PROJECT MANUAL AND SPECIFICATIONS



CONFEDERATE MONUMMENT RELOCATION PROJECT THE UNIVERSITY OF MISSISSIPPI UNIVERSITY, MISSISSIPPI

AUGUST 26, 2019

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SECTION 00 41 13 PROPOSAL FORM

To: DEPARTMENT OF FACILITIES PLANNING IAN BANNER <u>ibanner@olemiss.edu</u> 700 Hathorn Road UNIVERSITY, MISSISSIPPI 38677

Project Title: CONFEDERATE MONUMENT RELOCATION PROJECT

Location: THE UNIVERSITY OF MISSISSIPPI UNIVERSITY, MISSISSIPPI

Ladies and Gentlemen:

Having carefully examined all conditions of the Documents thereto, having visited the site and being familiar with the conditions thereof, I or We propose to furnish all labor, materials and equipment to complete all work required by the Contract Documents entitled Confederate Monument Relocation Project for the amount set forth below:

BASE PROPOSAL:

Confederate Monument Relocation Project

_____ Dollars (\$

)

TIME OF COMPLETION:

I propose to complete all work in accordance with the Drawings within 90 consecutive calendar days from the receipt of a Purchase Order.

LIQUIDATED DAMAGES:

The stipulated liquidated damages are in the amount of <u>Two Hundred------</u> Dollars <u>(\$200.00-----)</u> for each calendar day. These damages shall be applied to each calendar day work is not complete beyond the 90 day construction time.

INSURANCES:

All Insurances are required including General Liability, Protective Liability, Automobile Liability, Bodily Injury & Property Damage Liability, Workers' Compensation, and Property Insurance.

GUARANTEE OF WORK:

Upon completion of work and prior to final payment, the Contractor shall provide The University of Mississippi with a written guarantee warranting that all workmanship and materials are free from defects and that he or she shall promptly repair or replace without additional cost to The University any defects which evidence themselves within one (1) year after date of completion and acceptance of work.

I am authorized to enter my firm into a binding contract if this proposal is accepted.

Respectfully submitted,	
Contractor / Firm:	
Name & Title:	
By:	Date:

Proposals should be received prior to 4:00 p.m. on October 30, 2019, at the office of the Department of Facilities Planning, 700 Hathorn Road, University, MS 38677 or emailed to Ian Banner, AIA, at <u>ibanner@olemiss.edu</u>.

SECTION 00 52 13 AGREEMENT

PART 1 – GENERAL

1.01 CONTRACT

 A. The Owner will use the Standard Form of Agreement between Owner and Contractor where the basis of payment is a Stipulated Sum, AIA Document A101, 2017 as a part of the Contract Documents.



Mandatory Addendum to All University of Mississippi Contracts

This Addendum between the University of Mississippi ("UM") and ("Contractor") is an integral part of the contract. Contractor acknowledges that UM is a state institution of higher learning and is subject to the laws of the State of Mississippi governing actions of state agencies. Contractor further acknowledges that UM does not waive, relinquish or forfeit any of the rights, benefits, protections, guaranties or prohibitions that may be provided under any law, statute, regulation or policy. The parties agree that this Addendum is incorporated into the contract and agree that should any provision of the contract conflict with this Addendum, the terms of the Addendum control.

1. UM contracts are governed by the laws of the State of Mississippi. Any provision that purports to set venue outside of the State of Mississippi is deleted.

U.S. Const. Amend XI; <u>Miss. Code Ann</u>. § 11-11-3; <u>Miss. Code Ann</u>. § 11-45-1; <u>City of Jackson v. Wallace</u>, 196 So. 223 (1940); Miss. AG Op., Clark (June 2, 2002); Miss. AG Op., Nowak (November 19, 2005).

- UM does not waive its sovereign immunity. UM shall only be responsible for liability resulting from the negligent actions of its officers, agents, and employees acting within the course and scope of their official duties. Miss. Code Ann. § 11-46-1, et seq.
- UM does not waive its Constitutional Eleventh (11th) Amendment immunity. U.S. Const. Amend. XI.
- 4. Any references to UM waiving its right to a trial by jury are deleted. Miss. AG Op., Chamberlin (Oct. 18, 2002).
- UM does not agree to any provisions wherein the credit of the State of Mississippi is pledged or loaned in aid of any person, association, or corporation. Miss. Const. Art. 14 § 258; Miss. AG Op., Stringer (January 25, 2006).

- Any references to payment of attorney's fees by UM are deleted. Miss. AG Op., Nowak (January 23, 2009); Miss. AG Op., Stringer (January 25, 2006).
- UM does not agree to pay extra compensation, fees, or allowances after service rendered or contract made, or for any payment not authorized by law. Miss. Const. Art. 4, § 96; Miss. AG Op., Stringer (January 25, 2006).
- 8. Any references to UM limiting UM's damages to the contract price or any other set amount are deleted.

Miss. Const. Art. 4, § 100; Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002).

9. Any references to UM indemnifying or holding harmless the Contractor or any other party are deleted.

Miss. Const. Art. 4, § 100; Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002).

- Any provisions limiting the time for UM to pursue legal action are deleted. Miss. Const. Art. 4, § 100; Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002).
- 11. Any references to UM waiving any cause of action it may have against Contractor or any other party as a result of Contractor's breach of the contract, or Contractor's own negligence or willful misconduct or the negligence or willful misconduct of Contractor's employees or agents are deleted.

Miss. Const. Art. 4, § 100; Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002).

- 12. Any references to UM limiting damages, remedies or waiving any claim are deleted. Miss. Const. Art. 4, § 100; Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002).
- 13. Any provisions giving the Contractor exclusive control over litigation are deleted. UM does not agree that Contractor may represent, prosecute or defend legal actions in the name of UM.

Board of Trustees Institutions of Higher Learning Policy 1102.

- 14. Any references to UM submitting to binding arbitration are deleted. Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002).
- 15. With the exception of any expressed limitation of remedies for breach of implied warranties of merchantability and fitness for a particular purpose concerning computer software and services performed on computer hardware and computer software, which are sold between merchants, any provisions which would limit the Contractor's liability to UM or allow Contractor to waive any applicable warranties (express or implied) are deleted.

Revised November 2017

Miss. Const. Art. 4, § 100; <u>Miss. Code Ann</u>. § 75-2-719; Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002); Miss. AG Op., Long (February 22, 2009).

- 16. Any references to UM limiting or waiving any common law warranty are deleted. Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002).
- 17. UM does not make any warranty. Miss. Const. Art. 4, § 100; Miss. AG Op., Clark (June 7, 2002); Miss. AG Op., Chamberlin (Oct. 18, 2002).
- 18. UM will deliver payments to Contractor no later than forty-five (45) days after receipt of invoice and receipt, inspection and approval of Contractor's products/services. Any provision that requires UM pay Contractor any late charges is governed by <u>Miss. Code</u> <u>Ann.</u> § 31-7-305.
- 19. UM is a public agency of the State of Mississippi and is subject to the Mississippi Public Records Act, <u>Miss. Code Ann.</u> §25-61-1, et seq., and the Mississippi Accountability and Transparency Act of 2008, <u>Miss. Code Ann.</u> § 27-104-151, et seq.
- 20. Contractor represents and warrants that it will ensure its compliance with the Mississippi Employment Protection Act, <u>Miss. Code Ann.</u> § 71-11-1, et seq., and will register and participate in the status verification system for all newly hired employees. Any provision penalizing UM for hiring an employee who works for the Contractor is deleted.
- 21. UM is an equal opportunity employer. Executive order 11246 requires that UM do business with organizations that are in compliance with Title VII of the 1964 Civil Rights Act, as amended. During the performance of any contract with UM, Contractor agrees to be bound by provisions of Section 202 of Executive Order 11246, as amended and Executive Orders 11701, 11625 and 11758.
- 22. The continuance of any UM contract is based on the availability of funds. Should there be no funds available for any succeeding funding period; the contract will be cancelled as of the end of the funding period with no further obligation on the part of UM. This contract is cancellable with thirty (30) days' notice to the vendor at the end of the fiscal period in the event funds are not appropriated by the funding authority. (Any property covered by a lease shall be returned to lessor).
- 23. Any provision requiring UM to name the contractor as an additional insured is deleted.
- 24. Neither party may assign its rights or delegate its duties under the contract without the prior written consent of the other party, which shall not be unreasonably withheld.

- 25. Contractor recognizes that UM, as a political subdivision of the State of Mississippi, enters into this contract only to the extent authorized by Mississippi law.
- 26. Contractor acknowledges that the individual executing the contract on behalf of UM is doing so only in his/her official capacity only, and to the extent that any provision contained in the contract exceeds his/her authority, Contractor agrees that it will not look to that individual in his/her personal capacity or otherwise seek to hold him/her individually liable for exceeding such authority.

CONTRACTOR

By:	(Original Signature of Principal or General Agent)
NAME/TITLE	
COMPANY:	
DATE:	

UNIVERSITY OF MISSISSIPPI

By:	(Original Signature of Authorized Representative)
TITLE:	
DATE:	
DATE:	

SECTION 00 61 13 BONDS

PART 1 – GENERAL

1.01 SECURITY FOR FAITHFUL PERFORMANCE

- A. A Performance and a Payment (Labor and Material) Bond are required as a condition of this contract. Security for Faithful Performance: Simultaneous with delivery of the executed contract, the contractor shall furnish a surety bond or bonds as security for the faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract in the amount of 100% of the contract sum for payment. The surety on such bond or bonds will be by a duly authorized surety company licensed by the State of Mississippi Commissioner of Insurance for the purpose of providing insurance. A Performance Bond and a Payment (Labor and Material) Bond are required as a condition of the Contract Award.
- B. The surety on such bond or bonds will be a duly authorized surety company licensed by the State of Mississippi's Commissioner of Insurance and must have a B++ or higher rating in accordance with the most recent edition of the A. M. Best Company, Inc. Key Rating Guide.
- C. All bonds shall be countersigned by a Mississippi resident agent with the name and address typed or lettered legibly.
- D. All bonds must be accompanied by an appropriate power of attorney.

SECTION 00 62 16 CERTIFICATE OF INSURANCE

PART 1 – GENERAL

- A. The *Certificate of Insurance* is a tabulation of insurance required for this Project as specified in Article 11 entitled *Insurance and Bonds* in the General Conditions (AIA Document A201, 2017 edition).
- B. The *Certificate of Insurance* must be completed, certified by the original signature of a Mississippi Resident Insurance Agency and bound in each set of the Contract Documents.
- C. Indicate Insured, Project, Companies providing coverage, policy numbers and policy periods in the blanks as applicable.
- D. If the "OWNERS / CONTRACTORS PROTECTIVE LIABILITY" insurance is part of the Commercial General Liability Insurance Policy, or included by endorsement, indicate the policy number and period of the CGL policy in the "OWNERS / CONTRACTORS PROTECTIVE LIABILITY" blank spaces.
- E. Automobile Liability Insurance may be provided which covers Bodily Injury and Property Damage in one (1) Combined Single Limit, or may be provided with separate minimum limits as shown on the Certificate of Insurance and specified in Article 11 of the Supplementary Conditions. The person signing the Certificate of Insurance should show which option the Contractor has selected by marking out the coverage that is not provided under the policies indicated.
- F. OTHER INSURANCE (if required) will be indicated by typing in the "OTHER" block and detailed in Article 11 of the Supplementary Conditions.
- G. CERTIFICATION wording may not be changed without specific written approval from the Owner.
- H. "Riders" or other unsolicited attachments are not allowed as part of the *Certificate of Insurance* unless specifically requested in writing by the Owner, or specified as part of the requirements for this Project.
- I. CAUTION: The *Certificate of Insurance* is intended to be used for all Projects. The Contractor must provide all insurance specified in the Contract Documents for this Project, whether indicated on this form, or not. The Contractor must verify all insurance has been provided as required.
- J. The Owner and Engineer and all of their agents and employees are included as additional insureds on the Contractor's insurance.

SECTION 00 72 13 GENERAL CONDITIONS

PART 1 – GENERAL

1.1 DESCRIPTION

A. DOCUMENT: The General Conditions for this project shall be AIA Document A201, General Conditions of the Contract for Construction, 2017 Edition. This document shall be made a part of the Contract Documents as if fully stated herein. Contractors are presumed to be familiar with this document; however a copy may be examined in the Owner's office.

SECTION 00 73 13 LABOR PROTECTIONS (E-VERIFICATION)

SENATE BILL NO. 2988 (As Passed by the Senate) This act shall take effect and be in force from and after July 1, 2008 for Purchased Service Contracts.

AN ACT TO CREATE THE MISSISSIPPI EMPLOYMENT PROTECTION ACT; TO PROVIDE PROCEDURES FOR NEWLY HIRED EMPLOYEES AND THEIR EMPLOYERS; TO ENACT DEFINITIONS; TO REQUIRE EMPLOYEE VERIFICATION; TO PROVIDE EMPLOYER LIABILITY; TO SET UP EMPLOYER-EMPLOYEE PROGRAMS; TO MAKE PROVISIONS FOR THIRD-PARTY EMPLOYERS; TO DEFER TO FEDERAL LAW IN STATE LAW; TO ENACT EXEMPTIONS; TO DESIGNATE ENFORCEMENT DUTIES UNDER THE ACT; TO PROVIDE PENALTIES FOR VIOLATIONS OF THIS ACT; AND FOR RELATED PURPOSES.

