushed water.

C. Testing:

1. Before applying the specified test pressure, all entrained air shall be expelled completely from the section pipe under test. Air shall be bled from the highest elevations in the line. If permanent air vents are not located at the high points in the test section, corporation cocks meeting the approval of the City Engineer shall be installed at such points so that air may be expelled as the line is filled with water. At the conclusion of the pressure test, the corporation cocks shall be removed and tightly plugged, or left in place at the direction of the City Engineer.
2. All exposed pipe, fittings, and joints shall be examined carefully during the test. Any damaged or defective pipe or fittings or any visible or audible leaks, discovered during or following the pressure test shall be repaired or replaced, regardless of the pressure test results, with sound material by the Contractor. The test shall be repeated until the results are satisfactory to the City Engineer.
3. The Test Pressure shall be the Working Pressure of the line as defined below, but in no case less than one hundred pounds per square inch (100 psi).
 - a. The Working Pressure shall be defined as one and one-half (1.5) times the shut-off head of the system pump or as defined by the City Engineer.
4. Leakage shall be defined as the quantity of water that must be supplied into the section of pipe being tested to maintain pressure within ± 5 psi of the specified test pressure after the pipe has been filled with water and the air has been expelled. Leakage **shall not** be measured by a drop in pressure in a test section over a period of time.
5. Upon complete removal of all air entrapped in the line, the line shall again be filled with water and pressurized to the required test pressure. The line shall be allowed to stabilize at the test pressure for a minimum of four (4) hours before conducting the pressure test.
6. Duration of the test shall be two (2) hours for uncovered pipe and six (6) hours for covered pipe. The test pressure shall not vary by more than plus or minus five pounds per square inch (± 5 psi) during the duration of the test. The specified test pressure shall be applied by means of a pump connected to the pipe.
7. A recording pressure gauge approved by the Engineer shall be installed and pressure

fluctuations recorded for the duration of the test. For each test, copies of all test charts and records shall be furnished to the Engineer.

D. Acceptance:

1. Acceptance shall be determined on the basis of allowable leakage. If any test of pipe laid discloses leakage greater than that specified, the failure shall be located and repaired using approved materials and acceptable construction practices until the leakage is within specified allowance. All visible leaks are to be repaired regardless of the amount of leakage.
2. Maximum allowable leakage in a test period shall not exceed:

$$L = \frac{SD(P^{1/2})}{133,200}$$

where: L = allowable leakage in gallons per hour
S = length of pipe tested in feet
D = nominal diameter of pipe in inches
P = average test pressure during the leakage test in pounds per square inch, gauge (psig)

3.7 Clean-Up and Grassing:

- A. After the ditch lines have been sufficiently compacted, all excess material shall be removed from the job site by the Contractor.
- B. Any trees or undergrowth shall also be removed by the Contractor.
- C. All disturbed areas shall have topsoil replaced equal to that before construction began. If necessary, the Contractor shall provide topsoil.

END OF SECTION 02722

SECTION 02957 - SEWER MANHOLE REHABILITATION

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Section includes requirements for application of polymer liner to newly installed concrete sanitary sewer manholes.
- B. The contractor will be required to stop all I/I to the engineer's satisfaction before applying liner.
- C. The contractor must be experienced in applying polymer to a new concrete structure. A penetrating primer will be required to prevent off gassing of new concrete structure.
- D. All liners must be a polymer liner, as described in Part 2.1 MATERIALS Section G.
- E. All inverts shall be repaired to the satisfaction of the OWNER.
- F. All manholes must have approved chimney seal installed.

1.2 QUALITY ASSURANCE

- A. Follow national standards and as specified herein.
- B. Personnel Involved in Installation of Manhole Rehabilitation Materials: Certified by manufacturer successfully completed training in handling, applying and finishing materials used.
- C. Commercially Proven Product:
 - 1. Successfully completed over period of at least 2 years, minimum of 1,000 vertical feet of manhole rehabilitation or 100 manholes.
 - a. Document to satisfaction of the TWSD

1.3 REFERENCE STANDARDS

- A. American Society for Testing and Materials (ASTM)
 - 1. C78, Standard Test Method for Flexural Strength of Concrete
 - 2. C109, Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
 - 3. C157, Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete
 - 4. C307, Standard Test method for Tensile Strength of Chemical-Resistant Mortar, Grouts, and Monolithic Surfacing
 - 5. C580, Standard Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes
 - 6. C596, Standard Test Method for Drying Shrinkage of Mortar Containing Hydraulic Cement
 - 7. C882, Standard Test Method for Bond Strength of Epoxy-Resin Systems Used with Concrete By Slant Shear
 - 8. D638, Standard Test Method for Tensile Properties of Plastics
 - 9. D790, Standard Test Method for Tensile Properties of Unreinforced and Reinforced Plastics
 - 10. D792, Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement
 - 11. D4787, Standard Practice for Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates

12. D4833, Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products
13. F2414, Standard Practice for Sealing Sewer Manholes Using Chemical Grouting

B. Federal Specification HH-P-117 for Dry Oakum

1.4 SUBMITTALS

A. Submit

1. Working drawings showing design calculations, materials selected, and manufacturer's installation requirements.
2. Catalog data showing manufacturer's clarifications and updates, ASTM references, material composition, specifications, physical and chemical properties.
3. Manufacturer's recommended procedures for handling, storing, repairing, and installing materials selected.
4. Method of construction (as appropriate):
 - a. Access manholes and site locations
 - b. Work dimensions
 - c. Existing utilities
 - d. Size of work area
 - e. Impact portions of existing sewer
 - f. Site access points
 - g. Bypass pumping plan: Follow Section 02960
5. Emergency plan detailing procedures followed in event of health and safety emergency, pump failures, overspray, chemical spills, sewer overflows, service backups, and sewage spillage. Maintain copy on site for duration of project
 - a. Address dangers associated with sewer rehabilitation work (i.e. working with large boiler trucks).
 - b. Identify health and safety officer:
 1. Designated health and safety officer:
 - a) Responsible for providing health and safety oversight of personnel participating on project team.
 - b) Perform and document routine work area inspections, conduct safety meetings, and provide safety orientations for team members.
 - c) Have the following contact information in easy accessible place:
 - (1) Non-emergency number.
 - (2) Contractor's health and safety representative name and number.
 - (3) Occupational health clinic number(s).
 2. Submit the following:
 1. List of critical rehabilitation equipment, including boiler truck equipment, to be inspected on daily basis.
 2. Recently completed (previous month) monthly maintenance log.
 3. Annual third-party certified inspection for boiler truck(s) to be used on project.
 4. Certification of training for boiler truck operator.

5. Noise attenuation.
 6. Epoxy, Polyurethane and Polyurea manhole liner products.
 - a. Infrared spectrograph chemical fingerprint and Certificate of Analysis for each lot of material:
 1. Lot number.
 2. Product name.
 3. Manufacturer
 4. Brookfield Viscosity.
 5. Thix Index.
 6. Gel time at cure temperature.
 7. Peak Temperature for failure.
 8. Percent of non-volatile solids.
 9. Specific Gravity.
 10. Catalyzed Stability time at optimum temperature.
 11. Catalyst to resin ratio.
 12. Analysis signature.
 13. Date tested.
 14. Batch ticket for each resin-catalyst-colorant batch made up and impregnated into felt liner material.
 - b. Shipping manifest:
 1. Date shipped.
 2. Origination and delivery locations.
 3. Shipping method and carrier.
 4. Shipping order number.
 5. Purchase order number.
 6. Shipped item.
 7. Stock number.
 8. Lot number.
 9. Manufacturer.
 10. Any shipping, storage, or safety requirements.
 11. Received by, and date.
 12. Signature of receiver.
 7. Stock sheets, order forms, delivery forms, invoices, and Hazardous Material forms for material used.
- B. Submit**
1. Certificate statement from manufacturer approved installer of their system.
 - a. Include certificates of training from manufacturer for each crewmember involved in installation process.
 2. Documentation of Products and Installers: Engineer's approval required before installation of rehabilitation materials.
 - a. Descriptions of projects completed in past 2 years where proposed rehabilitation material was used.
 1. Include vertical feet of manhole rehabilitated. Manhole identification number, work order number, Contract number, Contractor's name, operator's contact information, and date of readings.
 3. Safety Plan for installing liners.
 4. For manhole process involving materials that cure in field as component of their installation.

- a. Provide ASTM certified lab test results for field installations completed in United States over the past two years.
 - 1. In place properties for actual field installations for proposed materials.
 - 2. Test results must verify physical properties specified herein have been achieved in previous field applications.
- 5. Detailed description of field testing process and procedures.
 - a. Keep accurate record of work for each manhole rehabilitated under this contract.
 - 1. Show manhole identification number and location, quantities of rehabilitation material used, estimate of infiltration eliminated, and results of post-rehabilitation inspection.
 - b. DVD_ROM with Color video inspection reports and all digital records (original inspection videos, photographic stills, etc.) made following manhole rehabilitation.
 - 1. Provide to Engineer within 10 days.
 - c. Curing logs: Show material curing readings per unit of time collected during material installation.
 - d. Third party material testing report complete with samples, test done, results and Analyst signature.
 - 1. Third part defined as ASTM or equivalent accredited materials testing firm with no financial or directorial link to manufacturer or Contractor.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect, store, and handle materials during transportation and delivery, while stored on-site, and during installation following approved submittals.
 - 1. Maintain temperature less than 120 degrees F. while in storage.
 - 2. Engineer may inspect and test materials at factory, before delivery to site or while in storage.
- B. Material found to be defective or damaged due to manufacture or shipment:
 - 1. When Engineer deems repairable: Repair following manufacturer's recommendations.
 - 2. When Engineer deems not repairable: Rejected, removed from Contact site, and replaced under Engineer's direction.
 - 3. Repair or replacement of defective or damaged material will be at no additional cost to the project.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Acrylic or Acrylate Base Grout for non-structural infiltration control: Follow ASTM F2414 and as specified herein.
 - 1. Two-part chemical grout mixed at point of injection.
 - 2. Minimum 25 percent acrylic or acrylate base material by volume.
 - a. To increase strength or offset dilution during injection period, use higher concentration of base material as directed by Engineer.
 - 3. Controllable reaction time: 30 seconds to 1 hour.
 - 4. Viscosity: 1.5 centipoises water.
 - a. May be increased maximum of 2.5 centipoises water as directed by Engineer.
 - b. Remain constant throughout injection period.
 - 5. Tolerates dilution and reacts in moving water.
 - 6. Final reaction:

- a. Produces chemically, continuous irreversible, non-biodegradable, flexible gel, impermeable to water at pressures up to 15 psi in pure form.
 - b. Produces stabilized soil in the ground that will not become brittle or rigid.
- 7. Gel does not bleed water under stress.
- 8. Dehydrated gel returns to 90 percent of its original volume and form after prolonged period of low ground water.
- 9. Do not use catalyst containing dimethyl amino propionitrile (DMAPM).
- 10. Use root inhibitor (50% active dichlobenil) when roots are present in manholes, connecting pipes or laterals.
 - a. Change dye color to confirm root inhibited grout is being injected.
- 11. Use latex additive for increased tensile strength.
- 12. Tinted to allow detection of grout in drill holes or at leakage locations.
- 13. Approved Manufacturers
 - a. Grout
 - 1. Avanti International, Acrylic Gel.
 - a) Additives
 - (1) AV-101 Catalyst T+
 - (2) AV-103 Catalyst SP
 - (3) AC50W- Root Inhibitor
 - (4) AC-257 Icoset
 - 2. De Neef, Inc.
 - a) Ac400 Acrylate Grout
 - (1) Additives
 - (a) TE 300 Triethanolamine
 - (b) P200 Sodium Persulfate
 - 3. Or Approved Equal.