E-Verify Home Page: www.uscis.gov/portal/site/uscis

<u>E-Verify Contact Information:</u> E-Verify Help Desk: 1-888-464-4218 Bob Fagan - Office of the Attorney General, State Personnel Board: 601-359-2704

E-Verification

Contractor represents and warrants that it will ensure its compliance with the Mississippi Employment Protection Act (Senate Bill 2988 from the 2008 Regular Legislative Session) and will register and participate in the status verification system for all newly hired employees. The term "employee" as used herein means any person that is hired to perform work within the State of Mississippi. As used herein, "status verification system" means the Illegal Immigration Reform and Immigration Responsibility Act of 1996 that is operated by the United States Department of Homeland Security, also known as the E-Verify Program, or any other successor electronic verification system replacing the E-Verify Program. Contractor agrees to maintain records of such compliance and, upon request of the State, to provide a copy of each such verification to the State. Contractor further represents and warrants that any person assigned to perform services hereunder meets the employment eligibility requirements of all immigration laws of the State of Mississippi. Contractor understands and agrees that any breach of these warranties may subject Contractor to the following: (a) termination of this Agreement and ineligibility for any state or public contract in Mississippi for up to three (3) years with notice of such cancellation/termination being made public, or (b) the loss of any license, permit, certification or other document granted to Contractor by an agency, department or governmental entity for the right to do business in Mississippi for up to one (1) year, or (c) both. In the event of such termination/cancellation, Contractor would also be liable for any additional costs incurred by the State due to contract cancellation or loss of license or permit.

I, the undersigned, certify, as an authorized representative, that my company is in compliance with the Mississippi Employment Protection Act (Senate Bill 2988) and will register and participate in the status verification system.

Company Name

Company Address

Company Tax Identification Number

Company Phone Number

Authorized Representative

SECTION 00 73 13 SUPPLEMENTARY CONDITIONS

PART 1 GENERAL

1.1 DESCRIPTION

- A. The following Supplementary Conditions modify the "General Conditions of the Contract for Construction," AIA Document A201-2017. Where a portion of the General Conditions is modified or deleted by the Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect. In the event of a conflict between the General Conditions of the Contract for Construction and Section 00 73 13, Section 00 73 13 shall control even if the conflicting provision in the General Conditions of the Contract for Construction is not expressly revised or deleted by reference in Section 00 73 13.
- B. The General Conditions may also be supplemented or amplified elsewhere in the Contract Documents by provisions located in, but not necessarily limited to, Division 1 of the Specifications.

1.2 SUPPLEMENTS

ARTICLE 1 - GENERAL PROVISIONS

- 1.1 BASIC DEFINITIONS
- 1.1.1 THE CONTRACT DOCUMENTS:
- 1.1.1 Delete the last sentence in Article 1.1.1 and insert the following:

The Contract Documents shall include the Instructions to Bidders, plans, the Project Manual, including Division 0 and the specifications, Divisions 1 through 32, all Addenda and modifications to the plans and/or specifications, the Agreement between Owner and Contractor, the performance and payment bonds, the notice to proceed and any executed change orders. Information and documentation pertaining to soil investigation data, laboratory investigations, soil borings and related information included herein are not part of the Contract Documents. In the event of a conflict between the provisions of Division 0 and any other section of the Contract Documents, such other sections(s) shall govern.

1.1.5 THE DRAWINGS

1.1.5 Add the following to the end of Article 1.1.5:

Large scale drawings shall govern over small scale drawings where there are differences or conflicts between such drawings. Where the word "similar" appears on the plans, it shall not be interpreted to mean "identical" and shall require the Contractor to coordinate the actual conditions and dimensions of the location where the "similar" conditions are shown to occur.

1.1.9 MISCELLANEOUS DEFINITIONS

1.1.9 Add the following Article 1.1.9:

The term "products" as used in these Supplementary Conditions includes materials, systems and equipment.

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

1.2.4 Add the following to the end of Article 1.2.4:

It is the intent of the Contract Documents that the Contractor shall properly execute and complete the Work described by the Contract Documents, and unless otherwise provided in the Contract, the Contractor shall provide all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services, whether temporary or permanent and whether or not incorporated in the Work, in full accordance with the Contract Documents and reasonably inferable from them as necessary to produce the indicated results.

1.2.5 Add the following to the end of Article 1.2.5:

The Contract Documents shall be interpreted collectively, each part complementing the others and consistent with the intent of the Contract Documents. Unless an item shown or described in the Contract Documents is specifically identified to be furnished or installed by the Owner or others or is identified as "Not In Contract" ("N.I.C."), the Contractor's obligation relative to that item shall be interpreted to include furnishing, assembling, installing, finishing, and/or connecting the item at the Contractor's expense to produce a product or system that is complete, appropriately tested, and in operable condition ready for use or subsequent construction or operation of the Owner or separate contractors. The omission of words or phrases for brevity of the Contract Documents, the inadvertent omission of words or phrases, or obvious typographical or written errors shall not defeat such interpretation as long as it is reasonably inferable from the Contract Documents as a whole.

Words or phrases used in the Contract Documents which have well-known technical or construction industry meanings are to be interpreted consistent with such recognized meanings unless otherwise indicated.

Except as noted otherwise, references to standard specifications or publications of associations, bureaus, or organizations shall mean the latest edition of the referenced standard specification or publication as of the date of the Advertisement of Bids.

In the case of inconsistency between Drawings and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Engineer's interpretation.

Generally, portions of the Contract Documents written in longhand take precedence over typed portions, and typed portions take precedence over printed portions.

Any doubt as to the meaning of the Contract Documents or any obscurity as to the wording of them shall be promptly submitted in writing to the Engineer for written interpretation, explanation, or clarification.

1.6 TRANSMISSION OF DATA IN DIGITAL FORM

1.6 Delete the phrase "they shall endeavor to" in the second line and insert the phrase "the Engineer shall" and add the following to the end of the sentence:

..., which protocols shall be the same as or similar to the Digital Data Protocol Exhibit, AIA Doc. E201-2007."

ARTICLE 2 - OWNER

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.1 Delete this subparagraph in its entirety.

- 2.2.2 Delete this subparagraph in its entirety.
- 2.2.3 Delete this subparagraph in its entirety.
- 2.2.5 Delete Article 2.2.5 and insert the following:

The Contractor will be furnished free of charge ten (10) copies of Drawings and Project Manuals. Additional sets will be furnished at the cost of reproduction, postage and handling.

2.3 OWNER'S RIGHT TO STOP THE WORK

2.3 Delete this subparagraph in its entirety and insert the following:

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Paragraph 12.2 or fails to carry out Work in accordance with the Contract Documents or fails to perform any of its obligations under the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Subparagraph 6.1.3.

The rights and remedies under this Article 2.3 are in addition to and do not in any respect limit any other rights of the Owner, including its termination rights under Article 14.

2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

2.4 Delete this subparagraph in its entirety and insert the following:

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails, within a seven (7) day period, after receipt of written notice from the Owner, to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies without further notice to the Contractor and/or its Surety. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Engineer's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Engineer. If payments then or thereafter due the Contractor or its Surety shall pay the difference to the Owner.

ARTICLE 3 – CONTRACTOR

3.1 GENERAL

3.1.1 Add the following at the end of Article 3.1.1:

The relationship of Contractor to Owner shall be that of independent contractor, and nothing in Contract Documents is intended to nor should it be construed as creating any other relationship, expressed or implied, between Owner and Contractor.

3.4 LABOR AND MATERIALS

3.4.2 Add the following to the end of Article 3.4.2:

Some Sections of the Specifications do not allow substitution of materials, products or equipment. Where "or equal" substitution is allowed the request for substitution will only be considered if made

in strict accordance with the requirements of Article 3.4.4 and Section 00 21 13 – Instructions to Bidders.

3.4.4 Add the following Article 3.4.4.

After the Contract has been executed, the Owner and the Engineer may consider a request for the substitution of products in place of those specified only under the conditions set forth in the Project Specifications.

By making requests for substitutions, the Contractor:

- .1 Represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified.
- .2 Represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;
- .3 Certifies that the cost data presented is complete and includes all related costs under this Contract except the Engineer's redesign costs, and waives all claims for additional costs related to the substitution which subsequently becomes apparent; and
- .4 Will coordinate the installation of the accepted substitute, making such changes as may be required for the work to be completed in all respects.

All substitutions shall be submitted within 30 days of the Notice to Proceed, as per the Project Specifications.

3.4.5 Add the following Article 3.4.5:

Contractor represents that it has independently investigated, considered and understands the labor conditions in the area surrounding the Project and acknowledges that such conditions may impact the Contractor's cost and/or time of performance of the Contract. Therefore, Contractor further represents that the Contract Price is based upon Contractor's independent investigations into such labor conditions and that the Contract time is reasonable and the date of Substantial Completion is obtainable. As a result, Contractor assumes the risk of increased costs, if any, incurred by, or arising out of, or related to such labor conditions and acknowledges that Contractor and its surety will reimburse Owner for any additional costs Owner incurs arising out of or related to such labor conditions.

3.4.6. Add the following Article 3.4.6:

E-Verification: Contractor represents and warrants that it will ensure its compliance with the Mississippi Employment Protection Act (Senate Bill 2988 from the 2008 Regular Legislative Session) and will register and participate in the status verification system for all newly hired employees. The term "employee" as used herein means any person that is hired to perform work within the State of Mississippi. As used herein, "status verification system" means the Illegal Immigration Reform and Immigration Responsibility Act of 1996 that is operated by the United States Department of Homeland Security, also known as the E-Verify Program, or any other successor electronic verification system replacing the E-Verify Program. Contractor agrees to maintain records of such compliance and, upon request of the State, to provide a copy of each such verification to the State. Contractor further represents and warrants that any person assigned to perform services hereunder meets the employment eligibility requirements of all immigration laws of the State of Mississippi. Contractor understands and agrees that any breach of these warranties may subject Contractor to the following: (a) termination of this Agreement and ineligibility for any state or public contract in Mississippi for up to three (3) years with notice of such cancellation/termination being made public, or (b) the loss of any license, permit, certification or other document granted to Contractor by an agency, department or governmental entity for the right to do business in Mississippi for up to one (1) year, or (c) both. In the event of such termination/cancellation, Contractor would also be liable for any additional costs incurred by the State due to contract cancellation or loss of license or permit. See E-Verification / Good Faith Compliance attached.

3.7 PERMITS, FEES AND NOTICES

3.7.1 Delete Article 3.7.1 entirely and insert the following:

The Contractor shall secure and pay for the building permit and all other permits, fees, licenses, inspections and all other approvals and charges necessary for proper execution and completion of the Work.

3.7.3 Delete Article 3.7.3 and insert the following:

At no additional cost to the Owner, the Contractor shall comply with all laws, statutes, ordinances, building codes, rules, and regulations of whatever nature that applies to the Project, whether enacted or adopted before or after bid opening. If the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall promptly notify the Engineer and Owner in writing, and necessary changes shall be accomplished by appropriate modification. The Engineer shall not administer the Contractor's safety performance, or any other matter relating to Contractor's means, methods, techniques, sequences and procedures, which are not a part of Contractor's scope of Work which is to be administered by the Engineer as part of the Engineer's obligations.

3.8 ALLOWANCES

3.8.2.3 Add the following to the end of Article 3.8.2.3;

Except when installation is specified as part of the allowance in the General Requirements (Division 1 of the specifications).

3.9 SUPERINTENDENT

3.9.1 Add the following to the end of Article 3.9.1.

The superintendent shall be designated by the Contractor at the preconstruction conference. After Owner's approval of such superintendent, he shall not be replaced by the Contractor without the Owner's prior written consent, which consent is required unless the Contractor submits proof satisfactory to the Owner that the superintendent should be terminated by the Contractor for cause.

3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

3.10.3 Delete Article 3.10.3 and insert the following:

Time being of the essence, the Contractor shall perform the Work in accordance with the most recent schedule submitted to and approved by the Owner and Engineer.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

3.12.6 Delete Article 3.12.6 and insert the following:

By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor thereby represents that the Contractor has determined and verified all dimensions, quantities, field dimensions, relationships to existing Work, coordinated with Work to be installed later, coordinated with information on previously accepted shop drawings, Product Data, Samples, and similar submittals and verified compliance with all requirements of the Contract Documents. The accuracy of all such information is the responsibility of the Contractor. In reviewing Shop Drawings, Product Data, Samples and similar submittals the Engineer shall be entitled to rely upon the Contractor's representation that such information is correct and accurate.

3.12.8 Add the following to the end of Article 3.12.8:

Unless such written notice has been given, the Engineer's approval of a Shop Drawing, Product Data, Sample or similar submittal shall not constitute approval of any changes not requested on the prior submittal.

3.12.9 Add the following to the end of Article 3.12.9:

The Engineer's review of the Contractor's submittals will be limited to examination of an initial submittal and one (1) resubmittal. The Engineer's review of additional submittals will be made only with the consent of the Owner after notification by the Engineer. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Engineer for evaluation of such additional resubmittals.

- 3.18 INDEMNIFICATION
- 3.18.1 Change Article 3.18.1 to add the word "defend" before the word "indemnify" in the first line, to add the words "or nonperformance" after the word "performance" in the third line and to delete the phrase "provided that such claim damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself)".

ARTICLE 4 - ADMINISTRATION OF THE CONTRACT

4.1 ENGINEER"S ADMINISTRATION OF THE CONTRACT

4.2.10 Delete this subparagraph in its entirety.

ARTICLE 5 - SUBCONTRACTORS

- 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK
- 5.2.1 Delete the phrase "Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract" from the first sentence of Article 5.2.1 and replace with the following:

"The Contractor, with its first Application for Payment and as a condition to the Owner's obligation to make payments to Contractor under Article 9 of the General Conditions as supplemented herein..."

5.2.5 Add the following Article 5.2.5:

The Contractor's unauthorized substitution of any subcontractor, supplier, person or entity previously listed by Contractor shall entitle the Owner to reject the work, materials or products furnished and require removal and replacement at no additional cost to the Owner.

ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 Delete Articles 6.1, 6.1.1, 6.1.2, 6.1.3, 6.1.4 entirely and insert the following new Article 6.1:

Owner's Right to Perform Construction and to Award Separate Contracts. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces and to award separate Contracts either in connection with other portions of the Project or other construction or operation on the site. In such event, the Contractor shall coordinate its activities with those of the Owner and of other Contractors so as to facilitate the general progress of all work being performed by all parties. Cooperation will be required in the arrangement for the storage of materials, and in the detailed execution of the work.

The Contractor, including his subcontractors, shall keep informed of the progress and the detailed work of the Owner or other Contractors and shall immediately notify the Engineer of lack of progress or delays by the Owner or other Contractors which are affecting Contractor's Work. Failure of Contractor to keep informed of the progress of the work of the Owner or other Contractors and/or failure of Contractor to give notice of lack of progress or delays by the Owner or other Contractors shall be deemed to be acceptance by Contractor's Work. If, through acts or neglect on the part of the Contractor, the Owner or any other Contractor or subcontractor shall suffer loss or damage or assert any claims of whatever nature against the Owner, the Contractor shall defend, indemnify and hold harmless the Owner from any such claims or alleged damages, and the Contractors.

6.2.3 Delete Article 6.2.3 entirely.

ARTICLE 7 - CHANGES IN THE WORK

- 7.1 CHANGES
- 7.1.3 Add the following to the end of Article 7.1.3:

Except as permitted in Article 7.3, a change in the Contract Sum or the Contract Time shall only be accomplished by written change order. Therefore, the Contractor acknowledges that it is not entitled to a change in the Contract Sum or the Contract Time in the absence of a written Change Order on the basis of the course of conduct or dealings between the parties, the Owner's express or implied acceptance of alterations or additions to the Work, the Owner has been unjustly enriched by the Contractor's Work or any other basis otherwise allowed by law or the facts and Contractor agrees that any such extra or changed work was performed by it as a volunteer.

7.2 CHANGE ORDERS

7.2.2 Add the following Article 7.2.2:

Adjustments to the Contract Sum by change order shall be based upon one of the methods set forth in Article 7.3.3.1, 7.3.3.2, 7.3.3.3 or 7.3.3.4, as appropriate. A reasonable allowance for the combined overhead and profit included in the change order shall be based upon the schedule set forth in Article 7.3.11, as supplemented.

7.2.3 Add the following Article 7.2.3:

Contractor's execution of a change order constitutes a final settlement to the Contract Sum and construction schedule and the Contract Time for all matters relating to or arising out of the change in the Work that is the subject of the change order including, but not limited to, all direct and indirect costs associated with such change, all extended direct job site and home office overhead costs and any and all delay and impact cost for the change, whether alone or in combination with other changes, including any impact, ripple or cumulative effect resulting therefrom, if any.

7.2.4 Add the following Article 7.2.4.:

In order to facilitate consideration of change order requests, all such requests, except those involving an amount less than \$500 must be accompanied by a complete itemization of costs, including labor, materials and subcontractor costs which shall likewise be itemized. Changes for more than \$500 will not be approved without such itemization.

7.3 CONSTRUCTION CHANGE DIRECTIVES

- 7.3.7 In the first sentence, delete the words "a reasonable amount" and substitute "a reasonable allowance for the combined overhead and profit in accordance with subparagraph 7.3.11 below." Delete Sections 7.3.7.4 and 7.3.7.5 entirely.
- 7.3.8 Delete the first sentence and insert the following:

The amount of credit to be given by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be the actual net cost plus a reasonable allowance for overhead and profit thereon as approved by the Engineer and Owner.

7.3.11 Add the following Article 7.3.11:

The allowance for overhead, taxes, fees, bonds, insurance and profit attributable to a change included in the total cost to the Owner shall be based on the following schedule. The overhead includes general home office, field personnel, superintendents, labor burden and all costs attributable to field and office personnel.

- .1 For the Contractor, for work performed by the Contractor's own forces, 16 percent of the cost.
- .2 For the Contractor, for work performed by the Contractor's subcontractor, 10 percent of the amount due the subcontractor.
- .3 For each subcontractor or sub-subcontractor involved, for work performed by that subcontractor's or sub-subcontractor's own forces, 16 percent of the cost.
- .4 For each subcontractor, for work performed by the subcontractor's sub-subcontractor's,10 percent of the amount due the sub-subcontractor.
- .5 Costs to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.3.7.

ARTICLE 8 - TIME

- 8.3 DELAYS AND EXTENSIONS OF TIME
- 8.3.1 Delete Article 8.3.1 and Insert the following:

If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Engineer, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by fire, natural disasters, unavoidable casualties beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Engineer determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Engineer may determine.

8.3.3 Add the following to the end of Article 8.3.3:

No delay, interference, hindrance or disruption, from whatever source or cause, in the progress of the Contractor's Work shall be a basis for an extension of time and/or additional compensation, unless the delay, interference, hindrance or disruption (1) is without the fault and not the responsibility of the Contractor, its subcontractors and suppliers and (2) directly affects the overall completion of the Work as reflected on the critical path of the Contractor's updated and accepted construction schedules. The Contractor expressly agrees that the Owner shall have the benefit of any float in the construction schedule and that delays to construction activities, which do not affect the overall completion of the Work, do not entitle the Contractor to any extension in the Contract Time and/or increase in Contract Sum.

8.3.4 Add the following Article 8.3.4:

Any claims by the Contractor for an increase in the Contract Time must follow the procedures set forth in Articles 15.1.2, 15.1.5 and 15.2, including the requirement that the Contractor give written notice of any claim within twenty-one (21) days after occurrence of the event giving rise to such claim

or within twenty-one (21) days after the claimant first recognizes the condition giving rise to the claim, whichever is later.

8.3.5 Add the following Article 8.3.5:

If the Contractor submits a schedule indicating or otherwise expressing intent to complete the Work prior to the date of substantial completion, the Owner shall have no liability to the Contractor for any failure by the Contractor to complete the Work prior to the expiration of the Contract Time.

8.3.6 Add the following Article 8.3.6:

Weather Delays: The Contractor agrees that normal weather occurrences and disruption to construction activities are included in the schedule. Weather occurrences or delays beyond normal are defined as days beyond the NOAA average for each month as published by NOAA – UNIVERSITY, MS US (Station ID: GHCND:USC00229079). Impacted days may be determined by the occurrence of weather events (precipitation > = 0.10inch) that occurred in excess of the average as indicated by NOAA.

The table below defines the monthly anticipated adverse weather days for the contract period and is based upon the NOAA Summary of Normals 1981-2010 for University, MS US GHCND:USC00229079.

7	January	7	April	6	July	5	October
7	February	8	May	5	August	6	November
7	March	6	June	4	September	8	December

The Contractor is responsible for providing the NOAA data as stated above and the observed deviation in excess of the average as defined by the table above. The weather data is to be received monthly with the Application for Payment.

All requests for time extensions shall be made monthly in writing with the Application for Payment. No monetary change in the contract value is considered due to impacted days. The Owner reserves the right to review any requests for consideration of value for extenuating circumstances by the Contractor in regard to schedule and value. The Owner is not obligated under this review for additional compensation as per Article 15.1.5.2.

ARTICLE 9 - PAYMENTS AND COMPLETION

- 9.3 APPLICATION FOR PAYMENTS
- 9.3.1 Add the following to the end of Article 9.3.1:

The Form of Application for Payment will be AIA Document G702, Application and Certification for Payment supported with AIA Document G702A, Continuation Sheet.

9.3.1.3 Add the following Article 9.3.1.3:

The Owner will retain, until the Work is one hundred percent (100%) complete, five percent (5%) of the amount due the Contractor on account of progress payments. No reduction in retainage will be made until final payment is made except that when the initial Contract award is in an amount equal to or greater than \$750,000, then whenever such Work is fifty percent (50%) complete and on schedule and satisfactory, in the opinion of the Engineer and the Owner, fifty percent (50%) of the retainage may be returned to the Contractor and two and one-half percent (2.5%) will be retained on all subsequent progress payments. The Owner may subsequently increase the retainage if the Contractor's manner of completion of the Work and/or its progress does not remain satisfactory to

the Engineer and/or Owner or if the Surety withholds its consent to payment for other good and sufficient reasons.

9.3.2.1 Add the following Article 9.3.2.1:

Payment on materials stored at some location other than the building site may be approved by the Engineer and the Owner after the Contractor has submitted the following items:

- .1 An acceptable Lease Agreement between the General Contractor and the owner of the land, or building, where the materials are stored covering the specific area where the materials are located.
- .2 Consent of Surety or other acceptable bond to cover the materials stored off-site.
- .3 All Perils Insurance coverage for the full value of the materials stored off-site.
- .4 A Bill of Sale from the Manufacturer to the General Contractor for the stored materials.
- .5 A complete list and inventory of materials manufactured stored and delivered to the storage site and of materials removed from the storage site and delivered to the job site.
- .6 A review by the Engineer of the materials stored off-site prior to release of payment.
- .7 Proof of payment of stored materials verified by the supplier must be submitted to the Engineer within thirty (30) days of the Application for Payment on which payment for said material was made. If proof of payment is not submitted within thirty (30) days, then payment for said materials will be deducted from the next application for payment and withheld until proof of payment is received.
- 9.3.2.2 Add the following Article 9.3.2.2:

.1

- Affidavit Certifying Payment to All Subcontractors
 - Submit to the Owner, an Affidavit Certifying Payment to All Subcontractors on a monthly basis after the submittal, approval and payment of Application for Payment #1.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

- 9.5.1.7 Delete the word "failure".
- 9.6 PROGRESS PAYMENTS
- 9.6.1 Delete Article 9.6.1 and insert the following:

Subject to the conditions of the Contract, the Owner shall make payment to the Contractor in the amount certified within forty-five (45) days after receipt of the Certificate for Payment from the Engineer. Payment shall not be considered late until forty-five (45) days after Owner's receipt of the approved Certificate for Payment from the Engineer.

9.6.1.1 Add the following Article 9.6.1.1:

Contractor's Applications for Payment shall be submitted on or before the 15th day of each month. Any application not submitted on or before this date may not be processed or approved until the following month.

9.6.7 Add the following to the end of Article 9.6.7:

The amount retained by the Contractor from each payment to each Subcontractor and material supplier shall not exceed the percentage retained by the Owner from the Contractor.

- 9.7 FAILURE OF PAYMENT
- 9.7.1 In the first sentence, delete the words "or awarded by binding dispute resolution".
- 9.8 SUBSTANTIAL COMPLETION

9.8.1 Delete this subparagraph in its entirety and insert the following:

Substantial completion for purposes of this Contract occurs only upon Contractor's compliance with the following conditions precedent: (a) the Contractor furnishes to the Engineer all close-out documents required by the Contract Documents in a form satisfactory to the Engineer and the Owner, (b) the Contractor furnishes the manufacturers' certifications required by the Contract Documents; (c) the Contractor furnishes the Guarantee of Work required by Section 00 73 13, Paragraphs 12.2.2.1.1; and (d) the Engineer certifies that the Work is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended purpose.

9.8.2.1 Add the following Article 9.8.2.1:

The Contractor shall be responsible for the costs of inspections made by the Engineer including any and all other related expenses incurred by the Engineer for providing services for the Project required by failure of the Contractor to achieve final acceptance / completion of the Project within 30 days after the first occurrence of the below described events:

- .1 Specified date of Substantial Completion; or
- .2 Actual date of Substantial Completion.

The costs of the Engineer's additional services shall be deducted by the Owner from the Contractor's final application for payment to pay the Engineer for additional services required by the Contractor's failure to achieve final completion of the project within the 30 day period described above.

9.8.4 Delete the last sentence of Article 9.8.4 and insert the following:

Warranties required by the Contract Documents shall commence on the date of final acceptance / completion unless otherwise provided in the Contract Documents.

9.8.5 Add the following to the end of Article 9.8.5:

Contractor's execution of the Certificate of Substantial Completion constitutes Contractor's representation that the items on the list accompanying the Certificate can and will be completed by Contractor and his subcontractors within thirty (30) days of Contractor's execution of the Certificate. Based upon this representation by Contractor and upon the acknowledgement of the Engineer that the listed items remaining can be completed within thirty (30) days, the Owner agrees to execute the Certificate of Substantial Completion. If Contractor fails to complete the items on the list within thirty (30) days of Contractor's execution of the Certificate, then the Owner, at its option and without prejudice to any other rights or remedies it may have under this Contract or otherwise and without notice to Contractor, may proceed to have same completed and to deduct the reasonable costs thereof from the amounts then due or thereafter to become due to Contractor.

9.8.6 Add the following Article 9.8.6:

The costs of inspections requested by Contractor and made by Engineer which are not required by Articles 4, 9.8, 9.10.1 or 12 of the General Conditions and any other inspection required by Article 12 other than the year-end inspection itself, will be the responsibility of the Contractor and will be deducted by the Owner from the Application for Payment submitted after the Owner's receipt of the Engineer's statement for its costs of additional inspections. These costs are not the result of Contractor's failure to timely complete the Contract within the specified time and, therefore, such costs are in addition to and not a part of any liquidated damages calculation, if any.

9.8.7 Add the following Article 9.8.7:

Upon the Owner's acceptance of the Work as substantially complete and upon Contractor's compliance with all conditions precedent to substantial completion as stated in Section 00 73 13, Paragraph 9.8.1 and upon application by the Contractor, the Owner will pay to the Contractor all retainage held by the Owner less an amount equal to the greater of (a) two percent (2%) of the Contract sum, or (b) two hundred percent (200%) of the estimated cost of the Work remaining to be performed by the Contractor in accordance with the Engineer's determination. Final payment, including all retainage, shall be made at the time and in the manner provided for final payment in accordance with the provisions of Article 9.10 and the additional conditions precedent to final acceptance / payment set forth in Section 00 73 13, Paragraphs 9.8.5 and 9.10.

9.9 PARTIAL OCCUPANCY OR USE

9.9.1.2 Add the following new subparagraph:

The Owner's occupancy or use of any completed or partially completed portions of the Work shall not affect Contractor's obligation to complete incomplete items on the list attached to the Certificate of Substantial Completion within the time fixed in the Certificate and does not waive Owner's right to obtain completion of incomplete items at Contractor's expense upon Contractor's failure to timely complete same.

9.10 FINAL COMPLETION AND FINAL PAYMENT

9.10.2.1 Add the following Article 9.10.2.1:

Final acceptance / completion for purposes of this Contract occurs only upon Contractor's compliance with the following conditions precedent: (a) The Contractor furnishes to the Engineer all required close-out documents in a form satisfactory to the Engineer and the Owner; (b) the Contractor furnishes all required manufacturers' certifications (c) the Contractor furnishes the signed Guarantee of Work required by Section 00 73 13, Paragraph 12.2.2.1.1; (d) the Engineer certifies final acceptance / completion of the Project through issuance of a "Certificate of Final Completion".