B. Urethane Base Grout for non-structural infiltration control: Follow ASTM and as specified herein.

- 1. Ratio: One part urethane prepolymer to 10 parts water by volume (10 to 50 percent prepolymer).
- 2. Liquid prepolymer:
 - a. Solids content: 77 to 83 percent.
 - b. Specific Gravity: 1.04
 - c. Flash Point: 20 degrees F.
 - d. Viscosity: 200 to 1,200 centipoises water at 70 degrees F.
- 3. Water for reacting prepolymer: pH of 5 to 9.
- 4. Use manufacturer recommended gel control agent to control cure time as required.
- 5. Final Reaction:
 - a. Produces chemically continuous irreversible, non-biodegradable, flexible gel, impermeable to water at pressures up to 15 psi in pure form.
 - b. Produces stabilized soil in ground that will not become brittle or rigid.
- 6. Dehydrated gel returns to 90 percent of its original volume and form after prolonged period of low ground water.
- 7. Use root inhibitor (50% active dichlobenil) when roots are present in manholes, connecting pipes, or laterals.
- 8. Use latex additive for increased tensile strength.
- 9. Tinted to allow detection of grout in drill holes or at leakage locations.
- 10. Approved Manufacturers:
 - a. Warren Environmental, Inc.
 - 1. SG-201 Grout

- b. Avanti
 - 1. Norosac AC 50W Root Inhibitor
 - 2. AV-254 Gelseal
 - a) Additives
 - (1) AV-257 Icoset
 - (2) AV-255G Grout Side Accelerator
- c. De Neff, Inc.
 - 1. Hydro Active Multigel NF
 - a) Additives
 - (1) Flexgel Cat Water Side Accelerant
 - (2) Reinforcing Agent
- d. Sauereisen
 - 1. F370, Hydroactive Polyurethane Grout
- e. Prime Resins Inc.
- f. Or Equal

C. Cementitious Reconstruction for Manhole Restoration

- 1. Quick Setting (under 20 minutes), high strength, sulfide resistant, calcium aluminate-based or portland cement material.
- 2. Suitable for troweling or rotary spray application to inside of manhole.
- 3. Use additives to increase corrosion resistance or bond strength at manufacturer's direction and with Engineer's approval.
- 4. Initial set time per manufacturer's recommendations and per project conditions.
- 5. Density when applied: 135lb/cf +/- 5lb/cf.
- 6. Compressive strength (ASTM C109) at 1 day.
 - a. Per manufacturer's recommendations
 - b. Minimum acceptable: 2,000 psi
- 7. Compressive strength (ASTM C109) at 28 days
 - a. Per manufacturer's recommendations
 - b. Minimum acceptable: 5,500 psi
- 8. Bond Strength (ASTM C882) at 28 days
 - a. Per manufacture's recommendation
 - b. Minimum acceptable: 1,640 psi
- 9. Flexural Strength (ASTM C78) at 28 days
 - a. Per manufacturer's recommendation
 - b. Minimum acceptable: 1,500 psi
- 10. Shrinkage (ASTM C596) at 28 days: 0 percent
- 11. Approved Manufacturers
 - a. Green Monster
 - 1. GML 30/60
 - b. IPA Systems, Inc.
 - 1. Octocrete (trowel)
 - 2. Drycon (brush or towel) (Non-Structural Applications only)
 - 3. Drycon SM (spray gun)
 - 4. Drycon SMF fiber reinforced
 - c. The Strong Company, Inc.
 - 1. Strong-Seal MS-2A
 - 2. Strong-Seal MS-2C (mild corrosion resistance)
 - 3. Strong-Seal High Performance (high corrosion resistance)
 - d. AP/M Permaform
 - 1. Permacast MS-10,000 (corrosion resistant)

- 2. Permacast MS-10,000 with Con-Shield (anti-bacterial additive)
 - 3. Permacast CR-9,000 (calcium aluminate cement) (trowel)
 - e. Sauereisen
 - 1. F-120 Underlayment (calcium aluminum cement) (trowel)
 - 2. F-120 FC Fast Setting Underlayment
 - 3. F-121 Substrate Resurfacer
 - f. Mainstay Composite Liner
 - 1. ML-72
 - g. QuadEx
 - 1. Aluminaliner (calcium aluminum cement)
 - h. Or Equal
- D. Hydraulic Water Plugs for non-structural infiltration control.
- 1. Rapid setting to plug active leaks prior to other rehabilitation work.
 - 2. Initial Set Time at 70 degrees F: 60 to 90 seconds
 - 3. Final Set Time at 70 degrees F: One hour.
 - 4. Compressive Strength (ASTM C109) at 28 days:
 - a. Per manufacturer's recommendation
 - b. Minimum acceptable "or equal" products: 4,000 psi
 - 5. Length Change (ASTM C157): 0 percent
 - 6. Approved Manufacturers
 - a. Sauereisen
 - 1. Instaplug F-180
 - b. GML – SewerCrete Leak Stop
 - c. IPA Systems, Inc.
 - 1. Octoplug Plus
 - 2. IPANEX Rapid
 - d. The Strong Company, Inc.
 - 1. Strong-Seal QSR (acid resistant)
 - 2. Strong-Plug
 - e. AP/M Permaform
 - 1. Permacast-Plug
 - f. Or approved Equal
- E. Oil-Free Oakum Water Plugs for non-structural infiltration control.
- 1. Rapid setting oil-free oakum and hydrophilic grout to plug active water leaks prior to other rehabilitation work.
 - 2. Oil-free oakum meeting Federal Specification HH-P-117
 - 3. Two-part urethane resin.
 - 4. Initial set time: 5 to 10 seconds.
 - a. Use accelerator to decrease initial set time.
 - 5. Approved Manufacturers
 - a. Avanti International
 - 1. Oil-free Oakum (AV-219)
 - 2. Multigrout (AV-202)
 - b. De Neef, Inc.
 - 1. Oil-free Oakum
 - 2. Hydro Active Sealfoam
 - 3. Hydro Active Flex LV grout
 - c. Or Equal

F. Manhole Chimney Seals

1. Cured in Place Chimney Liner

- a. Seamless tube liner formed in place within existing manhole, beginning just below cover seat extending downward maximum of 24 vertical inches.
 1. Structurally independent of existing manhole structure.
- b. Resin impregnation method: On site.
- c. Resin-Catalyst-Colorant Additive Mixture:
 1. Tested to certify design standards are met before impregnating felt material.
 2. Quantity of resin used for tube impregnation: Sufficient to fill volume of air voids in felt tube with additional allowances for Polymerization shrinkage and loss of resin through cracks and irregularities in manhole walls.
- d. Seems in felt tube.
 1. Stronger than non-seamed felt.
 2. Overlapped layers of felt in vertical seams that cause lumps in final product shall not be utilized.
- e. Cured Liner.
 1. 50-year life span.
 2. Chemically resistant to internal exposure to sewage containing small quantities of hydrogen sulfide, carbon dioxide, methane, mercaptans, kerosene, moisture and diluted sulfuric acid.
 3. Chemically and physically resistant to external exposure of soil bacteria, moisture roots and chemical attack, this may be due to material in surrounding ground.

2. Approved Manufacturers

- a. Cured In Place Liner/Chimney Sealant
 1. LMK
 2. Flex-Seal
 3. CIPMH Chimney
 4. Or Approved Equal

G. Manhole Liners

1. Spray on Polymer Liners

- a. Seamless manhole formed in place, within existing manhole extending from channel to frame.
- b. Two or three part epoxy coating.
- c. Existing wall preparation: Follow manufacturer's recommendations.
- d. Minimum thickness: Structurally independent of existing manhole structure or sufficient to form protective barrier when used with Cementitious Manhole Restoration.
- e. Minimum Tensile Strength (ASTM D638-03): 2,500 psi
- f. Minimum Flexural Strength (ASTM D790): 4,600 psi
- g. Approved Manufacturers
 1. Sauereisen
 - a) Sewer Gard No. 210 Sprayable
 - b) Sewer Gard No. 210 Rotary Spray
 - c) Sewer Gard No. 210G (Non-Structural Application Only)
 - d) Sewer Gard No. 210 FS
 - e) Hi-Build Filler Compound No. 209HB (Non-Structural Applications Only)

2. Raven
 - a) Raven 400S (Non-Structural Application Only)
3. Terre Hill
 - a) Hydropoxy (Non-Structural Application Only)
4. AP/M Permaform
 - a) Cor+Gard (Non-Structural Application Only)
5. SprayRoq, Inc.
 - a) SR6100 (Non-Structural Application Only)
6. Sprectrashield
7. Nukote
8. Mainstay
 - a) DS-5
9. Warren Environmental, Inc.
 - a) S-301-14 Epoxy Spray System
 - b) M-301-18 Epoxy Trowel-On Mastic System
 - c) S-301-20 Thermaflex (Non-Structural Application Only)
 - d) SG-201 Injection Grout (Non-Structural Application Only)
10. Or Approved Equal

PART 3 - EXECUTION

3.1 MAINTENANCE OF SERVICE

- A. Maintenance service usage throughout duration of project.
 1. Maximum time without service: 4 hours for property served by sewer.
 - a. Without service longer than 4 hours will require bypass to sanitary sewer following Section 02530 at no cost to the project.

3.2 PUBLIC NOTIFICATION PROGRAM

- A. Notifications shall be placed 72 hours in advance of all work. Notices should be approved by Owner's Representative.

3.3 PREPARATION

- A. Manhole Preparation: Following approved submittals for rehabilitation products used.
 1. Divert flow from channel.
 2. Prevent extraneous material from entering sewer lines during cleaning and rehab work.
 - a. Filter solids-laden water through an approved de-silting device. No material shall be allowed to go downstream.
 3. Clean interior surface of manhole of debris, dirt, oil, grease, remains of old coating materials, and any other extraneous materials.
 4. Pressure wash interior of manholes to remove loose mortar, concrete and debris.
 5. Repair irregularities and missing material in manhole forming smooth surface. This includes inverts and benches.
 6. Stop leakage into manhole.
 7. Completely dry manholes using dryers to engineer's satisfaction.
 8. Remove manhole steps as directed by owner.
- B. Chemical Grouting for Leakage Control.

1. Provide 48 hour notice to Engineer prior to start of work for equipment inspection and testing.
 - a. Allow measurements to be taken.
 - b. Demonstrate acceptable grout volumetric measuring technique.
2. Adjust chemical mixing ratios required for specific application.
 - a. Minimum gel time 30 seconds or as directed by Engineer.
3. Do not block pipes entering/exiting manhole with grout.
 - a. Use mirror or camera to confirm pipes are not blocked.
4. Do not damage manhole structure during operations.
 - a. Repair damage as directed by Engineer.
5. Protect area of manhole below repair work.
 - a. Do not allow solid material to enter sewage flow.
 - b. Remove protective devices as soon as practical.
6. Manhole Sealing: Follow ASTM F2414 and as specified herein.
 - a. Brick manholes.
 1. Drill only the amount of holes necessary to stop leakage following industry standards and chemical grout manufacturer's recommendations.
 2. Proceed with manhole reconstruction using reconstruction process specified herein.
 - b. Precast Manholes.
 1. Seal pipe connections as specified by drilling between pipe and manhole opening and injection grout.
 2. When specified, seal precast manhole base by drilling holes at leakage points along bench to wall, and in channel.
 3. At precast joints, inject grout through holes drilled at leaking joint.
7. Hydraulic Water Plugs: Following approved submittals.
 - a. Provide mechanical key by undercutting or square cutting opening and removing loose materials.
 - b. Mix, handle, place, and cure material.
 - c. Finish surface as required for other rehabilitation work.
8. Oil-Free Oakum Water Plugs: Following approved submittals.
 - a. Saturate oakum with resin.
 1. Use additives as required.
 - b. Place, pack and cure material.

3.4 MANHOLE REHABILITATION

- A. Locate Existing Manhole.
 1. Using available records, drawings, land surveying, GPS, metal detectors or other technology and techniques, locate, excavate and expose existing manhole.
- B. Chemical Grouting: At the direction of Owner's Representative. As specified herein, following ASTM F2414 and specified herein.
- C. Manhole Chimney Seals: Following approved submittals.
 1. Provide smooth circular surface following manufacturer's requirements.
 - a. Install following Standard Details.
 - b. Realign manhole frame and cover if required following City of Tuscaloosa Standard Details, and specified herein.
 2. Mix, handle, and apply material.

- D. Manhole Liners: Following approved submittals.
 - 1. Epoxy Liners.
 - a. Mix and apply material.
 - 1. Sagging of material is not permitted.
 - b. Seal around pipe connections and steps.
 - c. Cure.
 - d. Finished liner: Forms monolithic structure from manhole frame to channel.
- E. Trim and seal incoming laterals and pipes.

3.6 FIELD TESTING

- A. Follow specified herein.
 - 1. Monitor, record, and report to Engineer defects or damage to materials during installation.
 - 2. Collect, label, and store representative product samples.
 - a. Submit product samples specified herein.
 - b. Additional product samples may be required, as directed by Engineer
 - c. Store and maintain products samples until contract maintenance bond has expired.
 - 3. Verified required testing is performed by approved laboratory.
 - 4. Engineer may inspect pre-rehabilitation work, rehabilitation operations, and post-rehabilitation work.
- B. Video Inspections of post-rehabilitation condition of manhole must be provided to the Owner's Representative.
- C. Visual Inspection: Determine integrity of rehabilitation materials and water-tightness.
 - 1. Verify no inflow or infiltration.
 - 2. Verify services are reinstated and unobstructed.
- D. Defects.
 - 1. When Engineer Deems Repairable: Repair defect, replace liner, install new manhole at no additional cost to the project.
- E. Manhole Lining: Contractor shall test for continuity following ASTM D4787 and approved submittals.
 - 1. Conduct holiday test and gauge depth test on spray-on liners.
 - 2. Perform CCTV inspection of liner following Section 02956.
 - 3. Conduct pull test with embedded bolt or tab.
 - 4. Repair holes and discontinuities following manufacturer's recommendations.
- F. Grout and Concrete: Test for compressive strength following ASTM C109.

3.7 WARRANTY INSPECTIONS

- A. Conduct visual inspection prior to expiration of warranty to determine integrity of rehabilitation materials and water-tightness.
 - 1. Complete post inspection during first high groundwater period (spring or fall) following acceptance of work.

2. Contractor will accompany Engineer on inspections.
3. Inspect 25 percent of manholes rehabilitated at locations selected by Engineer.
 - a. Infiltration and Inflow: None
 - b. Structural Repair: Sound
 - c. If more than one manhole fails warranty inspection, inspect all manholes with similar characteristics.
 - d. Repair defects in accordance with Warranty.
4. When Engineer Deems Repairable: Repair defect, replace liner, install new manhole at no additional cost to the project.

PART 4 - MEASUREMENTS AND PAYMENT

4.1 CHEMICAL GROUTING OF MANHOLES

- A. Measurement: Per each manhole using a pressurized grout machine.
- B. Payment: At unit price per manhole up to 30 gallons of grout.
 1. Payment includes all equipment, material, and labor for various grout items.

4.2 CHIMNEY SEALS

- A. Measurement: per each.
- B. Payment: at unit price per manhole.
 1. Payment includes all equipment, material, and labor for installation of chimney seal.

4.3 EPOXY MANHOLE LINER

- A. Measurement: By vertical foot of liner installed.
- B. Payment: At unit price per vertical foot listed in Bid Schedule.
 1. Payment includes all equipment, materials, labor, surface preparation, grouting to stop leaks, installation of material, and testing.

4.4 TRAFFIC CONTROL

- A. Measurement: Incidental to manhole rehab and pipe lining
- B. Payment: no payment will be made for traffic control. Traffic control shall meet plans and MUTCD.

END OF SECTION 02957



3516 Greensboro Avenue
Tuscaloosa, AL 35401
205.345.0816
www.ttlusa.com

September 10, 2015

Burk-Kleinpeter, Inc.
Attn: Mr. Clay Randolph, P.E.
600 Lurleen Wallace Boulevard, Suite 180
Tuscaloosa, AL 35401

**RE: *Soil Survey and Materials Report
 Prince Avenue Improvements
 Tuscaloosa, Tuscaloosa County, Alabama
 TTL Project No. 100114050***

Dear Mr. Randolph:

The following soil survey and materials report is documentation of the recommendations of TTL, Inc. (TTL) for construction of the above referenced project. Quantities are based on the project plans provided by Burk-Kleinpeter, Inc. (BKI).

PROJECT INFORMATION

The project is located in Tuscaloosa, Tuscaloosa County, Alabama, and includes widening, overlaying, and partial realignment of Prince Avenue between Harrison Street and a recently completed intersection realignment project at Hargrove Road. The project includes the construction of narrow widening and curb and gutter on Prince Avenue. The majority of the project will include raising the profile grade, with the exception of an approximately 300-foot section near the middle of the project alignment which will be lowered to facilitate stormwater drainage. Additional construction will include a horizontal realignment of the curve near Sumner Place Apartments. Project discussions with BKI indicate some leveling will be utilized to superelevate the realigned curve and some additional leveling may be utilized as needed for cross-slope corrections. Project plans including plan, profile, and cross sections were provided to TTL. The project is not expected to include any culverts or culvert extensions. The project is in an area with dense residential development including detached single-family homes, an apartment complex, and a church at the intersection with Hargrove Road. Based on the plans provided, cuts and fills for the widened areas and adjacent sidewalks are shown to be 3 feet or less.

Location maps of the project are included in Appendix A.

FIELD OPERATIONS AND FINDINGS

Between May 23, 2014, and July 3, 2014, 18 soil-auger borings were performed along the project alignment, as shown on the Boring Location Schematic included in Appendix A. The borings were field-located by TTL personnel using hand-held, sub-meter GPS equipment, and, therefore, the locations should be considered approximate. The borings were drilled to depths ranging from about

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3 to 6 feet below the ground surface (bgs) using a CME 45 and 75 drill rig. Standard Penetration Test (SPT) testing was performed in the borings at select intervals to observe any base material and estimate the general engineering characteristics of the soils encountered. Cores of the existing Prince Avenue were obtained at three boring locations and at each intersecting street.

Soil samples were tested in TTL's Tuscaloosa laboratory and the results are included in Appendix C. The tests included soil moisture content, Atterberg limits, and soil grain size distribution.

RECOMMENDATIONS

The project will include narrow widening on portions of both sides of the existing roadway to create an 11-foot travel lane in each direction, curb and gutter, and a sidewalk on the west side of the road. Cross sections provided to TTL show shallow cuts and fills (less than 3 feet) will be required to reach finished grade. Our borings encountered some areas of soft soils. Generally, soft soils are fine-grained soils with Standard Penetration Test (SPT) "N" Values of less than or equal to about 6 blows per foot. Several areas which encountered "N" values of 6 or less were at deeper depths within the boring which will not be exposed during grading operations; however, several areas of soft soils will likely be encountered in the planned shallow cuts/fills. Surficial soft soils are expected to be removed or densified during topsoil stripping and normal construction traffic. Thicker intervals of soft soils should be stabilized as described below to provide a stable subgrade for the widened roadway. After removal of topsoil and cutting to the planned subgrade elevation, the subgrade should be evaluated by proofrolling under the direction of the Project Engineer prior to any fill placement. Areas judged to be unsuitable for support of fill or pavement should be undercut and replaced with properly compacted borrow material. Undercutting should be conducted as necessary to provide suitable subgrade; however, undercutting should be limited to 3 feet below subgrade elevation. If soft soils remain at 3 feet below the planned subgrade elevation, the subgrade may be stabilized by placing Type 3 soft soil stabilization reinforcement followed by properly compacted borrow material (A-4 or better). Undercutting and replacement should extend to the limits of the unsuitable material or 2 feet outside the edge of pavement, whichever is less. We recommend quantities of 300 square yards of geosynthetic reinforcement and 300 cubic yards of undercut be set up in the project plans to be used as directed by the engineer to address areas of soft soils. Depending upon the time of year of construction, our experience has shown these types of soils can be very moisture sensitive. If grading operations are performed during or just after a period of significant rainfall, additional undercutting should be expected.