9.11 LIQUIDATED DAMAGES

9.11.1 Add Section 9.11 LIQUIDATED DAMAGES and insert the following Article 9.11.1:

Time being of the essence of this Contract and a matter of material consideration thereof, a reasonable estimate in advance is established to cover losses incurred by the Owner if the project is not substantially complete on the date set forth in the Contract Documents. The Contractor and his Surety will be liable for and will pay the Owner the sums hereinafter stipulated as fixed and agreed as liquidated damages for each calendar day for delay until the Work is substantially complete. The Contractor and his Surety acknowledge that the Owner's losses caused by the Contractor's delay are not readily ascertainable and that the amount estimated per day for liquidated damages is reasonable and is not a penalty.

The amount established per day for liquidated damages is \$ 200 per day.

ARTICLE 10 - SAFETY

10.1 Add the following to the end of Article 10.1:

The Engineer shall not administer the Contractor's performance of Article 10 (including subparagraphs 10.1 through 10.4) because the initiation, maintenance and supervision of safety precautions and programs is the sole responsibility of the Contractor as means, methods, techniques, sequences and procedures of construction and, therefore, is not part of the Contractor's scope of Work which is to be administered by the Engineer.

ARTICLE 11 - INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1.5 Delete the words "other than the Work itself".

11.1.1.9 Add the following Article 11.1.1.9:

Liability insurance will include all major divisions of coverage and be on a comprehensive basis including:

- .1 Premises operations.
- .2 Independent Contractor's Protective.
- .3 Products and completed operations.
- .4 Contractual including specified provisions for the Contractor's obligations under 3.18.
- .5 Owned, non-owned and hired motor vehicles.
- .6 Broad form coverage for property damage.
- .7 Owner and Engineer will be listed as additional insures on policy.
- 11.1.2 Delete Article 11.1.2 in its entirety and insert the following:

The insurance required by subparagraph 11.1.1 will be written for not less than the following, or greater amounts if required by law.

.1	GENERAL LIABILITY: Commercial General Liability (Including XCU) General Aggregate Products & Completed Operations Personal & Advertising Injury Bodily Injury & Property Damage Fire Damage Liability Medical Expense	 \$2,000,000 Aggregate \$2,000,000 Aggregate \$1,000,000 per Occurrence \$1,000,000 per Occurrence \$500,000 per Occurrence \$10,000 per Person
.2	OWNERS & CONTRACTORS PROTECTIVE LIA Bodily Injury & Property Damage Bodily Injury & Property Damage	BILITY: \$2,000,000 Aggregate \$1,000,000 per Occurrence
.3	AUTOMOBILE LIABILITY: (Owned, non-owned & hired vehicles) Contractor Insurance Option Number 1: Bodily Injury & Property Damage (Combined Single Limit) Contractor Insurance Option Number 2: Bodily Injury Bodily Injury	\$1,000,000 per Occurrence \$ 500,000 per Person \$1,000,000 per Accident
.4	Property Damage EXCESS LIABILITY: (Umbrella on projects over \$50 Bodily Injury & Property Damage (Combined Single Limit)	 \$ 100,000 per Occurrence 00,000) \$2,000,000 Aggregate \$1,000,000 per Occurrence
.5	WORKERS' COMPENSATION: (As required by Statute) EMPLOYERS' LIABILITY Accident Disease Disease	 \$ 100,000 per Occurrence \$ 500,000 Policy Limit \$ 100,000 per Employee

.6 PROPERTY INSURANCE: Builder's Risk Or Installation Floater

\$ Equal to Value of Work
\$ Equal to Value of Work

11.1.5 Add the following Article 11.1.5:

Furnish one copy of certificate herein required for each copy of the Agreement, specifically set forth evidence of all coverage required by Articles 11.1.1, 11.1.7 and 11.1.2. The form of the certificate will be AIA Document G715 or a similar form acceptable to Owner. Furnish to the Owner and Engineer, copies of any endorsements that are subsequently issued amending coverage or limits. If the coverages are provided on a claims-made basis, the policy date or retroactive date shall predate the Contract and termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverages required to be maintained after final payment.

11.2 OWNER'S LIABILITY INSURANCE

11.2 Delete Article 11.2 in its entirety and insert the following:

The Contractor will pay for and maintain such insurance as will protect the Owner and Engineer from their contingent liability to others for damages because of bodily injury, including death, which may arise from operations under this Contract and other liability for damages which the Contractor is required to insure under any provision of this Contract. Certificate of this insurance shall be filed with the Owner and Engineer and will be the same limits set forth in Article 11.1.2.

11.3 PROPERTY INSURANCE (BUILDERS' RISK OR INSTALLATION FLOATER)

11.3.1 Change the first line of the Article 11.3.1 to read as follows:

"The Contractor shall purchase "

11.3.1 Add the following to the end of the paragraph:

Such property insurance shall be maintained, unless otherwise provided in the Contract Documents, or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made, as provided in Paragraph 9.10, or until no person or entity other than the Owner has an insurable interest in the property required by this Paragraph 11.3 to be covered, whichever is later.

- 11.3.1.2 Delete Article 11.3.1.2 in its entirety.
- 11.3.1.3 Delete Article 11.3.3 in its entirety and insert the following:

If the property insurance requires minimum deductibles and such deductibles are identified in the Contract Documents, the Contractor shall pay the deductible and all other costs not covered because of such deductibles. If the Contractor or insurer increases the required minimum deductibles above the amounts so identified or if the Contractor elects to purchase this insurance with voluntary deductible amounts, the Contractor shall be responsible for payment of the additional costs not covered because of such increased or voluntary deductibles. If deductibles are not identified in the Contract Documents, the Contractor shall pay the amount of the deductible and all costs not covered because of deductibles.

- 11.3.2 Delete this Subparagraph in its entirety.
- 11.3.3 Delete this Subparagraph in its entirety.
- 11.3.4 Delete this Subparagraph in its entirety.

- 11.3.5 Delete this Subparagraph in its entirety.
- 11.3.6 Delete this Subparagraph in its entirety.
- 11.3.10 Delete Article 11.3.10 in its entirety and insert the following:

The Owner, as fiduciary, shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five (5) days after occurrence of loss.

- 11.5 OWNER'S AND ENGINEER'S PROTECTION
- 11.5.1 Add Section 11.5 OWNER'S AND ENGINEER'S PROTECTION and insert the following Article 11.5.1:

In addition to the above, the Contractor shall take out in the Owner's and Engineer's names, and maintain during the same time period, Public Protective Liability Insurance and Property Damage Insurance in the amount of not less than \$1,000,000.000 combined single limit, which policies shall cover the operations of the Contractor, and those of his subcontractors to protect the Owner and Engineer from loss. This protection shall not be considered as a separate policy by the Contractor, but shall be a rider to the Contractor's coverage.

ARTICLE 12 - UNCOVERING AND CORRECTION OF WORK

12.2.2.1 Add the following to the end of Article 12.2.2.1:

Prior to the end of the one-year period, the Engineer may schedule a warranty inspection, which shall be attended by the Engineer, the Owner, the Contractor and all major subcontractors. During this inspection, the parties shall identify all defective and/or nonconforming items and fix a time within which all defective and/or nonconforming items shall be repaired and/or replaced.

12.2.2.1.1 Add the following Article 12.2.2.1.1:

As a condition to Substantial Completion of the Work under Section 00 73 13, Article 9.8.4, Contractor, upon completion of the Work, shall prepare and submit to the Owner a Guarantee of Work, sworn to by the Contractor, stating:

As required by Section 00 73 13, Paragraphs 12.2.2.1.1 and 12.2.2.6, Contractor and Contractor's Surety hereby guarantee that all Work performed on the above captioned project is free from defective and/or nonconforming materials and workmanship and that for a period of one-year for construction, from the date of final completion or such longer period of time as may be called for in the Contract Documents for such portions of the Work, Contractor will repair and/or replace any defective and/or nonconforming materials and workmanship in accordance with the requirements of the Contract Documents.

12.2.6 Add the following Article 12.2.6:

Within the one-year period, if repairs or replacement are requested by Owner in connection with guaranteed Work which, in the opinion of the Owner, are rendered necessary as a result of the use of materials, equipment or workmanship which are inferior, defective or not in accordance with the Contract Documents, the Contractor and/or its Surety shall promptly, upon receipt of notice from and without expense to the Owner, place in satisfactory condition in every particular, all such guaranteed Work, correct all defects therein and make good all damages to the building, site, equipment or contents thereof which, in the opinion of the Owner, are the result of the use of materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the Contract Documents; and make good any work or materials or the equipment and contents of said buildings or site disturbed in fulfilling any such guaranty. If, after notice or within the time agreed upon by the parties at the warranty inspection, the Contractor and/or its Surety fail to proceed promptly to comply with the terms of the guarantee, the Owner may have the defects

corrected in accordance with Article 2.4 and the Contractor and his Surety shall be liable for all expenses incurred. All special guarantees applicable to definite parts of the Work stipulated in the Contract Documents shall be subject to the terms of this paragraph during the first year of the life of such special guarantee.

ARTICLE 13 – MISCELLANEOUS PROVISIONS

13.6 Delete this Article in its entirety and insert the following:

Payments due and unpaid under the Contract Documents shall bear interest as provided by Mississippi Code, Section 87-7-3.

ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT

- 14.1 TERMINATION BY THE CONTRACTOR
- 14.1.1.4 Delete Article 14.1.1.4 entirely.
- 14.2 TERMINATION BY THE OWNER FOR CAUSE
- 14.2.1.1 Delete the word "repeatedly" from Article 14.2.1.1.
- 14.2.1.3 Delete the word "repeatedly" from Article 14.2.1.3.
- 14.2.1.5 Add the following Articles 14.2.1.5 and 14.2.1.6:
 - .5 fails to achieve substantial completion of the Project as described in Section 00 73 13, Article 9.8.5, within the time stated therein;
 - .6 fails to meet any deadline required by the Contract. Contractor acknowledges that time is of the essence for this Contract and that all deadlines required by the Contract are critical to timely completion of the Contract. Therefore, Contractor agrees that its failure to meet any deadline constitutes a substantial and material breach of this Contract, entitling the Owner to terminate the Contract.
- 14.2.5 Add the following Article 14.2.5:

If the Owner terminates the Contract for cause, and it is determined for any reason that the Contractor was not actually in default under the Contract at the time of termination, the Contractor shall be entitled to recover from the Owner the same amount as the Contractor would be entitled to receive under a termination for convenience as provided by Article 14.4. The foregoing shall constitute the Contractor's sole and exclusive remedy for termination of the Contract. In no event shall the Contractor be entitled to special, consequential, or exemplary damages, nor shall the Contract.

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

- 14.4 Delete Articles 14.4.1, 14.4.2, and 14.4.3 entirely and insert the following:
 - 14.4.1 The Owner may, without cause or fault of either the Contractor or the Owner, terminate the Contract in whole or in part if the Owner, in its sole discretion, determines it to be in the Owner's best interest.
 - 14.4.2 Upon the Owner's termination for convenience, the Contractor shall only be entitled to payment as provided in Subparagraph 14.1.2.
 - 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for reasonable profit and overhead on work performed. The Contractor

shall not be entitled to receive any payment for either overhead or profit on work not performed.

ARTICLE 15 - CLAIMS AND DISPUTES

- 15.1.5 CLAIMS FOR ADDITIONAL TIME
- 15.1.5.2 Add the following to the end of Article 15.1.5.2:

"The Contractor must submit each month with his Application for Payment a separate letter stating that he is requesting an extension of time for abnormal adverse weather or that he has no claim for an extension for that period of time. Payment is not due on a monthly application until the letter is received. Complete justification, including weather reports, daily reports, correspondence and any other supporting data must be provided for each day for which an extension is requested. A letter or statement that the Contractor was delayed is not an adequate justification. The receipt of this request and data by the Engineer will not be considered as Owner or Engineer approval of a time extension in any way."

- 15.2.1 Delete all references to mediation.
- 15.2.5 Delete the last sentence and its references to mediation.
- 15.2.6 Delete this paragraph in its entirety.
- 15.2.8 Delete this paragraph in its entirety.
- 15.3 Delete the entire paragraph entitled "MEDIATION", including subparagraphs 15.3.1, 15.3.2, and 15.3.3.
- 15.4 ARBITRATION
- 15.4.1 Delete this paragraph in its entirety and add the following paragraph as follows:

The Owner shall have the sole option of selecting arbitration as the means for resolving the parties' dispute and the Contractor shall, before initiating any proceeding against the Owner, notify the Owner in writing that it intends to initiate legal proceedings against the Owner which notice shall include a description of the claim(s) and amount(s) thereof. Within ten (10) business days after receipt of such notice, the Owner shall advise the Contractor whether the dispute is to be arbitrated or litigated. If arbitration is selected by the Owner, then any Claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived as provided for in Sections 15.1.6, 9.10.4 and 9.10.5, shall, after decision by the Engineer or 30 days after submission of the Claim to the Engineer, be subject to arbitration If selected by the Owner at its sole and exclusive option,

- 15.4.1.1 Delete paragraph 15.4.1.1 in its entirety.
- 15.4.2 Delete this paragraph and substitute the following:

Claims shall be decided by arbitration, if selected by the Owner, which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect but not administered by the American Arbitration Association. The demand for arbitration shall be filed in writing with the other party to the Contract and with the American Arbitration Association if the arbitration is to be administered by the American Arbitration Association, and a copy shall be filed with the Engineer.

15.4.3 Delete this paragraph and substitute the following:

If arbitration is selected by the Owner, a demand for arbitration shall be made within the time limits specified in Sections 4.4.6 and 4.6.1 as applicable, and in other cases within a reasonable time after the Claim has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations as determined pursuant to Section 13.7.