Our observations of the roadway as of the date of this report indicated several areas of the existing pavement should be considered for repair by means of full depth patching. We recommend setting up appropriate quantities for 100 square yards of full depth patching. Full depth patches should be constructed by saw cutting the perimeter of the failed area, removing the existing pavement and base material to allow for construction of a 5-inch thick full depth patch. After removal of the failed pavement and base material necessary for the required patch thickness, the subgrade soils should be evaluated to determine if removal of additional soft soils is required to stabilize the patch area. If additional undercut is recommended, the undercut materials should be replaced with bituminous concrete patching or crushed aggregate base material as directed by the Project Engineer. We recommend that the cost for removal and hauling of existing pavement and base material required for construction of the full depth patches and undercutting of the additional soft soils be a subsidiary obligation of the pay item number for the material used to replace the removed materials. We recommend setting up an additional quantity of 10 tons of bituminous concrete patching and 20 tons of crushed aggregate in case additional undercutting is required at the patches.

We did not measure the cross-slope of the in-place pavement; however, based on our discussions of the project with BKI, we anticipate some cross-slope corrections will be made with leveling. ALDOT

Guidelines for Operation 6-10 Rev. 10/13 specifies a minimum laydown rate for leveling based upon the maximum aggregate size of the specified mix. The specific pay item should be selected by the designer based on the required cross-slope corrections. Milling for cross-slope corrections is not anticipated since the roadway profile grade is planned to be raised.

After completion of the required patching and any leveling, the widening and overlay buildups should be constructed based on the following recommendations.

No traffic data was provided for the roadway; therefore, the pavement buildups presented in this report were based on the City of Tuscaloosa's minimum buildup for arterial streets. The minimum buildup is based on a Structural Number (SN) of at least 3.12. TTL performed three pavement cores within the existing Prince Avenue to estimate the in-place buildup. Table 1 presents the pavement core data along Prince Avenue.

Table 1. Prince Avenue Pavement Cores

Station and Offset	Boring No.	Bituminous Concrete Thickness (in)	Base Thickness (in)	Base Type
12+42 11 LT	050-17	2.5	12	Soil-Aggregate
15+98 8 LT	050-16	5	8	Soil-Aggregate
23+12 11 LT	050-15	6.5	10	Soil-Aggregate

The pavement core and base thicknesses presented in Table 1 were utilized along with a structural coefficient of 0.44 for bituminous concrete and 0.07 for soil-aggregate base to determine an in-place SN. The calculated SN was subtracted from the City's minimum SN of 3.12 to determine a required overlay SN. The required overlay SN was then used to determine the required overlay thickness. Based on the core data and our observation of the existing pavement surface, there are likely two distinct pavement buildups which appear to meet at approximately Station 13+25. The required overlay SN from the beginning of the project to approximately Station 13+25 was 1.18; however, the in-place SN from Station 13+25 to the end of the project was greater than the minimum of 3.12 which does not require an overlay for structural support. We understand the plans are to raise the profile grade of the roadway and that no milling (except at tapers) will be performed. Therefore, we recommend a structural overlay between the beginning of the project and Station 13+25 and a functional overlay buildup between Station 13+25 and the end of the project.

Areas of new pavement buildup including areas of widening and reconstruction (Station 20+00 to Station 23+00) along the project alignment should utilize the buildup presented in Table 2.

Table 2. New Pavement Buildup

Layer	Material Description	Struct. Coef.	Thickness (in)	Actual SN (in)
1	424A-340 Superpave Bituminous Concrete Wearing Surface Layer, 1/2" Maximum Aggregate Size, ESAL Range A/B, 155 lb/SY	0.54	1.4	0.76
2	405A-000 Tack Coat	---	---	---
3	424B-635 Superpave Bituminous Concrete Upper Binder Layer, 3/4" Maximum Aggregate Size, ESAL Range A/B, 165 lb/SY	0.54	1.5	0.81
4	405A-000 Tack Coat	---	---	---
5	424B-665 Superpave Bituminous Concrete Lower Binder Layer, 3/4" Maximum Aggregate Size, ESAL Range A/B, 180 lb/SY * Shall be Pay Item No. 424B-676 in areas of widening	0.54	1.6	0.86
6	401A-000 Bituminous Treatment A	---	---	---
7	301A-008 Crushed Aggregate Base Course, Type B, Plant Mixed, 5" Compacted Thickness	0.14	5	0.70
Total:				3.13

The structural overlay from the beginning of the project to Station 13+25 is presented in Table 3.

Table 3. Overlay Buildup between Begin Project and Station 13+25

Layer	Material Description	Struct. Coef.	Thickness (in)	Actual SN (in)
1	424A-340 Superpave Bituminous Concrete Wearing Surface Layer, 1/2" Maximum Aggregate Size, ESAL Range A/B, 155 lb/SY	0.54	1.4	0.76
2	405A-000 Tack Coat	---	---	---
3	424B-635 Superpave Bituminous Concrete Upper Binder Layer, 3/4" Maximum Aggregate Size, ESAL Range A/B, 165 lb/SY	0.54	1.5	0.81
4	405A-000 Tack Coat	---	---	---
5	Existing Pavement and Base (Retain)	---	---	1.94
Total:				3.51

The functional overlay from Station 13+25 to the end of the project is presented in Table 4.

Table 4. Overlay Buildup between Sta. 13+25 and End Project

Layer	Material Description	Struct. Coef.	Thickness (in)	Actual SN (in)
1	424A-340 Superpave Bituminous Concrete Wearing Surface Layer, 1/2" Maximum Aggregate Size, ESAL Range A/B, 155 lb/SY	0.54	1.4	0.76
2	405A-000 Tack Coat	---	---	---
3	Existing Pavement and Base (Retain)	---	---	2.76
Total:				3.52

Between the beginning of the project and Station 13+25, the top of the lower binder layer should be tapered to match the existing pavement elevation prior to placing the upper binder across the full width of the roadway. Similarly, between Station 13+25 and the end of the project, the upper binder in the widened areas should be tapered to match the existing pavement elevation prior to placing the wearing surface layer full across the full width of the pavement for the entire project length.

We recommend the buildups be tied into the existing pavement by milling of the existing pavement for the appropriate layer thickness over a distance of 25 feet. At the beginning of the project, milling should be conducted for both the upper binder and wearing surface layers, and the milling for the wearing surface layer should begin at the end of the upper binder layer taper. At Station 13+25, the upper binder layer should be tied into the existing pavement by milling similar to the beginning of the project. The taper length on the side streets can be reduced to 10 feet, and the milling depth should be limited to a maximum of 1 inch due to the thickness of the in-place pavement.

We recommend the following plan note be included in the project plan assembly.

Plan Note: In areas of widening greater than 6 feet in width, the subgrade shall be compacted to 100% of AASHTO T-99. In areas of widening 6 feet or less in width, compaction of the subgrade soil should be to the satisfaction of the engineer.

In addition to the pavement pay items presented in the buildup tables, the following pay items should be included in the project plans.

Pay Item No. 210D-011 Borrow Excavation (A-4 or Better) – per cubic yard.

Pay Item No. 243A-035 Geosynthetic Reinforcement for Soft Soil Stabilization, Type 3 – per square yard.

Pay Item No. 424B-639 Superpave Bituminous Concrete Upper Binder Layer, Patching, 3/4" Maximum Aggregate Size Mix, ESAL Range A/B – per ton.

Pay Item No. 301E-008 Crushed Aggregate Base Course, Type B, Plant Mixed – per ton.

If you need further information or require additional geotechnical services, please contact us at 205.345.0816.

Sincerely,

TTL, Inc.



Brian E. Wysock, P.E.
Project Engineer

Harvey F. Upchurch, Jr., P.E.
Principal Materials Engineer
(by Bgan)

Attachments:

- Appendix A. Location Maps
Boring Location Schematic
- Appendix B. Test Boring Records
- Appendix C. Laboratory Classification Summary
BMT-5's