15.4.4 Delete Article 15.4.4 CONSOLIDATION OF JOINDER, including subparagraph 15.4.4.1, 15.4.4.2 and 15.4.4.3 in its entirety.

SECTION 00 73 14 SPECIAL CONDITIONS

PART 1 GENERAL

1.1 TERMINOLOGY

- A. The Project Engineer is authorized to prepare all drawings, specifications, and details for this work, and to act as the Owner's representative during construction.
- B. Owner: Wherever the term "Owner" is used in the specifications, it refers to The University of Mississippi Department of Facilities Planning.
- C. Notice: The term "notice" as used herein shall mean and include all written notices, demands, instructions, claims, approvals, and disapprovals required to obtain compliance with contract requirements. Any written notice by either party to the contract shall be sufficiently given if delivered to or at the last known business address of the person, firm or corporation constituting the other part of the contract, or to his, their, or its duly authorized agent, representatives, or officer; or when enclosed in a postage prepaid envelope addressed to such last known business address and deposit in a United States mail box.
- D. As Directed: The term "as directed," where used in the specifications, shall mean according to instructions issued by the Engineer.
- E. Approved Acceptable Satisfactory: The term "approved", "acceptable," and "satisfactory" when used in the specifications, shall mean approved by the Engineer.

1.2 SCOPE OF WORK

A. This section is the University requirements for implementation of the construction requirements. See General Conditions, Section 00 72 14 and Supplemental Conditions, Section 00 73 13.

1.3 CONSTRUCTION DOCUMENTS

- A. The drawings are intended to show the general arrangement of the work and are not intended to be scaled or to serve as shop drawings. Omission of details concerning local code requirements or proper or normal installations of equipment specified shall not be cause for additional charges or claims. The specifications and the drawings are intended to be in agreement with each other, and to be mutually explanatory. They are also intended to be complementary and any work or material called for by either shall be performed and/or furnished as if called for by both.
- B. In the event of a discrepancy between the drawings and the specifications, the University shall recognize the more expensive of the two.

1.4 CONSTRUCTION DOCUMENTS

A. The Contractor will be furnished free of charge ten (10) sets of plans and specifications. The Contractor shall pay the actual cost of reproductions for all additional sets requested by him.

1.5 BUILDING CODE REQUIREMENT

- A. All parts of building work under contract by General Contractor and other contractors or subcontractors shall be executed in compliance with building codes of governing bodies, such as State Codes and Regulations also, the National Electrical Code and National Plumbing Code. These requirements shall take precedence over the Engineer's specifications or plans wherever a conflict exists.
- B. Where a conflict exists which would create additional cost or changes to the work other than as designed, the conflict shall be submitted to the Engineer in writing before commencing any work, and a decision shall be made instructing the contractor or subcontractor as to how to proceed.
- C. The University of Mississippi utilizes the 2012 IBC of the ICC.

1.6 VERIFICATION OF DIMENSIONS

- A. Before starting the construction work, all measurements shall be checked by contractor against dimensions of the plans to insure the intent of the ground floor base dimensions. Differences shall be called to the attention of the Engineer for adjustment.
- B. Before ordering any materials or doing any work, each contractor shall verify the dimensions and shall be responsible for the accuracy of such dimensions as they affect the work. No extra compensation will be allowed on account of differences between the dimensions shown on the drawings and actual dimensions.
- C. Shop drawing dimensions shall be checked with the building conditions and Engineer's drawings for correctness before submitting some for approval to the Engineer.

1.7 ENGINEERING AND LAYOUT

A. The Contractor shall provide competent engineering services to execute the work in accordance with the contract requirements. He shall verify the figures shown on the survey and working drawings before undertaking any construction work and shall be responsible for the accuracy of the finished work.

The Owner has established or will establish, such general reference points as will in his judgment, enable the Contractor to proceed with the work. If the Contractor finds that any previously established reference points have been destroyed or displaced, he shall promptly notify the Owner.

The Contractor shall protect and preserve the established bench marks and monuments and shall make no change in locations without the written approval of the Owner. Any of them which may be lost or destroyed or which require shifting because of necessary changes in

grades or locations, shall be subject to prior approval by the Owner, be replaced and accurately located by the Contractor.

1.8 OWNER'S RIGHT TO EXPEDITE

A. The Owner reserves the right to aid in expediting materials whenever it is necessary to maintain the building schedule but does not relieve the Contractor of any responsibility in securing materials.

1.9 CONTRACT COORDINATION

A. Multiple contracts could be under way on site during the duration of this contract. Coordination and cooperation will be required to complete the work identified. The Contractor is required to coordinate with the Engineer any work which would interfere with other activities on site.

1.10 EXPERIENCE VERIFICATION

- A. Immediately after receipt of bids, and upon notification of Owner and/or Engineer, furnish the following information for evaluation by the Owner (the Owner reserves the right to evaluate the following information prior to award of contract:
 - 1. Similar Experience: Furnish a complete listing of completed project or on-going project similar in size and scope to this project, listing complete names, addresses, and telephone numbers of Owners, cost of project, and year completed or anticipated to be completed.
 - 2. Office Staff: Furnish a complete listing of all office staff listing name, address, and title.
 - 3. Superintendent: Furnish a complete resume for the proposed project superintendent, listing previous experience as either Assistant Superintendent or Superintendent. Experience listing shall show scope of projects and proposed superintendent's duties on these projects.

1.11 WORKMANSHIP

A. All work as described or required shall be executed in a neat, skillful manner, in accordance with the best recognized trade practice. Only competent workmen (including the superintendent) who work and perform their duties satisfactory shall be employed on the project, and when requested by the Engineer or University Officials, the Contractor shall discharge and shall not re-employ on the project, any person who commits trespass or who is, in the opinion of the Engineer, dangerous, disorderly, insubordinate, incompetent, or otherwise objectionable.

1.12 EXISTING UTILITIES

- A. Existing structures, plantings, trees, utility lines, and building or landscaping systems, within the work area and outside the work area, which are to be retained unchanged, shall be protected from damage by the Contractor, prior to the start of construction. Any streets, roadways, sidewalks, grounds, plantings, trees, utility line, building or landscaping systems, or other property that are damaged, as a result of the Contract Work, shall be properly repaired or fully replaced by the Contractor to the full satisfaction of the University.
- B. All utility meters, valves, switches, etc. within the work area shall remain accessible to University employees for the duration of the project.

- C. The Contractor shall take all precautions to protect all existing sewer manholes, sewer lines, and storm drains from be infiltrated by construction debris and eroded silt.
- D. Utility interruptions and Utility Connections planned as part of the Work shall be coordinated a minimum or ten (10) calendar days prior to interruption of service or occurrence of work. The University maintains the right to withhold authorization until it is practical for the work to occur. The University utility infrastructure cannot be shut down to make connections without prior notification to all affected University Departments.

1.13 UTILITIES, ELECTRICITY, GAS, WATER, FENCE

- A. New Construction and Major Renovations
 - 1. The University will bill the Contractor for electrical service during the construction. A temporary power source will be set by the Contractor that will include a University approved meter.
 - a. The University will invoice the Contractor monthly for power use based on \$00.07 per kilowatt hour. This rate is subject to change based on variables such as consumption ranges, customer charges, etc. The Contractor will remove temporary service when full power is commissioned in the project.
 - 2. The University will invoice the Contractor monthly for the water use based on \$4.50 for the first 3,000 gallons plus \$ 00.001750 per each additional gallon beyond the first 3,000 gallons. Contractor is responsible for providing temporary meter and removing any temporary connections at project completion.
 - 3. The Contractor shall meter use of natural gas until substantial completion. The University will invoice the Contractor \$00.006 / MMBTU per for natural gas on a monthly basis. This rate is subject to change based on variables such as consumption ranges, customer charges, etc.
 - 4. The Contractor shall be responsible for maintaining all temporary utilities throughout the duration of construction.
 - 5. The Contractor will provide and pay for all utilities until the project Substantial Completion date is established or other arrangements are made with the University.
 - 6. The Contractor is responsible for restoring all utilities to pre-construction condition after completion.
- B. Renovations Within Existing Buildings
 - 1. The University will bill the Contractor for utilities based upon a prorated amount determined by the area of construction. The utility rate charges will be same as the rates identified for New Construction and Major Renovations above.
1.14 RESPONSIBILITY OF CONTRACTOR TO ACT IN EMERGENCY

A. In case of an emergency which threatens loss or injury of property and/or safety of life, the Contractor shall act without previous instructions from the Owner, as the situation may warrant. He shall notify the Owner immediately thereafter. Any compensation claimed by the Contractor, together with substantiating documents in regard to expense, shall be submitted to the Owner within twenty-eight (28) consecutive calendar days after each occurrence and the amount of compensation shall be determined by the agreement or arbitration.

1.15 PROTECTION OF PROPERTY, SITE SAFETY, AND PROTECTIVE MEASURES

- A. The Contractor shall at all times safeguard the Owner's property from injury or loss in connection with this contract. He shall at all times safeguard and protect his own work and that of adjacent property (as provided by law and the contract documents) from damage. All passage ways, guard fences, lights and other facilities required for protection by state or municipal laws and regulations and local conditions must be provided and maintained.
- B. The University will not be responsible for the safety of the Contractor's work, materials or equipment. Protection of the property within the contract work area both day and night shall be the responsibility of the Contractor. The Contractor shall provide a chain and lock for the security gate that can be "double locked" with a University furnished lock so that the University can have access to the job site during emergencies.
- C. Precaution shall be exercised at all times for the protection of persons (including employees) and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment, and all hazards shall be guarded or eliminated in accordance with the safety provisions of the latest edition of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable laws and codes.
- D. Organized safety measures shall be enforced on all construction work. Daily safety meetings shall be held by the Contractor prior to start of construction each day. The Contractor shall meet all applicable OSHA, and other Federal, State, and local agencies' codes and requirements regarding safety on and adjacent to the construction site.
- E. The Contractor shall provide the Department of Facilities Planning with a copy of all accident reports for any occurrences on site.
- F. The Contractor shall provide protective devices such as signs, lights, barricades, covered walkways, signals, fences and etc., shall be utilized night and day to protect students and personnel on the campus. All temporary construction shall conform to or exceed the requirements of Chapter 33, Safeguards During Construction, of the IBC latest edition.
- G. Contractor shall install and maintain a chain link perimeter fence at the edge of designated lay down area and construction boundary. Lay down area shall be graded, fertilized and sodded to the limits of the construction area and maintained throughout the duration of the project.
 - 1. The perimeter fence shall be 10'-0" high per the project specifications.

1.16 FIRE PROTECTION

A. The General Contractor will provide general temporary fire protection as required.

1.17 RISK MANAGEMENT

- A. These procedures are intended to enhance occupants' safety, workers' safety, and reduce contractor's liability.
 - 1. Existing fire alarm systems in building must be protected by covering sensors that may cause activation by dirt, dust, smoke, heat or fumes generated by the Contractor's work.
 - 2. "Hot" work requires special attention to ensure safe working conditions and protection to both facilities and workers.
 - a. Fire Extinguisher
 - b. Fire Watch
 - c. Risk Management Permit (Issued by Facilities Management Department) See Section 7: Forms for a copy of the Risk Management Permit
 - 3. Failure to adhere to these procedures may result in a "stop work" order and/or being assessed a fire run fee of one thousand (\$1,000) dollars for each emergency response the Fire Department makes as a result of the Contractor's work activating the fire alarm system.

1.18 EROSION CONTROL

- A. Proper precautions shall be taken by the General Contractor to prevent erosion of the job site and run off from the job site. Precautions shall be taken during construction to prevent mud and debris being transported off the site onto the streets and drives. The Contractor shall repair any eroded areas at the end of the job, and wash streets and parking lots as needed, during the job, to keep them clear of soil, gravel or other material.
- B. Contractor shall provide, install and maintain erosion control methods to insure compliance with MDEQ requirements. Contractor is responsible for application and approval of MDEQ.

1.19 USE OF PREMISES

- A. The Contractor expressly undertakes at his own expense:
 - 1. To store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other contractors;
 - 2. To place upon the work, or any part thereof, only such loads as are consistent with the safety of that portion of the work;
 - 3. To affect all cutting, fitting, or patching of his work required to make the same conform to the plans and specifications, and except with the consent of the Engineer not to cut or otherwise alter the work of any other contractor;
 - 4. Before final payment to remove all surplus material, false-work, construction sign, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations and to put the site in a neat, orderly condition, including the removal of all paint spatters and other defacement.

- B. All materials and equipment shall be brought onto the site by making use of such roadways and drives as designated by the University and across the grounds along routes established by the University and Director of Landscape Services. Access shall be confirmed in the pre-construction meeting.
- C. Any streets, roadways, sidewalks, grounds, plantings, trees or other property that may be damaged as a result of the contract work shall be properly repaired or fully replaced by the Contractor to the full satisfaction of all interests involved. Trenches cut across roads, streets, drives, and parking lots shall be back-filled, compacted and topped with an acceptable assembly of paving material to match existing paving material. The University must approve final paving patch assemblies. **Patching asphalt surfaces with concrete is not acceptable**.

1.20 TRASH DISPOSAL AND BURNING

A. From the very start of the work, until its entire completion, the Contractor shall keep on hand an adequate crew of laborers, or others to keep the entire building and surrounding street, sidewalks, alleys, etc. free from any dirt, rubbish and debris resulting from the execution of the contract. The Contractor is responsible for keeping the project site clean and litter-free on a daily basis. It shall be the responsibility of each individual prime contractor to provide dumpsters to collect and remove all of their related debris from the building and the sites. Contractor must take necessary precautions to protect asphalt surfaces and concrete surfaces from damage caused by dumpster placement, storage, and retrieval. Contractor will be required to replace all damaged surfaces.

Contractor's use of University dumpsters, trash cans and other construction dumpsters is strictly prohibited.

- B. There shall be no burning on properties of the University of Mississippi. All clearing and grubbing, debris, rubbish, trash and any other material which is subject to burning shall be removed and disposed of outside the limits of the University property. It shall be the responsibility of the Contractor to acquire, maintain and pay for, if necessary, a disposal area.
- C. No materials of any sort shall be buried on University property.