Appendix A

Location Maps

Topographic Location Map

Highway Location Map

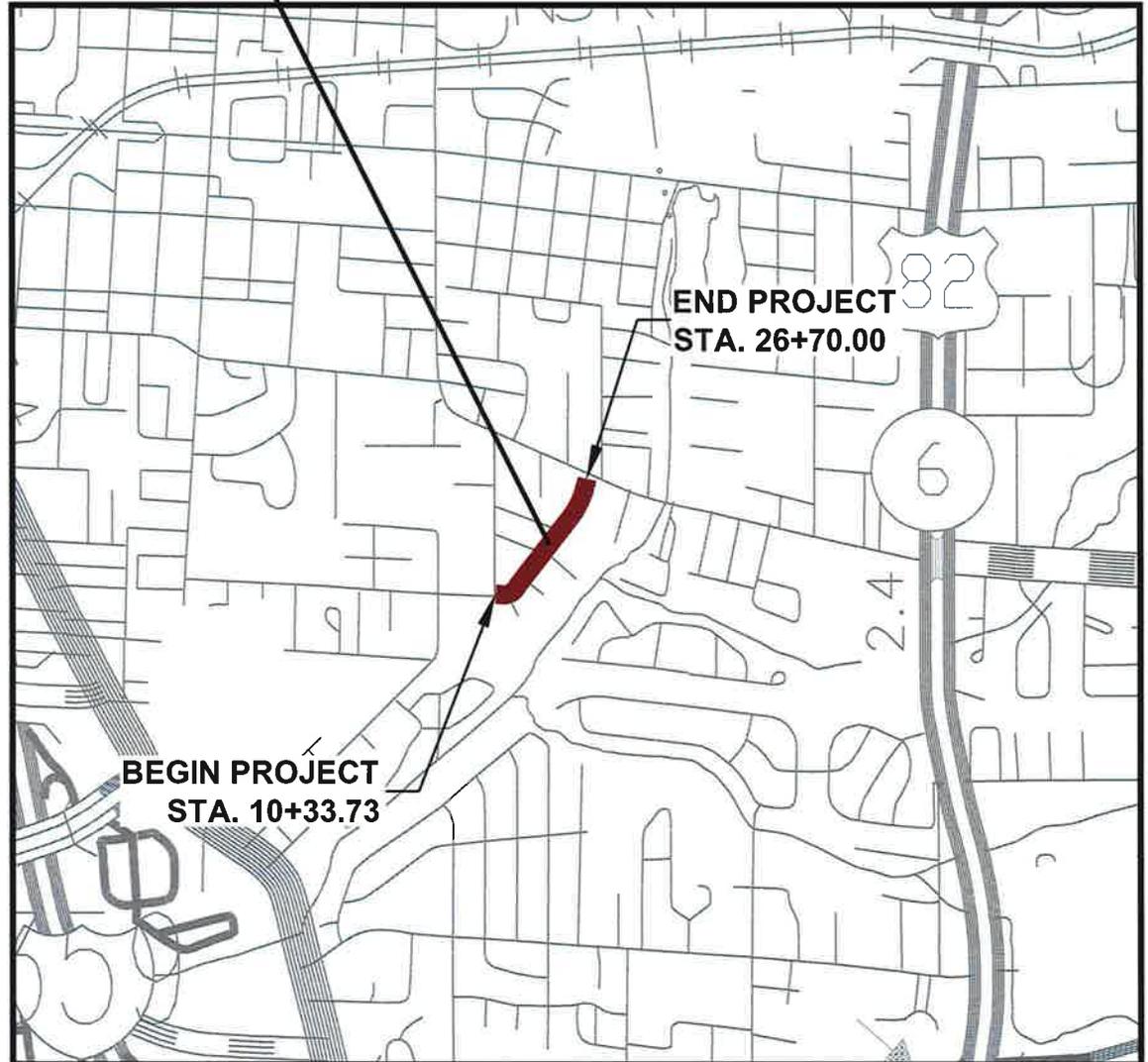
Geologic Location Map

Boring Location Schematic

Approximate Project Centerline



General Site Location



Source: General Highway Map of Tuscaloosa County, ALDOT, 1999



3516 Greensboro Avenue ■ Tuscaloosa, Alabama 35401
205.345.0816 ■ Fax 205.345.0992

Burk-Kleinpeter, Inc.
Prince Avenue Improvements
Tuscaloosa County



Highway Location Map

SCALE: 1" = 2000'

DRAWING PATH: <small>\\S1118\Facilities\Projects\2015\100114050 Prince Avenue Improvements\GIS\Map\1002 Map.dwg</small>		TTL PROJECT NO.: 100114050
DATE CREATED: 08/24/2015	DATE REVISED: N/A	REVISION NUMBER: N/A
DRAWN BY: mjc	CHECKED BY: BEW	
APPROVED: Brian Edward Wysock, P.E.		
SHEET:		MAP-02 OF 3

Legend



Alluvial, and low terrace deposits

Approximate Project Centerline



Source: Geologic Map of Alabama, Geological Survey of Alabama, 1988



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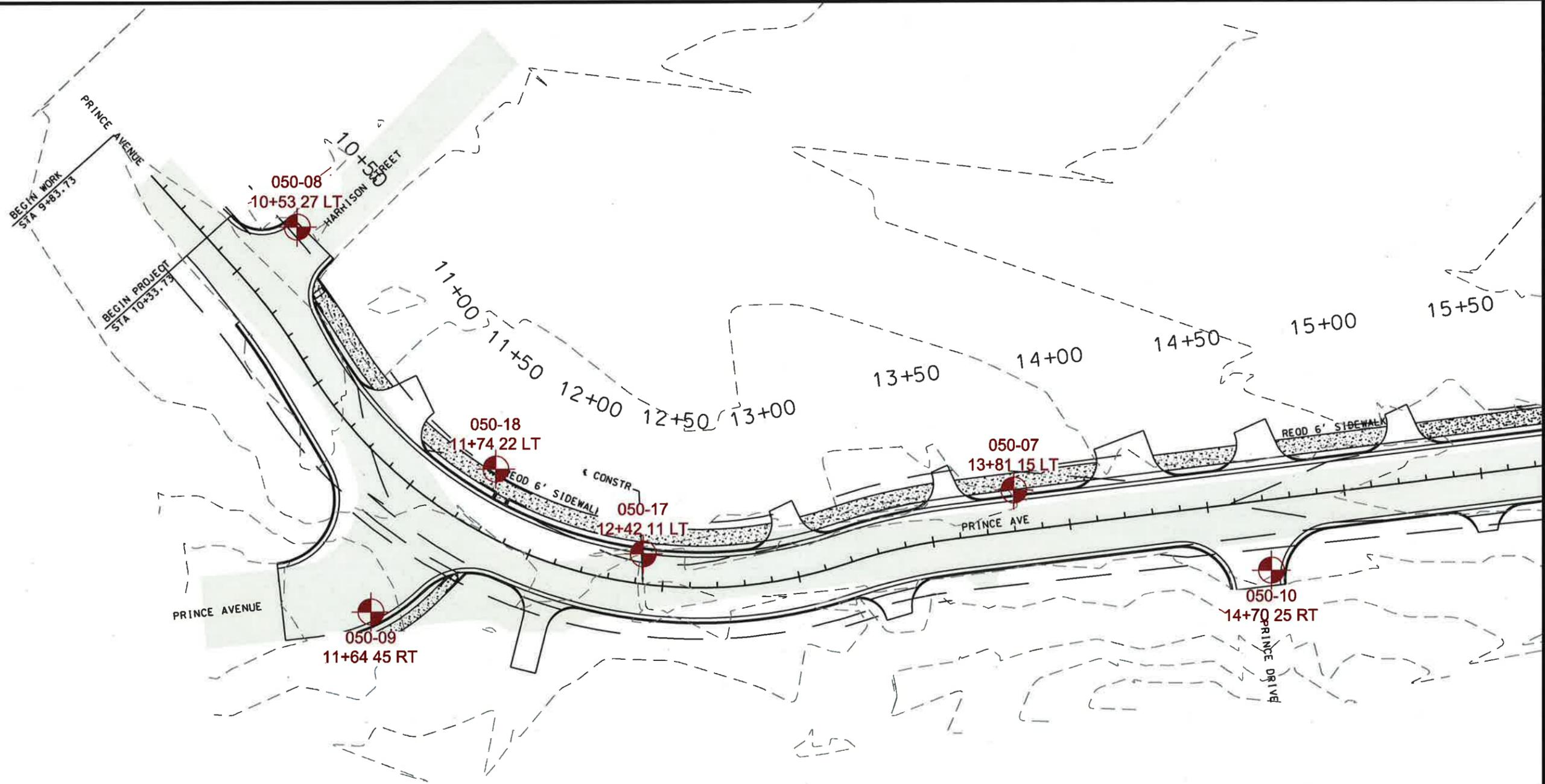
Burk-Kleinpeter, Inc.
Prince Avenue Improvements
Tuscaloosa County



Geologic Location Map

APPROXIMATE SCALE: 1" = 2000'

DRAWING PATH: <small>\\TTL\GIS\Projects\100114050 Prince Avenue Improvements\082415\Map-03.dwg</small>		TTL PROJECT NO.: 100114050
DATE CREATED: 08/24/2015	DATE REVISED: N/A	REVISION NUMBER: N/A
DRAWN BY: mjc	CHECKED BY: BEW	
APPROVED: Brian Edward Wysock, P.E.		
SHEET:		MAP-03 OF 3

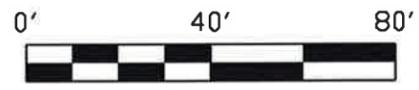
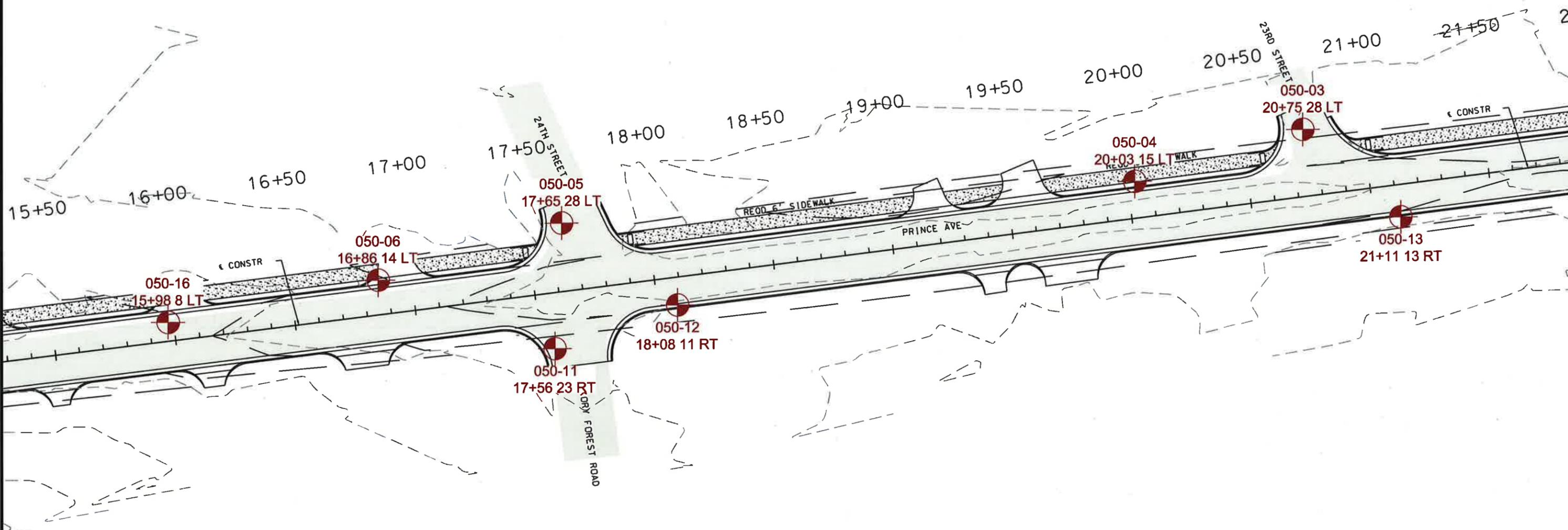


THESE DRAWINGS ARE BEING PROVIDED FOR REFERENCE PURPOSES
AND MAY NEED TO BE MODIFIED FOR FINAL DESIGN PLANS



 BORING LOCATION
STATION NUMBER AND OFFSET

 <small>3516 Greenburg Avenue • Tuscaloosa, Alabama 35401 205.343.5818 • Fax 205.343.5882</small>	BORING LOCATION SCHEMATIC		
	Burk-Kleinpeter, Inc. Prince Avenue Improvements Tuscaloosa County		
<small>DRAWING PATH: W:\1.1.00\tuscaloosa\Projects\2014\100114050 Prince Avenue Improvements\Drawings\14-050 PLN.dwg</small>			
<small>DATE CREATED:</small>	<small>CREATED BY:</small>	<small>CHECKED BY:</small>	
08/24/2014	mjc	BEW	
<small>DATE REVISED:</small>	<small>REVISION NO.:</small>	<small>REVISED BY:</small>	
N/A	N/A	N/A	
<small>TTL PROJECT NO.:</small>	<small>SCALE:</small>	<small>SHEET:</small>	
100114050	1" = 40'	PLN-01 OF 3	
<small>GEOTECHNICAL ENGINEER:</small>		<small>MODIFIED FROM ORIGINAL DRAWING BY:</small>	
Brian Edward Wysocki, P.E.		Burk-Kleinpeter, Inc.	