1.21 DESIGNATION OF STORAGE AND WORKING AREA

- A. The exact boundaries of the area which may be used by the Contractor and subcontractors for the storage of materials and as a working area will be clearly defined in the contract documents. The contract will include the development of the complete work area and both the design and construction operations will be confined to this area.
- B. The Contractor shall confine his operations, and provide within the designated storage and work areas any required space for all Sub-Contractors. Any damage to the grounds and irrigation systems within the designated working area or storage area shall be repaired by the Contractor, and left at the completion of the Project, either in the same state as found to exist at the start of the work, or as shown on the Contract Documents. Such damage shall include repairs or replacement of turf, shrubs, trees, sidewalks, parking lots, existing drains, street surfaces, curbs, gutters, irrigation systems, and other property and building systems. Existing structures, plantings and trees within the work area which are to be retained unchanged shall be protected. The Contractor shall repair all rutted and disturbed ground areas with solid sod to match existing ground cover. Contractor shall water and maintain sod until final acceptance of

the project. An inspection of grounds by Landscape Services shall be included in the final punch list to determine if the site has been properly restored.

1.22 DESIGNATION OF PARKING AREA

A. Parking for the Contractor's and Sub-Contractors' employees shall be within the Project site. If sufficient parking area is not available within the designated storage and working area for the vehicles of workmen employed on the building, the Contractor shall require workmen to park their vehicles in areas designated by the University and instructed through the Engineer. Parking Permits will be required and must be purchased from the University Parking and Transportation Services. Parking Permits only allow Contractor parking within valid, legal parking spaces. Parking areas must be policed daily for trash and debris by the General Contractor. Workmen failing to comply with traffic and parking regulations of the University shall be removed from the job at the request of the proper University officials.

1.23 TREES AND PLANTING

- A. The Contractor shall refer to the Mississippi Extension Service's publication, "Tree Protection Standards in Construction Sites" for further information and requirements not noted in this document.
- B. A charge of \$2,500.00 will be assessed to the Contractor for any trees designated to remain that are damaged, to pay for the cost of tree replacement.

1.24 WORK HOURS AND NON-INTERFERENCE OF UNIVERSITY OPERATIONS

- A. As a result of the Work involved, it is understood that the Contractor shall schedule and perform the Work in such a manner as to not unnecessarily interfere with normal University operations, including the interruption of utilities, without a minimum of ten (10) calendar days prior notice to the Design Professional and the Department of Facilities Planning.
- B. The Contractor expressly undertakes, at his own expense, to comply with the regulations governing the operations of the premises which are occupied by the Project, and to perform his contract in such a manner as not to interrupt or interfere with the operations of the University, and to perform any Work after normal working hours, or on Saturday, or on regular holidays without additional expense to the University.
- C. Construction is not permitted on Sundays, except by specific permission from the Department of Facilities Planning.
- D. The Contractor shall end all work by Noon on Fridays prior to Commencement. Work on Saturday shall NOT be permitted during Commencement activities.
 - 1. Commencement is typically scheduled for the second Saturday of May each year.
- E. The Contractor shall end all work by Noon on Fridays prior to the Saturday of all home football games. Work on Saturday shall NOT be permitted during home football games.
 - 1. Typical football schedule includes seven (7) home games each season.
- F. Construction projects near Residence Halls are restricted as follows:
 - 1. Construction (including excavation) or any other type of activity involving the use of heavy

equipment, power equipment, or other tools creating excessive noise, shall only be conducted between 8 AM and 7 PM, Monday through Saturday.

- a. Construction noise restrictions also apply if specific permission is granted for Sunday work.
- 2. The Contractor shall not work during Final Exam week, Monday through Friday.
 - a. Fall Semester Final Exams are typically scheduled for the first full week of December each year.
 - b. Spring Semester Final Exams are typically scheduled for the full week prior to Commencement each year.

G. Construction projects within or adjacent to Academic Buildings are restricted as follows:

- 1. Construction (including excavation) or any other type of activity involving the use of heavy equipment, power equipment, or other tools creating excessive noise, shall be coordinated with the class schedule of the building. After-hours work may be required to avoid disrupting classes.
- 2. The Contractor shall not work during scheduled Final Exams.
 - a. Fall Semester Final Exams are typically scheduled for the first full week of December each year.
 - b. Spring Semester Final Exams are typically scheduled for the full week prior to Commencement each year.
 - c. Fall/Spring Exams are typically given from 8 AM 10:30 PM, Monday through Thursday, and 8 AM 7 PM on Friday.

1.25 IDENTIFICATION OF CONSTRUCTION WORKERS

A. All construction workers and vendors shall wear, at all times, on their upper torso an identification badge, with their photograph, as issued by either their company or the University. The ID badge shall identify the name of the worker and the company by which the worker is employed. ID badges provided by the University may be obtained from the University ID Center at a charge dictated by Contractual Services.

1.26 WORKER CONDUCT - OBJECTIONABLE WORKMEN

- A. Any workman who may, because of improper conduct, become objectionable to the University will be promptly removed by the Contractor at the request of the proper University officials. In addition, the following work requirements shall be met at all times:
 - 1. No firearms of any kind shall be allowed on the campus. Possession of a firearm on campus shall be considered improper conduct.
 - 2. The possession or consumption of alcoholic beverages is forbidden on campus, and shall be considered improper conduct.

- 1. The use of tobacco products is prohibited in buildings. Smoking is prohibited at all times and at all locations on The University of Mississippi Oxford Campus; including all University owned facilities, properties and grounds. All violators will be subject to a fine in an amount set at the current rate according to University Policy at the time of the offence. Fines will be assessed to the workers' company. Multiple violations shall be considered improper conduct.
- 4. Clothing for construction workers shall conform to the accepted standards within the construction industry. This includes appropriate footwear, shirts, and pants. The provision of protective clothing shall be the responsibility of the General Contractor. Shirts and pants will be worn by al workers at all times. Non-compliance shall be considered improper conduct.
- 5. Use of offensive language or gestures to any student, faculty, or staff member shall be considered improper conduct.
- 6. Non-compliance with wearing of either a company issued or University issued identification badge, with the worker's photograph, as noted under **Identification of Construction Workers** shall be considered improper conduct.

1.27 EXCAVATION

- A. Contractors shall follow all current conditions and procedures required by Mississippi One Call prior to and during excavations. No person shall make any excavation in any of the grounds of the University of Mississippi campus without first obtaining a confirmation number from Mississippi One Call, Inc. calling 1-800-227-6477.
- B. The grounds of the University of Mississippi as used herein include, but not limited to, the streets, sidewalks, parking areas, and all other public and private areas of the Oxford Campus, whether covered or uncovered.
- C. Safety dictates that Contractor be familiar with the color coding scheme used to mark the various utilities (blue water; orange gas, etc.).
- D. A copy of the Mississippi law Regulation of Excavations near underground utility facilities, and the uniform color code for marking underground utility lines are in Addendum D.
- E. Markings made by utility owners (University and local providers, Bellsouth, Entex, etc)are valid for a period of ten (10) days from the proposed starting date provided to the Mississippi One Call, Inc. The person responsible for the excavation shall renew the notification with Mississippi One Call, Inc. at least two (2) days prior to the expiration and continue to renew notification throughout the duration of the excavation. By calling Mississippi One Call, Inc. on the eighth (8th) day, the utility owners can remark utilities so excavation projects can go longer than ten (10) days without requiring the excavator to stop work.
- F. Damage to utilities by excavators will be reported to Mississippi One Call, Inc. and the Department of Facilities Planning immediately, especially damage to underground utilities permitting escape of any hazardous, flammable, toxic or corrosive gas or liquid. Additionally, those excavating shall take action as reasonably necessary to protect persons and property and to minimize hazards until arrival of the owner's personnel, police and/or fire department.

- G. Repairs to utilities are the responsibility of the excavator except where the excavator has fully complied with these procedures. The excavator shall be responsible for any costs and expenses incurred by the owner of the utilities in restoring, correcting, repairing, and replacing the damaged line or facility.
- H. Utility owners (University and other local providers, Bellsouth, Entex, etc) shall mark utilities within two (2) working days from the time Mississippi One Call, Inc. receives the notification.
 - 1. Unmarked locations when an excavator sees evidence that utilities are unmarked, or encounters an unmarked utility, the excavator must immediately contact Mississippi One Call, Inc. and owners. All owners must contact the excavator within four (4) hours of any known underground utilities at the excavation site.

a. Group Identifying Colors for Utilities:

- Safety Red.....Electrical
- High Visibility Safety Yellow.....Petroleum products, gas, oil steam, gaseous materials
- Safety Precaution Blue.....Potable water, irrigation lines
- Safety Green.....Sewers and drain lines
- WhiteProposed excavation
- I. Procedures
 - 1. Excavator calls Mississippi One Call, Inc. requesting utility locates and provides information requested.
 - 2. Mississippi One Call, Inc. notifies University (Facilities Management, Telecommunication, Landscaping, etc.) and local providers (Bellsouth, Entex, etc.). Each organization is responsible for marking their utilities.
 - 3. Facilities Management issues work orders to mark University gas, water, sewer, electrical, and chill water/steam lines.
 - 4. University Telecommunications issues work orders to locate telephone, fiber optics and data lines.
 - a. Bellsouth locates its utilities.
 - b. Entex locates its utilities.
 - c. Vista cable locates its utilities.
- J. Excess Excavation: Any excess excavation shall be trucked to dumping points off the University campus, as directed by the Engineer, or shown on drawings.

1.28 CONSTRUCTION SIGN

A. The Contractor shall not install any construction signs on the construction site other than the University Job Site Construction Sign. Attached is a copy of the University of Mississippi requirements for construction signs utilized on campus. Please provide a sign that meets University specifications. If it is determined by the Department of Facilities Planning that a sign is not needed and the Contractor chooses to install a sign, it must be a standard University Job Site Construction Sign.

1.29 TERMITE TREATMENT

- A. The Contractor shall pre-treat all slab on grade and perimeter foundations for termites as indicated in the Project Manual. An optional service contract should be made available.
- B. The Contractor shall take the necessary precautions to assure that any wood or cellulose based products are isolated from the ground to prevent infestation with termites during storage in the lay down area.

1.30 CONSTRUCTION CHANGE ORDERS

- A. See Supplementary Conditions Section of the Specifications, Article 7 Changes in the Work for required procedures and allowable mark-ups.
- B. All projects with IHL project numbers must abide by the Institutions of Higher Learning Change Order Approval Process. Change Orders for these projects must be submitted to IHL by the Department of Facilities Planning for approval prior to final execution.

1.31 NOTICE OF REVIEW TO THE UNIVERSITY

A. The Department of Facilities Planning must be notified minimum of (7) days prior to the need to review/approve any on-site mock-ups for color and/or details.

1.32 SCHEDULING TESTING

A. A representative of the University may wish to be present during periods of major testing: i.e., systems tests, performance tests, load tests, etc. The University must be notified a minimum of seven (7) days prior to the time when such tests are to be performed. Failure to issue such notice may result in repetition of the testing at the Contractor's expense. The presence of a representative of the University at such a test shall not relieve the Design Professional of his responsibility.

1.33 WITHHOLDING OF FINAL PAYMENT TO THE CONTRACTOR

A. The University will withhold final payment of the Retainage to the Contractor until ALL project closeouts and as-builts are received in an acceptable manner per the Project Specifications.

SECTION 01 11 00 SUMMARY OF WORK

PART 1 – GENERAL

1.01 GENERAL

- A. The project consists of the disassembly of the existing Confederate monument and its and relocation to the existing Confederate cemetery located on campus. Site and access improvements are also included in the project.
- B. The work shall include all labor, materials, equipment, services and related activities and procedures necessary to complete the construction including the foundation repair, site work, interior repairs, and other improvements as shown on the Drawings and required in the Specifications (Project Manual).

1.02 CONTRACT DOCUMENTS

- A. The Contract Documents for providing the Work of the Project include the following:
 - 1. Engineer's Drawings dated August 26, 2019.
 - 2. Project Manual (including Specifications) dated August 26, 2019.

SECTION 01 14 00 WORK RESTRICTIONS

PART 1 – GENERAL

1.01 CONTRACTOR'S USE OF PREMISES

- A. Contractor shall limit his use of premises for work as described in drawings and specifications.
- B. Contractor shall assume full responsibility for the protection and safekeeping of products under this contract stored on the site.
- C. Contractor to provide temporary fencing around project laydown area using chain link fence material. All temporary fencing to be 10 feet high and covered full height with two layers of privacy screen mesh (dark green color), one on each side of fence. Fence posts to be inserted into drilled sections at landscaped or grassed areas as well as hard surfaces (pavement, sidewalks, etc.). See project drawings for approximate laydown area and restrictions.
- D. Gates to be locked using a two lock system during all non-working hours. One lock and key to be provided by Contractor. The second lock and key system to be provided by the University.
- E. It is the Contractors responsibility during after hours and weekends to secure fencing that has moved or fallen as a result of wind.
- F. Use of restrooms in any University building is not permitted. Contractor responsible for providing personal sanitation services to the site.

SECTION 01 18 00 PROJECT UTILITY SOURCES

PART 1 – GENERAL

1.01 The Contractor to provide and maintain the required electrical services for use on the project. Temporary services shall be provided by the University to a metered point of connection.

SECTION 01 23 00 ALTERNATES

PART 1 – GENERAL

1.01 PROCEDURES

- A. Purpose: To enable the Owner to give consideration to alternative proposals and compare costs with the possibility to include modifications which will change the level of quality and/or to add to or subtract from the scope of work of the Project.
- B. Acceptance or rejection of any Alternate is at the sole discretion of the Engineer and University. Final decision on each Alternate will be made in conjunction with the base bid. Accepted Alternates shall become a part of the University/Contractor Agreement.

SECTION 01 29 00 PAYMENT PROCEDURES

PART 1 – GENERAL

1.01 APPLICATION FOR PAYMENT

- A. Submit Application for Payment to the Engineer on a monthly basis. Payment application to represent percentage of work completed at time of submission.
 - 1. Submit (2) original applications for payment each month.
 - 2. Break down project costs by division and section in CSI format or equal.
 - 3. Contractor shall submit monthly certification to the Engineer indicating payments to subcontractors on prior payment requests.
- B. Retainage shall be 10% on all payment requests. Until final payment, the owner will pay ninety percent (90%) of the amount due the Contractor on account of progress payments.

SECTION 01 31 00 PROJECT MANAGEMENT AND COORDINATION

PART 1 – GENERAL

1.01 PROJECT SUPERVISION

A. The Contractor shall employ a competent supervisor and necessary assistants who shall be in attendance at the project site at all times during performance of the work. The project supervisor shall not be moved to another project or otherwise fail to be in attendance at the project site until the project is substantially complete or until the Engineer and University approve of the supervisor's absence from the project site.

SECTION 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 – GENERAL

1.01 WORK SCHEDULE/TIME OF COMPLETION

- A. The Contractor shall coordinate the project schedule and operations with the University's requests. Follow the construction schedule as outlined in the contract documents.
- B. The Contractor shall at all times conduct his operations as to insure the least inconvenience to the University.
- C. Time of Completion is an important consideration on the project. <u>The project shall</u> <u>be substantially complete on or before the amount of time indicated on the Proposal</u> <u>Form elapses.</u>
- D. The Contractor, promptly after being awarded the contract, shall prepare and submit for the University and Engineer's information, a detailed Contractor's Construction Schedule for the work. The contractor shall review this schedule in form and content and revise to meet the approval of the Engineer. The schedule shall not exceed time limits established by the contract documents.
- E. The Contractor must submit with his Application for Payment, an updated construction schedule, and a separate letter stating that he is requesting an extension of time or that he has no need for an extension of time for that period. No payment on a monthly application will be made until the letter is received. Complete justification, including weather reports, correspondence, etc. must be included for each day's request for extension. A Contractor's letter or statement will not be considered as adequate justification for, nor will receipt of this request be considered as approval of a time extension in any way, nor will it waive the imposition of daily liquidated damages.
- F. Construction Delays and Contractor's Plan of Recovery: If the construction work at any time is delayed or falls behind the schedule as established by the Contractor's Construction Schedule, the Contractor shall promptly submit a Plan of Recovery which outlines in detail, the methods and means required to insure that the project is brought back on schedule. The Contractor's Plan of Recovery shall address manpower, materials and coordination efforts as required to successfully implement the Contractor's Construction Schedule. The Contractor's Plan of Recovery shall be submitted to the Owner and Engineer for approval not more than five (5) calendar days from the date of the Engineer's Letter of Request for the Plan of Recovery.

SECTION 01 33 00 SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 WORK SCHEDULE/TIME OF COMPLETION

- A. Contractor shall determine and verify all field measurements, field construction criteria, manufacturer's catalog numbers, and conformance of submittal data with requirements of Contract Documents. The Contractor shall verify that the item as submitted is coordinated with other work of the project. The Engineer will not approve shop drawings unless they bear the Contractors verification of review and approval.
- B. Contractor shall furnish Engineer with shop drawings, product data, and samples as outlined in Engineer's submittal requirements. Engineer will furnish Contractor with submittal requirements at pre-construction conference.
- C. Furnish the Engineer with four (4) copies of shop drawings and submittals.
- D. Contractor shall retain one (1) copy of each submittal on the project site at all times.

SECTION 01 41 00 REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.01 CODES AND STANDARDS

- A. Contractor shall strictly comply with the 2015 edition of the International Building Code, all other applicable local, municipal, and state and federal codes.
- B. All permits and inspections required for the execution of the work shall be provided by the Contractor at no additional cost to the University.

SECTION 01 51 00 TEMPORARY UTILITIES

PART 1 – GENERAL

1.01 TEMPORARY UTILITIES:

A. Temporary Utilities shall be paid for by the Contractor. Temporary service to facilities shall be provided by the University to a metered point of connection. The Contractor shall be responsible for final connection fees and payment for energy used.

SECTION 01 63 00 PRODUCT SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.01 PROJECT PROCEDURES

A. Substitutions: Products of other manufacturers equal to those specified herein will be considered for substitution. Contractor to submit product information and specifications to Engineer and/or University for review. Use of products from other manufacturers is not permitted unless directed by the Engineer and stated in writing.

SECTION 01 74 00 CLEANING

PART 1 – GENERAL

1.01 FINAL CLEANING

- A. Clean finishes free of dust, stains, films and other foreign substances.
- B. Clean transparent and glossy materials to a polished condition; remove foreign substances. Polish reflective surfaces to a clear shine.
- C. Remove waste, foreign matter, debris, and surplus materials from site. Clean grounds; remove stains, spills, and foreign substances from paved areas and sweep clean.
- D. Sweep and remove stains from existing sidewalk and paved areas.
- E. Fully remove all temporary fencing from project areas.

SECTION 01 77 00 CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.01 SUBSTANTIAL COMPLETION

- A. Substantial completion is the stage in the progress of the work when the work or designated portion thereof is sufficiently complete in accordance with the contract documents so the University can utilize the stair tower for its intended use.
- B. When the Contractor considers that the work is substantially complete, the Contractor shall prepare and submit to the Engineer a comprehensive list of items to be complete or corrected.
- C. Upon receipt of the Contractor's list, the Engineer and University representatives will make an inspection to determine whether the work or designated portion thereof is substantially complete. Within 2 days of this inspection, the Engineer shall issue the Substantial Completion Punch List to the Contractor and provide a deadline for completing the punch list items.
- D. The Contractor shall notify the Engineer when the punch list items have been completed. Upon receiving this notice, the Engineer shall conduct the Final Inspection to review the punch list items.
- E. Upon completion of the Final Inspection, the Engineer shall indicate the acceptance or non-acceptance of the work to the University.

SECTION 03 10 00 CONCRETE FORMING AND ACCESSORIES

PART 1 GENERAL

1.1 RELATED SECTIONS

- A. Division 01 Sections
- B. Section 032000 Concrete Reinforcing.
- C. Section 033000 Cast-in-Place Concrete.

1.2 REFERENCES

- ACI 117 Standard Specifications for Tolerances for Concrete Construction and Materials.
- ACI 301 Standard Specifications for Structural Concrete.
- ACI 318 Building Code Requirements for Structural Concrete.
- ACI 347 Guide to Formwork for Concrete.

1.3 DEFINITIONS

A. Architectural Concrete: All concrete members exposed to public view are classified as Architectural Concrete and shall comply with the Architectural Concrete provisions in this specification and ACI 301.

1.4 SUBMITTALS

A. Submit locations of construction joints in framed construction for approval.

1.5 DESIGN OF FORMWORK

- A. Design of formwork, shoring, and reshoring and its removal is the Contractor's responsibility.
- B. Design of formwork, shoring, and reshoring shall conform to ACI 117, ACI 301, ACI 318, and ACI 347.
- C. Design formwork in a manner such that existing or new construction is not overloaded.

PART 2 PRODUCTS

2.1 FORM MATERIALS

- A. Form Material: Wood, plywood, metal, fiberglass or a combination of these, with sufficient strength to prevent distortion.
- B. Form Definitions

- 1. Standard Forms: No form-facing material required. Standard forms are acceptable everywhere except for Architectural Concrete elements.
- 2. Architectural Concrete Forms: Form-facing material shall be plywood, tempered concrete-form-grade hardboard, metal (unrusted) or plastic that will produce a smooth, uniform texture on the concrete. Do not use form-facing material with raised grain, torn edges, worn edges, patches, dents, or other defects that will impair the texture of the exposed concrete surfaces. Intent is that when the forms are removed, the exposed concrete surfaces will be free from all blemishes. Architectural concrete forms are required for all concrete elements indicated as Architectural Concrete.

2.2 FORMWORK ACCESSORIES

A. Formwork Accessories: Commercially manufactured products, including ties and hangers. Do not use non-fabricated wire form ties.

2.3 FORM RELEASE AGENT

A. Form release agent shall not bond with, stain, nor adversely affect concrete surfaces.

2.5 EXPANSION / ISOLATION JOINT FILLER

A. Expansion / Isolation Joint Filler: ASTM D1751, asphalt impregnated premolded fiberboard, 3/8-inch thick by full thickness of slab or joint, unless indicated otherwise in the Structural Drawings.

PART 3 EXECUTION

3.1 GENERAL

- A. Erect formwork in accordance with ACI 301 and ACI 347.
- B. Finished work shall comply with tolerances of ACI 117.
- C. Provide 3/4-inch chamfer at all formed corners.

3.2 FOUNDATION ELEMENTS

- A. Form foundation elements if soil or other conditions are such that earth trench forms are unsuitable.
- B. Sides of pile caps, perimeter grade beams, foundation walls, and turned-down slabs shall be formed.
- C. Maintain minimum coverage of reinforcing steel as indicated in Structural Drawings.

3.4 FORM PREPARATION

- A. Seal form joints to prevent leakage.
- B. Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt or other debris just before concrete is placed.
- C. Before reinforcement is placed, coat contact surfaces of form with form release agent in accordance with manufacturer's recommendations. Do not allow excess form release agent to accumulate in forms or come in contact with concrete surfaces against which fresh concrete will be placed.

3.5 INSERTS AND EMBEDMENT ITEMS

- A. Install and secure in position required inserts, embeds, hangers, sleeves, anchors, and nailers.
- B. Locate anchor bolts/rods in position in accordance with approved setting drawings and secure to prevent displacement during concrete placement.

3.6 PROVISIONS FOR OTHER TRADES

- A. Install openings in concrete formwork to accommodate work of other trades. Determine size and location of openings and recesses from trades requiring such items. Obtain approval from Structural Engineer for openings not shown in Structural Drawings.
- B. Accurately place and securely support items built into forms.

3.9 FORMWORK REMOVAL

- A. Remove formwork carefully in such manner and at such time as to ensure complete safety of structure. Do not remove formwork, shoring, or reshoring until members have acquired sufficient strength to support their weight and the load thereon safely.
- B. For conventionally reinforced framed slabs, formwork shall remain in place for a minimum of 5 days after concrete placement.
- C. For Architectural Concrete elements, remove forms as early as permissible and in such a manner as to not damage exposed surfaces.

3.10 FINISHES OF FORMED SURFACES

A. Standard Form Finish: Patch tie holes and defects. Chip or rub off fins exceeding ¹/₄ inch in height. Leave surface with the texture imparted by the forms.

B. Architectural Concrete Finish: Patch tie holes and defects. Remove all fins completely. Produce finish on newly hardened concrete no later than the day following formwork removal. Wet the surface and rub it with carborundum or other abrasive until uniform color and texture are produced. Use no cement grout other than cement paste drawn from the concrete itself by the rubbing process.

SECTION 03 21 00 CONCRETE REINFORCING

PART 1 GENERAL

1.1 RELATED SECTIONS

- A. Division 1 Sections
- B. Section 031000 Concrete Forming and Accessories.
- C. Section 033000 Cast-in-Place Concrete.

1.2 REFERENCES

ACI 117 – Standard Specifications for Tolerances for Concrete Construction and Materials.

ACI 301 – Standard Specifications for Structural Concrete.

ACI 315 – Details and Detailing of Concrete Reinforcement.

ACI 318 – Building Code Requirements for Structural Concrete.

ASTM A1064 – Standard Specification for Carbon-Steel Wire and Welded Wire

Reinforcement, Plain and Deformed, for Concrete Reinforcement.

ASTM A615 – Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.

ASTM A706 – Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement.

ASTM C948 – Standard Specification for Dry and Wet Bulk Density, Water Absorption, and Apparent Porosity of Thin Sections of Glass-Reinforced Concrete CRSI – Manual of Standard Practice.

1.3 SUBMITTALS

A. Refer to Structural Quality Assurance Plan in the Structural Drawings for additional submittal requirements.

B. Shop Drawings:

- 1. Notify Structural Engineer prior to detailing reinforcing steel shop drawings.
- 2. Indicate size, spacing, location and quantities of reinforcing steel and wire fabric, bending and cutting schedules, splice lengths, stirrup spacing, supporting and spacing devices. Detail reinforcing steel in accordance with ACI 315 and CRSI Standards.
- 3. Written description of reinforcement without adequate sections, elevations, and details is not acceptable.
- 4. Reproduction of Structural Drawings for shop drawings is not permitted. Electronic drawing files will not be provided to the Contractor.

1.4 QUALITY ASSURANCE

A. Refer to the Structural Quality Assurance Plan in the Structural Drawings.

1.5 STORAGE AND PROTECTING

A. Store reinforcing steel above ground so that it remains clean. Maintain steel surfaces free from materials and coatings that might impair bond.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Deformed Reinforcing Steel: ASTM A615, refer to Structural Drawings for grade (Grade 60 minimum).
- B. Welded Steel Wire Reinforcement: ASTM A1064.
- C. Fiber Reinforcement: ASTM C948, collated, fibrillated, 3/4" long polypropylene fibers to be used for concrete sidewalks.

2.2 ACCESSORY MATERIALS

- A. Annealed Steel Tie Wire: $16\frac{1}{2}$ gage minimum.
- B. Bar Supports: Plastic-tipped steel Class I bar supports conforming to CRSI Specifications. Concrete brick may be used to support reinforcement to obtain proper clearance from earth.

PART 3 EXECUTION

3.1 FABRICATION

- A. Fabricate reinforcing steel in accordance with ACI 318 and CRSI standards.
- B. Bend bars cold. Do not heat or flame cut bars. No field bending of bars partially embedded in concrete is permitted, unless specifically approved Structural Engineer and checked by Testing and Inspection Agency for cracks.
- C. Weld only as indicated. Perform welding in accordance with AWS D1.4 and AWS D12.1.
- D. Tag reinforcing steel for easy identification.

3.2 INSTALLATION

- A. Before placing concrete, clean reinforcement of foreign particles and coatings.
- B. Place, support, and secure reinforcement against displacement in accordance with ACI 318 and CRSI standards. Do not deviate from alignment or measurement.
- C. Place concrete beam reinforcement support parallel to main reinforcement.