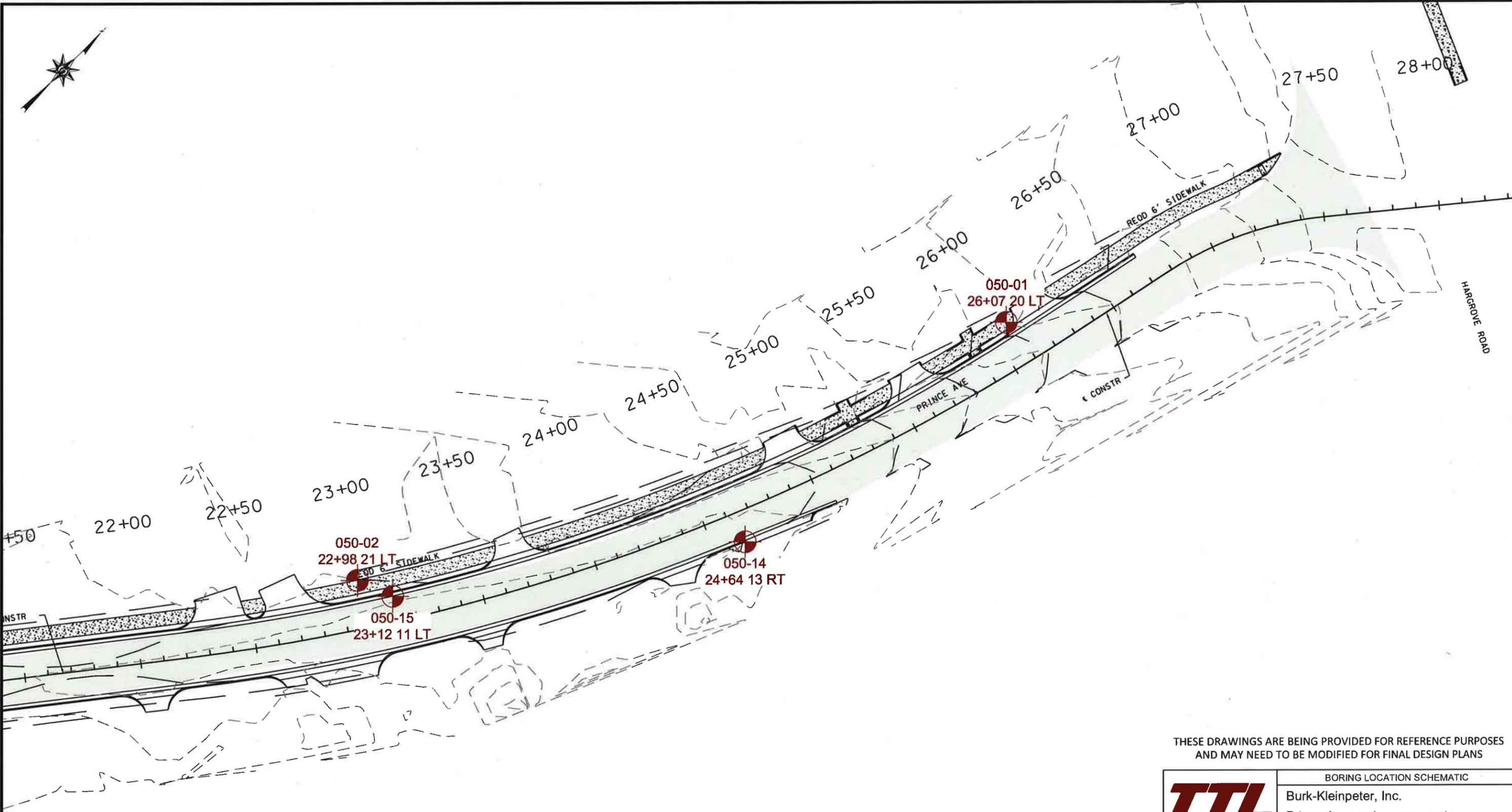


 BORING LOCATION
STATION NUMBER AND OFFSET

THESE DRAWINGS ARE BEING PROVIDED FOR REFERENCE PURPOSES
AND MAY NEED TO BE MODIFIED FOR FINAL DESIGN PLANS

 <small>2518 Greenbriar Avenue • Tuscaloosa, Alabama 35401 205.345.0818 • Fax 205.345.0822</small>	BORING LOCATION SCHEMATIC		
	Burk-Kleinpeter, Inc. Prince Avenue Improvements Tuscaloosa County		
DRAWING PATH:	\\10.1.1.81\Tuscaloosa\Projects\2014\100114050 Prince Avenue Improvements\Drawings\14050\PLN.dwg		
DATE CREATED:	08/24/2014	CREATED BY:	mjc
DATE REVISION:	N/A	REVISION NO.:	N/A
TTL PROJECT NO.:	100114050	SCALE:	1" = 40'
GEOTECHNICAL ENGINEER:	MODIFIED FROM ORIGINAL DRAWING BY:		
Brian Edward Wysock., P.E.	Burk-Kleinpeter, Inc.		

SHEET: **PLN-02 OF 3**




**BORING LOCATION
STATION NUMBER AND OFFSET**

THESE DRAWINGS ARE BEING PROVIDED FOR REFERENCE PURPOSES AND MAY NEED TO BE MODIFIED FOR FINAL DESIGN PLANS

 <small>3518 Oriolewood Avenue • Tuscaloosa, Alabama 35401 206.345.9218 • Fax 206.345.0900</small>	BORING LOCATION SCHEMATIC		
	Burk-Kleinpeter, Inc. Prince Avenue Improvements Tuscaloosa County		
<small>DRAWING PATH: \\S:\1 19\Tuscaloosa Projects\2014\00114050 Prince Avenue Improvements\Drawings\14-029 PLN.dwg</small>			
<small>DATE CREATED:</small>	<small>CREATED BY:</small>	<small>CHECKED BY:</small>	
08/24/2014	mjc	BEW	
<small>DATE REVISED:</small>	<small>REVISION NO.:</small>	<small>REVISED BY:</small>	
N/A	N/A	N/A	
<small>TTL PROJECT NO.:</small>	<small>SCALE:</small>	<small>SHEET:</small>	
100114050	1" = 40'	PLN-03 OF 3	
<small>GEOTECHNICAL ENGINEER:</small>		<small>MODIFIED FROM ORIGINAL DRAWING BY:</small>	
Brian Edward Wysock, P.E.		Burk-Kleinpeter, Inc.	

Appendix B
Test Boring Records

Soil (AASHTO Classification)

	A-1	WELL GRADED GRAVEL OR SAND; MAY INCLUDE FINES
	A-1a	LARGELY GRAVEL BUT CAN INCLUDE SAND AND FINES
	A-1b	GRAVELLY SAND OR GRADED SAND; MAY INCLUDE FINES
	A-2	SANDS AND GRAVELS WITH FINES
	A-2-4	SANDS, GRAVELS WITH ELASTIC SILT FINES LL<40, PI<10
	A-2-5	SANDS, GRAVELS WITH ELASTIC SILT FINES LL>=41, PI<10
	A-2-6	SANDS, GRAVELS WITH CLAY FINES LL<40, PI>=11
	A-2-7	SANDS, GRAVELS WITH HIGHLY PLASTIC CLAY FINES LL>=41, PI>=11
	A-3	FINE SANDS
	A-4	LOW COMPRESSIBILITY SILTS
	A-5	HIGH COMPRESSIBILITY SILTS, MICACEOUS SILTS
	A-6	LOW-TO-MEDIUM COMPRESSIBILITY CLAYS
	A-7	HIGH COMPRESSIBILITY CLAYS
	A-7-5	HIGH COMPRESSIBILITY SILTY CLAYS PI<LL-30
	A-7-6	HIGH COMPRESSIBILITY, HIGH VOLUME-CHANGE CLAYS PI>LL-30
	A-8	PEAT, HIGHLY ORGANIC SOILS

Rock

	CHALK
	COAL
	DOLOMITE
	GNEISS
	GRANITE
	LIMESTONE
	QUARTZITE
	SANDSTONE
	SAPROLITE
	SCHIST
	SHALE
	SILTSTONE

Other Materials

	BITUMINOUS CONCRETE
	BOULDERS & COBBLES
	CONCRETE
	CRUSHED STONE
	DEBRIS
	FILL
	TOPSOIL

Samplers

	AUGER CUTTINGS
	BULK SAMPLE
	CONTINUOUS SAMPLER
	DYNAMIC CONE PENETROMETER
	PITCHER SAMPLER or PRESSUREMETER
	ROCK CORE
	SHELBY TUBE
	SPLIT SPOON WITH NO RECOVERY

Water Level Symbols

	WATER LEVEL AT TIME OF DRILLING
	DELAYED WATER LEVEL
	CAVE-IN DEPTH

Existing Profile

Future Grade

General Notes:

N = Penetration in blows per foot (AASHTO T-206) (ASTM D 1586)

RQD/REC = Rock Quality Designation (RQD) / Recovery (REC)

A horizontal solid line in the material description column of the test boring record indicates a change in the AASHTO classification of the material. A dashed line indicates a significant change in color, moisture, consistency or additional materials within the same AASHTO classification.

Project Notes:

The subsurface investigation for this project was conducted on 05/23/2014 by personnel from TTL, Inc.

	3518 Greensboro Avenue Tuscaloosa, Alabama 35601 Phone 205.345.0916 Fax 205.345.0920
APPROVED:	Brian Edward Wysock, P.E.
	GEOTECHNICAL ENGINEER
DATE:	08/24/2014
APPROVED:	
	DIVISION MATERIALS ENGINEER
DATE:	

Burk-Kleinpeter, Inc.
Prince Avenue Improvements
Tuscaloosa County

STATION 10+53 27 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-08 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.																																																																	
Equipment: CME 45	Boring Depth: 6.0 feet																																																																		
Hammer Type: Automatic	Boring Elevation: 217.0 feet	Coordinates: N 1158958 E 1955942																																																																	
Drilling Method: Solid Stem Auger w/SPT Sampling																																																																			
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						4.5-6		9																																																											

Boring terminated at 6.0 feet

STATION 11+64 45 FT RIGHT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-09 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.																																																																													
Equipment: CME 45	Boring Depth: 6.0 feet																																																																														
Hammer Type: Automatic	Boring Elevation: 215.0 feet	Coordinates: N 1158879 E 1956059																																																																													
Drilling Method: Solid Stem Auger w/SPT Sampling																																																																															
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Boring terminated at 6.0 feet

STATION 11+74 22 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 7/3/2014	Remarks: TTL Boring No. 050-18 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.																																																																	
Equipment: CME 75	Boring Depth: 6.0 feet																																																																		
Hammer Type: Automatic	Boring Elevation: 217.0 feet	Coordinates: N 1158947 E 1956055																																																																	
Drilling Method: Solid Stem Auger w/SPT Sampling																																																																			
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Boring terminated at 6.0 feet

STATION 12+42 11 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-17 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.																																																					
Equipment: CME 45	Boring Depth: 3.2 feet																																																						
Hammer Type: Automatic	Boring Elevation: 216.0 feet	Coordinates: N 1158953 E 1956114																																																					
Drilling Method: Solid Stem Auger w/SPT Sampling																																																							
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Boring terminated at 3.2 feet

STATION 13+81 15 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-07 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.																																																																													
Equipment: CME 45	Boring Depth: 6.0 feet																																																																														
Hammer Type: Automatic	Boring Elevation: 216.0 feet	Coordinates: N 1159074 E 1956193																																																																													
Drilling Method: Solid Stem Auger w/SPT Sampling																																																																															
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Boring terminated at 6.0 feet

STATION 14+70 25 FT RIGHT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-10 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.																																																																	
Equipment: CME 45	Boring Depth: 6.0 feet																																																																		
Hammer Type: Automatic	Boring Elevation: 216.0 feet	Coordinates: N 1159119 E 1956280																																																																	
Drilling Method: Solid Stem Auger w/SPT Sampling																																																																			
<table border="1"> <thead> <tr> <th rowspan="2">DEPTH (ft)</th> <th rowspan="2">ELEVATION (ft)</th> <th rowspan="2">GRAPHIC LOG</th> <th rowspan="2">ASHTO</th> <th rowspan="2">MATERIAL DESCRIPTION</th> <th colspan="5">SAMPLE DATA</th> <th rowspan="2">REMARKS</th> </tr> <tr> <th>W.C. (%)</th> <th>SAMPLE INTERVAL (ft) & NUMBER</th> <th>TYPE</th> <th>N</th> <th>PPV (pcf)</th> <th>CORE LOG # & REC</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td></td> <td>A-2-6</td> <td>Asphaltic CONCRETE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>A-6</td> <td>Firm, moist, reddish-brown clayey SAND with gravel</td> <td></td> <td>0.3-1.8</td> <td></td> <td>6</td> <td></td> <td></td> <td>Group Index: (1) Percent Passing #200 sieve=34 LL=33 PI=13</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>Firm, moist, dark red sandy lean CLAY</td> <td></td> <td>1.8-3.3</td> <td></td> <td>6</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>4.5-6</td> <td></td> <td>5</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	ASHTO	MATERIAL DESCRIPTION	SAMPLE DATA					REMARKS	W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)	CORE LOG # & REC	0			A-2-6	Asphaltic CONCRETE											A-6	Firm, moist, reddish-brown clayey SAND with gravel		0.3-1.8		6			Group Index: (1) Percent Passing #200 sieve=34 LL=33 PI=13					Firm, moist, dark red sandy lean CLAY		1.8-3.3		6										4.5-6		5			
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				Firm, moist, dark red sandy lean CLAY		1.8-3.3		6																																																											
						4.5-6		5																																																											

Boring terminated at 6.0 feet

STATION 15+98 8 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-16 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.																																																					
Equipment: CME 45	Boring Depth: 3.4 feet																																																						
Hammer Type: Automatic	Boring Elevation: 218.0 feet	Coordinates: N 1159240 E 1956332																																																					
Drilling Method: Solid Stem Auger w/SPT Sampling																																																							
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				Stiff to firm, moist, dark red lean CLAY with sand		1.9-3.4		8																																															

Boring terminated at 3.4 feet

STATION 16+86 14 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-06 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.																																																																													
Equipment: CME 45	Boring Depth: 6.0 feet																																																																														
Hammer Type: Automatic	Boring Elevation: 218.0 feet	Coordinates: N 1159314 E 1956382																																																																													
Drilling Method: Solid Stem Auger w/SPT Sampling																																																																															
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				Stiff, moist, brown and red sandy lean CLAY																																																																											
						4.5-6		14																																																																							

Boring terminated at 6.0 feet

STATION 17+56 23 FT RIGHT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-11 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.																																																					
Equipment: CME 45	Boring Depth: 3.3 feet																																																						
Hammer Type: Automatic	Boring Elevation: 218.5 feet	Coordinates: N 1159345 E 1956454																																																					
Drilling Method: Solid Stem Auger w/SPT Sampling																																																							
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DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG						ASHTO	MATERIAL DESCRIPTION	SAMPLE DATA					REMARKS																																								
			W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)			CORE LOG # & REC																																													
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			A-6	Loose, moist, reddish-brown clayey SAND with gravel		0.3-1.8		6																																															
				Firm to soft, moist, dark red lean CLAY with sand		1.8-3.3		4																																															

Boring terminated at 3.3 feet

TTL
3518 Greenboro Avenue
Tuscaloosa, Alabama 35401
Phone: 205-345-0916
Fax: 205-345-0882

APPROVED:
Brian Edward Wysock, P.E.
GEOTECHNICAL ENGINEER

DATE: 08/24/2014

APPROVED:
DIVISION MATERIALS ENGINEER
DATE:

Burk-Kleinpeter, Inc.
Prince Avenue Improvements
Tuscaloosa County

TEST BORING RECORD
SHEET LOG-02 OF 3

STATION 17+65 28 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-05 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.									
Equipment: CME 45	Boring Depth: 6.0 feet										
Hammer Type: Automatic	Boring Elevation: 219.0 feet										
Drilling Method: Solid Stem Auger w/SPT Sampling		Coordinates: N 1159384 E 1956419									
		SAMPLE DATA									
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	AASHTO	MATERIAL DESCRIPTION	W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)	CORE LOG # & REC	REMARKS
0			A-2	Asphaltic CONCRETE							
			A-6	Loose, moist, red clayey SAND with gravel		0.3-1.8		9			
				Firm, moist, brown lean CLAY		1.8-3.3		7			
215				Stiff, moist, reddish-brown and gray lean CLAY		4.5-6		11			

Boring terminated at 6.0 feet

STATION 18+08 11 FT RIGHT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-12 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.									
Equipment: CME 45	Boring Depth: 6.0 feet										
Hammer Type: Automatic	Boring Elevation: 219.0 feet										
Drilling Method: Solid Stem Auger w/SPT Sampling		Coordinates: N 1159394 E 1956477									
		SAMPLE DATA									
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	AASHTO	MATERIAL DESCRIPTION	W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)	CORE LOG # & REC	REMARKS
0				TOPSOIL							Topsoil = 0.5 ft
			A-6	Stiff, moist, grayish-brown lean CLAY with sand		0-1.5		10			
				Stiff, moist, dark red lean CLAY with sand		1.5-3		10			
				- trace roots at 2 feet							
215											
5						4.5-6		9			

Boring terminated at 6.0 feet

STATION 20+03 15 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-04 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.									
Equipment: CME 45	Boring Depth: 6.0 feet										
Hammer Type: Automatic	Boring Elevation: 219.0 feet										
Drilling Method: Solid Stem Auger w/SPT Sampling		Coordinates: N 1159564 E 1956576									
		SAMPLE DATA									
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	AASHTO	MATERIAL DESCRIPTION	W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)	CORE LOG # & REC	REMARKS
0			A-6	TOPSOIL							Topsoil = 0.3 ft
				Firm to soft, moist, dark red lean CLAY		0-1.5		8			NO recovery
						1.5-3		4			
215				Firm, moist, dark red lean CLAY							
5						4.5-6		7			

Boring terminated at 6.0 feet

STATION 20+75 28 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-03 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.									
Equipment: CME 45	Boring Depth: 6.0 feet										
Hammer Type: Automatic	Boring Elevation: 219.0 feet										
Drilling Method: Solid Stem Auger w/SPT Sampling		Coordinates: N 1159628 E 1956611									
		SAMPLE DATA									
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	AASHTO	MATERIAL DESCRIPTION	W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)	CORE LOG # & REC	REMARKS
0			A-6	Asphaltic CONCRETE							
				Firm, moist, dark reddish-brown lean CLAY		0.3-1.8		5			
						1.8-3.3		5			
215											
5						4.5-6		6			

Boring terminated at 6.0 feet

STATION 21+11 13 FT RIGHT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-13 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.									
Equipment: CME 45	Boring Depth: 6.0 feet										
Hammer Type: Automatic	Boring Elevation: 218.0 feet										
Drilling Method: Solid Stem Auger w/SPT Sampling		Coordinates: N 1159631 E 1956665									
		SAMPLE DATA									
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	AASHTO	MATERIAL DESCRIPTION	W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)	CORE LOG # & REC	REMARKS
0				TOPSOIL							Topsoil = 0.7 ft
			A-6	Firm, moist, dark red lean CLAY with sand and trace roots		0-1.5		6			
				Firm to stiff, moist, dark red lean CLAY with sand		1.5-3		8			
215											
5						4.5-6		9			

Boring terminated at 6.0 feet

STATION 22+98 21 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-02 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.									
Equipment: CME 45	Boring Depth: 6.0 feet										
Hammer Type: Automatic	Boring Elevation: 219.0 feet										
Drilling Method: Solid Stem Auger w/SPT Sampling		Coordinates: N 1159800 E 1956750									
		SAMPLE DATA									
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	AASHTO	MATERIAL DESCRIPTION	W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)	CORE LOG # & REC	REMARKS
0			A-6	TOPSOIL							Topsoil = 0.4 ft
				Firm, moist, dark reddish-brown lean sandy CLAY		0-1.5		7			Group Index: (?) Percent Passing #200 sieve=66 LL=31 PI=14
						1.5-3		9			
215											
5						4.5-6		5			

Boring terminated at 6.0 feet

STATION 23+12 11 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-15 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.									
Equipment: CME 45	Boring Depth: 3.8 feet										
Hammer Type: Automatic	Boring Elevation: 219.0 feet										
Drilling Method: Solid Stem Auger w/SPT Sampling		Coordinates: N 1159805 E 1956766									
		SAMPLE DATA									
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	AASHTO	MATERIAL DESCRIPTION	W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)	CORE LOG # & REC	REMARKS
0				Asphaltic CONCRETE							
			A-2	Loose, moist, red clayey SAND with gravel		0.8-2.3		5			
			A-6	Firm to soft, moist, red sandy lean CLAY		2.3-3.8		3			

Boring terminated at 3.8 feet

STATION 24+64 13 FT RIGHT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-14 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.									
Equipment: CME 45	Boring Depth: 6.0 feet										
Hammer Type: Automatic	Boring Elevation: 220.0 feet										
Drilling Method: Solid Stem Auger w/SPT Sampling		Coordinates: N 1159929 E 1956857									
		SAMPLE DATA									
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	AASHTO	MATERIAL DESCRIPTION	W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)	CORE LOG # & REC	REMARKS
0	220			TOPSOIL							Topsoil = 0.6 ft
			A-4	Soft, moist, brown clayey SAND with gravel and wood debris		0-1.5		4			Group Index: (?) Percent Passing #200 sieve=46 LL=22 PI=9
			A-6	Stiff, moist, dark red sandy lean CLAY		1.5-3		10			
215											
5						4.5-6		7			

Boring terminated at 6.0 feet

STATION 26+07 20 FT LEFT OF CENTERLINE

Logged by: B. Wysock	Date Drilled: 5/23/2014	Remarks: TTL Boring No. 050-01 Elevation estimated from topographic drawing by BKI Water not encountered at time of drilling.									
Equipment: CME 45	Boring Depth: 6.0 feet										
Hammer Type: Automatic	Boring Elevation: 215.0 feet										
Drilling Method: Solid Stem Auger w/SPT Sampling		Coordinates: N 1160076 E 1956870									
		SAMPLE DATA									
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	AASHTO	MATERIAL DESCRIPTION	W.C. (%)	SAMPLE INTERVAL (ft) & NUMBER	TYPE	N	PPV (pcf)	CORE LOG # & REC	REMARKS
0	215			TOPSOIL							Topsoil = 0.6 ft
			A-6	Stiff, moist, red sandy lean CLAY with gravel		0-1.5		13			
				Firm to soft, moist, red lean CLAY with sand		1.5-3		5			
210											
5						4.5-6		2			

Boring terminated at 6.0 feet

TTL
3519 Greenboro Avenue
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Phone: 205-340-0910
Fax: 205-340-0982

APPROVED:
Brian Edward Wysock, P.E.
GEOTECHNICAL ENGINEER

DATE: 08/24/2014

APPROVED:
DIVISION MATERIALS ENGINEER

DATE:

Burk-Kleinpeter, Inc.
Prince Avenue Improvements
Tuscaloosa County

TEST BORING RECORD
SHEET LOG-03 OF 3

Appendix C
Laboratory Classification Summary
BMT-5's

Station & Offset	Location	TTL Boring No.	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200		D50 (mm)	USCS	AASHTO Classification
										% Silt <small>(if hydrometer data available)</small>	% Clay			
13+81 15 FT LT		050-07	0 - 1.5	10	19	12	7	31.7	36.3	32.0		0.277	SC-SM	A-2-4 (0)
14+70 25 FT RT		050-10	0.3 - 1.8	14	33	20	13	28.7	37.5	33.8		0.361	SC	A-2-6 (1)
22+98 21 FT LT		050-02	0 - 1.5	15	31	17	14	3.1	31.0	65.9			CL	A-6 (7)
24+64 13 FT RT		050-14	0 - 1.5	16	22	13	9	15.4	38.8	45.8		0.092	SC	A-4 (1)

Soil Classification Summary

Client: Burk-Kleinpeter, Inc.
 Project: Prince Avenue Improvements
 Location: Tuscaloosa County
 TTL Project Number: 100114050



SOILS AND BASE COURSE ANALYSIS

BMT-5

Project No.: 100114050
Location: Tuscaloosa County
Date: 12/19/14

Report of Analysis on Sample: Unclassified Excavation

Specifications of Section No.:

Source of Material: 050-07

Producer:

Sampled By: TTL, Inc.

Submitted By: TTL, Inc.

Laboratory No.:

TTL, Inc.

Date Sampled: 05/23/14

Station:

13+81 15 FT LT

Date Received:

Location:

0 - 1.5 ft of 6 ft boring

Date Tested: 05/30/14

TOTAL PASSING %

Table with 3 columns: Sieve Size, Sieve Description, and Percentage. Rows include 1-1/2" Sieve (38.1 mm) at 100.0%, 1" Sieve (25 mm) at 85.7%, 3/4" Sieve (19 mm) at 79.1%, 1/2" Sieve (12.5 mm) at 68.3%, 3/8" Sieve (9.5 mm) at 64.3%, #4 Sieve (4.75 mm) at 63.7%, #8 Sieve (2.36 mm) at 63.7%, #10 Sieve (2.00 mm) at 62.7%, #16 Sieve (1.18 mm) at 57.3%, #40 Sieve (0.425 mm) at 51.3%, #50 Sieve (0.300 mm) at 32.0%, and #200 Sieve (0.075 mm) at 32.0%.

MATERIAL PASSING #10

Table with 2 columns: Material Type and Percentage. Rows include Clay, Silt, Total Sand (36.3%), Mat'l Pass #40 (0.425 mm) (57.3%), and Mat'l Pass #200 (0.075 mm) (32.0%).

ATTERBERG LIMITS

Table with 2 columns: Limit Type and Value. Rows include Liquid Limit (19), Plastic Limit (12), and Plasticity Index (7).

GROUP: A-2-4 (0)

REMARKS:

ADDITIONAL INFORMATION:



Mitch Clarke

INSPECTOR

T:\PROJECTS\2014\100114050 PRINCE AVENUE IMPROVEMENTS\14-050 LOGS.GPJ 12/19/14 Report BMT-5 (NON-ALDOT)

SOILS AND BASE COURSE ANALYSIS

BMT-5

Project No.: 100114050
Location: Tuscaloosa County
Date: 12/19/14

Report of Analysis on Sample: Unclassified Excavation

Specifications of Section No.:

Source of Material: 050-10

Producer:

Sampled By: TTL, Inc.

Submitted By: TTL, Inc.

Laboratory No.: TTL, Inc.

Date Sampled: 05/23/14

Station: 14+70 25 FT RT

Date Received:

Location: 0.3 - 1.8 ft of 6 ft boring

Date Tested: 05/30/14

TOTAL PASSING %

1-1/2" Sieve (38.1 mm)	
1" Sieve (25 mm)	
3/4" Sieve (19 mm)	100.0
1/2" Sieve (12.5 mm)	92.5
3/8" Sieve (9.5 mm)	84.4
#4 Sieve (4.75 mm)	71.3
#8 Sieve (2.36 mm)	65.8
#10 Sieve (2.00 mm)	64.9
#16 Sieve (1.18 mm)	61.9
#40 Sieve (0.425 mm)	52.6
#50 Sieve (0.300 mm)	47.0
#200 Sieve (0.075 mm)	33.8

MATERIAL PASSING #10

Clay	
Silt	
Total Sand	37.5
Mat'l Pass #40 (0.425 mm)	52.6
Mat'l Pass #200 (0.075 mm)	33.8

ATTERBERG LIMITS

Liquid Limit	33
Plastic Limit	20
Plasticity Index	13

GROUP: A-2-6 (1)

REMARKS:

ADDITIONAL INFORMATION:

geotechnical • analytical • materials • environmental

Mitch Clarke

INSPECTOR

SOILS AND BASE COURSE ANALYSIS

BMT-5

Project No.: 100114050
Location: Tuscaloosa County
Date: 12/19/14

Report of Analysis on Sample: Unclassified Excavation

Specifications of Section No.:

Source of Material: 050-02

Producer:

Sampled By: TTL, Inc.

Submitted By: TTL, Inc.

Laboratory No.: TTL, Inc.

Date Sampled: 05/23/14

Station: 22+98 21 FT LT

Date Received:

Location: 0 - 1.5 ft of 6 ft boring

Date Tested: 05/30/14

TOTAL PASSING %

1-1/2" Sieve (38.1 mm)	
1" Sieve (25 mm)	
3/4" Sieve (19 mm)	
1/2" Sieve (12.5 mm)	100.0
3/8" Sieve (9.5 mm)	98.7
#4 Sieve (4.75 mm)	96.9
#8 Sieve (2.36 mm)	96.4
#10 Sieve (2.00 mm)	96.2
#16 Sieve (1.18 mm)	96.0
#40 Sieve (0.425 mm)	94.0
#50 Sieve (0.300 mm)	91.0
#200 Sieve (0.075 mm)	65.9

MATERIAL PASSING #10

Clay	
Silt	
Total Sand	31.0
Mat'l Pass #40 (0.425 mm)	94.0
Mat'l Pass #200 (0.075 mm)	65.9

ATTERBERG LIMITS

Liquid Limit	31
Plastic Limit	17
Plasticity Index	14

GROUP: A-6 (7)

REMARKS:

ADDITIONAL INFORMATION:

geotechnical • analytical • materials • environmental

Mitch Clarke

INSPECTOR

SOILS AND BASE COURSE ANALYSIS

BMT-5

Project No.: 100114050
Location: Tuscaloosa County
Date: 12/19/14

Report of Analysis on Sample: Unclassified Excavation

Specifications of Section No.:

Source of Material: 050-14

Producer:

Sampled By: TTL, Inc.

Submitted By: TTL, Inc.

Laboratory No.: TTL, Inc.

Date Sampled: 05/23/14

Station: 24+64 13 FT RT

Date Received:

Location: 0 - 1.5 ft of 6 ft boring

Date Tested: 05/30/14

TOTAL PASSING %

1-1/2" Sieve (38.1 mm)	
1" Sieve (25 mm)	100.0
3/4" Sieve (19 mm)	92.7
1/2" Sieve (12.5 mm)	92.7
3/8" Sieve (9.5 mm)	89.6
#4 Sieve (4.75 mm)	84.6
#8 Sieve (2.36 mm)	82.6
#10 Sieve (2.00 mm)	82.4
#16 Sieve (1.18 mm)	81.9
#40 Sieve (0.425 mm)	78.2
#50 Sieve (0.300 mm)	74.1
#200 Sieve (0.075 mm)	45.8

MATERIAL PASSING #10

Clay	
Silt	
Total Sand	38.8
Mat'l Pass #40 (0.425 mm)	78.2
Mat'l Pass #200 (0.075 mm)	45.8

ATTERBERG LIMITS

Liquid Limit	22
Plastic Limit	13
Plasticity Index	9

GROUP: A-4 (1)

REMARKS:

ADDITIONAL INFORMATION:

geotechnical • analytical • materials • environmental

Mitch Clarke

INSPECTOR