- D. Locate welded wire reinforcement in the top third of slabs. Overlap mesh one lap plus two inches at side and end joints.
- E. Furnish and install dowels or mechanical splices at intersections of walls, columns and piers to permit continuous reinforcement or development lengths at such intersections.
- F. Maintain cover and tolerances in accordance with ACI and CRSI Specifications, unless indicated otherwise on Structural Drawings.

3.4 DOWELS IN EXISTING CONCRETE

- A. Install dowels and dowel adhesive in accordance with manufacturer's recommendations.
- B. Minimum embedment length into the existing concrete shall be 12 bar diameters, unless noted otherwise.

SECTION 03 30 53 CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 RELATED SECTIONS

Division 1 Sections

- 1. Section 031000 Concrete Forming and Accessories.
- 2. Section 032000 Concrete Reinforcing.

1.2 REFERENCES

- ACI 117 Standard Specifications for Tolerances for Concrete Construction and Materials.
- ACI 214 Recommended Practice for Evaluation of Strength Test Results of Concrete.
- ACI 301 Specifications for Structural Concrete.
- ACI 302.1 Guide for Concrete Floor and Slab Construction.
- ACI 304 Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete.
- ACI 305 Hot Weather Concreting.
- ACI 306 Cold Weather Concreting.
- ACI 308 Guide to Concrete Curing.
- ACI 309 Recommended Practice for Consolidation of Concrete.
- ACI 318 Building Code Requirements for Reinforced Concrete.

ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.

- ASTM C33 Standard Specification for Concrete Aggregates.
- ASTM C39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- ASTM C94 Standard Specification for Ready-Mixed Concrete.

1.3 SUBMITTALS

- A. Refer to Structural Quality Assurance Plan in the Structural Drawings for additional submittal requirements.
- B. Submit three copies of the concrete mix designs. Include the following:
 - 1. Documentation of mix design proportions complying with ACI 318, Chapter 5.
 - 2. Type and quantities of materials including admixtures
 - 3. Slump
 - 4. Air content
 - 5. Water/cement ratio
 - 6. Fresh unit weight
 - 7. Aggregates sieve analysis
 - 8. Design compressive strength
 - 9. Location of placement in structure
 - 10. Method of placement

- 11. Method of curing
- 12. Seven-day and 28-day compressive strengths
- C. Mix design submittals not conforming to the above will be rejected.

1.4 QUALITY ASSURANCE

- A. The ready-mixed concrete plant shall be certified for conformance with the requirements of the National Ready Mix Concrete Association.
- B. Refer to the Structural Quality Assurance Plan in the Structural Drawings.

PART 2 PRODUCTS

2.1 CONCRETE MIX DESIGN

- A. Establish concrete mix design proportions in accordance with ACI 318, Chapter 5.
- B. Concrete Strength: See Structural Notes in Structural Drawings.
- C. Slump
 - 1. Design concrete with a slump between four and ten inches.
 - 2. If a slump greater than five inches is desired, use a mid-range or high-range water reducer.
- D. Water/Cementitious Materials Ratio (w/cm): See Structural Notes in Structural Drawings.
- E. Entrained Air Content: See Structural Notes in Structural Drawings.
- F. Fresh Unit Weight: Normal weight concrete: Fresh unit weight of 137 to 148 pcf.

2.2 MATERIALS

A. Materials designated by specific manufacturer's trade names are approved, subject to compliance with the quality and performance indicated by the manufacturer. Instructions and recommendations, published by the manufacturer of such materials are included in and are a part of these Specifications.

2.3 CEMENT

A. Cement: Type I Portland cement complying with ASTM C150, unless noted otherwise. Use one brand only.

2.4 AGGREGATE

A. Fine Aggregate: Fine aggregate complying with ASTM C33.

B. Coarse Aggregate: Gravel or crushed stone complying with ASTM C33 for normal weight concrete. Size coarse aggregate in accordance with ACI 318.

2.5 WATER

A. Water: Potable water free of deleterious substances complying with ACI 318.

2.6 AIR ENTRAINING AGENT

A. Air Entraining Agent: Air entraining agent complying with ASTM C260.

2.7 WATER REDUCER

A. Water Reducer: Water reducing agent complying with ASTM C494.

2.8 MID-RANGE/HIGH-RANGE WATER REDUCER

A. Mid-range/High-range Water Reducer: Mid-range and high-range water reducers (plasticizers) complying with ASTM C494.

2.9 CHLORIDE

A. Chlorides: Chlorides of any form shall not be used in concrete.

2.10 CURING COMPOUND

A. Curing Compound: A water-based, "odorless," acrylic curing compound with a minimum solid content of 20 percent may be used at the Contractor's option complying with ASTM C309. Coordinate curing compound with flooring supplier to ensure compatibility.

2.11 FLY ASH

A. Fly Ash: Class F fly ash with a loss on ignition of less than five percent or Class C fly ash with a loss on ignition of less than one percent complying with ASTM C618.

2.12 ACCELERATORS

A. Accelerators: Non-chloride accelerators complying with ASTM C494.

2.13 RETARDERS

A. Retarders: Retarders complying with ASTM C494.

PART 3 EXECUTION

3.1 GENERAL

- A. Prepare place of deposit, mix, convey, and place in accordance with ACI 301 and ACI 304. If concrete is pumped, use a 5-inch minimum hose diameter, except for placement of metal pan stair treads where a 2-inch minimum hose is permitted.
- B. Wet forms before placing concrete.
- C. Deposit concrete as near as practical to final position.
- D. Do no flowing of concrete with vibrators.
- E. Place slabs in accordance with ACI 302.
- F. Place and finish concrete members to comply with tolerances in ACI 117.
- G. Do not use aluminum equipment in placing and finishing concrete.

3.2 SLABS-ON-GRADE

- A. Place concrete for slabs-on-grade on properly prepared granular subbase with vapor barrier.
- B. Place thickened slabs for partitions integral with floor slabs.

3.3 MID-RANGE / HIGH-RANGE WATER REDUCERS

A. Mid-range or high-range water reducers are to be added at dosage recommended by the manufacturer. The slump of the concrete shall be one to four inches at the time the water reducers are added. Do not permit fresh concrete containing superplasticizers to come in contact with fresh concrete not containing superplasticizers.

3.4 ADDITION OF WATER AT JOB SITE

A. Water may be added at the jobsite if neither the maximum permissible water/cement ratio nor the maximum slump is exceeded. All concrete delivery trucks will have actual batch weight tickets available that clearly indicate the quantity of water that may be added at the jobsite that will not exceed the maximum water/cement ratio.

3.5 TIME LIMIT

A. Deposit concrete within one and one-half hours after batching.

3.6 VIBRATION

A. Consolidate concrete in accordance with ACI 301 and ACI 309.

3.7 CURING

A. Begin curing procedures immediately following the commencement of the finishing operation.

- B. Cure concrete in accordance with ACI 308. Keep the concrete surface moist, a minimum of three days.
- C. If an acrylic curing compound is used, apply in accordance with manufacturer's recommendations to surfaces of concrete not protected for five days by formwork. Do not use curing compound in areas to receive material that does not adhere to concrete cured with a curing compound unless the curing compound is water-soluble.

3.8 WEATHER PROVISIONS

- A. Perform cold weather concreting in accordance with ACI 306.
- B. Perform hot weather concreting in accordance with ACI 305.
- C. Protect concrete from drying and excessive temperature for the first seven days.
- D. Protect fresh concrete from wind.

3.9 CONTRACTION JOINTS

- A. Obtain Engineer's approval for location of contraction joints. Do not use contraction joints in framed floors or composite slabs, unless noted in Structural Drawings.
- B. Provide contraction joints in slabs-on-grade to form a regular grid with a maximum spacing as noted in the Structural Drawings. The long dimension of the grid shall not exceed 1.5 times the short dimension of the grid. Contraction joints to be saw cut within 24 hours after placement of concrete. Saw cuts shall be a depth equal to one-fourth the slab thickness by one-eighth inch wide.

3.10 CUTTING CONCRETE

A. Obtain Engineer's written approval prior to cutting concrete for installation of other work.

3.11 PATCHWORK AND REPAIRS

A. Notify Engineer of any defective areas in concrete to be patched or repaired. Repair and patch defective areas with non-shrink grout. Cut out defective areas over 2 inches in diameter to solid concrete but not less than a depth of one inch. Make edges of cuts perpendicular to the concrete surface.

3.12 CONCRETE FINISHES

A. Finish Concrete in accordance with ACI 301.

SECTION 03 31 37 CONCRETE SIDEWALKS

PART 1 GENERAL

1.01 SCOPE

A. This item shall consist of concrete sidewalks, all poured on a prepared sub-grade in accordance with the sections as to the dimensions and grades shown on the plans. Concrete shall be as specified under the heading "Concrete and Reinforcing."

1.02 PREPARING SUBGRADE

A. The subgrade upon which these items are constructed shall be compacted to a firm and uniform density and grade. Should the alignment of these items fall along an existing side ditch, all unsuitable materials shall be excavated and wasted and the backfill shall be made of selected borrow materials, all as previously set out. Subgrade compaction shall reach at least 95% standard proctor density at optimum moisture content.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 EXPANSION JOINTS

A. Pre-molded expansion joints, ¹/₂ inch thick, shall be placed at intervals as indicated in the plans, but shall not to exceed 40 feet. The expansion joint material shall fill the full cross-section and any protruding material shall be trimmed flush with the surface after the concrete has set. Expansion joints shall be required at 40 feet intervals in walks, or as indicated in the plans, and grooved contraction joints shall be set 10 feet apart between expansion joints, or as indicated on the plans.

3.02 PLACING AND FINISHING

A. Concrete shall be placed in forms sufficiently strong to prevent any lateral deflection. The concrete shall be placed in the forms to the final depth required and shall be tamped and spaded until it is consolidated and mortar entirely covers and forms the top surface. The exposed surfaces of the concrete shall be floated smooth and the edges rounded to the radii shown on the plans. Before the concrete is given the final finishing, the surface shall be tested with a straight-edge, and the irregularities of more than 1/4 inch in length of the placement shall be eliminated. The surface finish shall be as specified by the Engineer conforming to the "Concrete and Reinforcing" specification.

3.03 SIDEWALKS (INCLUDING HANDICAP RAMP AREAS)

A. Concrete shall be placed to the thicknesses shown on the plans. Old to new concrete joints shall be formed after thoroughly cleaning exposed surfaces. Concrete sidewalks shall

be reinforced with #4 rebar at 12" eachway, unless otherwise shown on the plans.

3.04 BACKFILL (WHERE APPLICABLE)

A. After the concrete has set sufficiently, the spaces adjacent to the structure shall be refilled to the required elevation with suitable material and compacted thoroughly. Back slopes shall be graded to present well drained, pleasing slopes.

SECTION 03 35 33 STAMPED CONCRETE FINISHING

PART 1 GENERAL

1.1 RELATED REQUIREMENTS

A. Section 03 3000 – Cast-in-Place Concrete

1.2 REFERENCE STANDARDS

A. ASTM C33/C33M – Standard Specification for Concrete Aggregates; 2013.

B. ASTM C979/C979M – Standard Specification for Pigments for Integrally Colored Concrete; 2010.

C. ASTM C1315 – Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete; 2011.

1.3 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:

- 1. Preparation instructions and recommendations.
- 2. Storage and handling requirements and recommendations.
- 3. Installation methods.
- B. Design Samples: Submit samples for approval; demonstrate pattern, color, and finishing, using specified materials and techniques, applied to plywood.
 - 1. Number of Samples: One of each color and pattern combination specified.
 - 2. Size: 48 by 48 inches.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing the work of this section with minimum 3 years experience.

1.5 MOCK-UPS

- A. Construct mock-up(s) of stamped concrete to serve as basis for evaluation of workmanship.
 - 1. Number of Mock-Ups to be Prepared: One.
 - 2. Use same materials and methods for use in the work.
 - 3. Use approved design samples as basis for mock-ups.
 - 4. Record technique, timed procedures and material used.
 - 5. Locate where directed.
- 6. Minimum Size 48 by 48 inches.
- B. Obtain approval of mock-up by Engineer before proceeding with work.
- C. Retain mock-up(s) until completion of work for use as quality standard.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

- B. Store and handle materials in accordance with manufacturer's instructions.
- C. Keep materials in manufacturer's original, unopened containers and packaging until application.
- D. Store materials in clean, dry area indoors and out of direct sunlight.
- E. Keep materials from freezing.
- F. Protect materials during storage, handling, and application to prevent contamination or damage.

1.7 FIELD CONDITIONS

- A. Do not install materials when air and surface temperatures are below 55 degrees F (13 degrees C) or above 80 degrees F (27 degrees C).
- B. Do not install materials when rain, snow, or excessive moisture is expected during application or within 24 hours after application.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Stamping and Coloring Materials.
 - 1. BRICKFORM: <u>www.brickform.com</u>
 - 2. Concrete Solutions by Rhino Linings: <u>www.concretesolutions.com</u>
 - 3. The Bomanite Company: <u>www.bomanite.com</u>

2.2 STAMPED CONCRETE APPLICATIONS

- A. Full Depth Stamped Concrete Slab: Patterned new concrete.
 - 1. Application(s): All indicated exterior locations.
 - 2. Pattern: To match existing.
 - 3. Color: To match existing.

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- 4. Color is to be achieved as follows: Concrete pigment, mixed into concrete prior to placement.
- 5. As last step, apply combination curing compound/clear sealer.

2.3 FULL-DEPTH CONCRETE SLAB MATERIALS

- A. See other section(s) for concrete design mix, mixing, forming, and reinforcement.
- B. Slump: 4.0 inches (101.6 mm) maximum.
- C. Do not use calcium chloride or admixtures containing calcium chloride.
- D. Aggregates: Use non-reactive fine and coarse aggregates free from deleterious material and complying with ASTM C33.

2.4 STAMPING MATERIALS

- A. Stamping Mats: Mat type imprinting tools for texturing freshly placed concrete, in pattern and texture to achieve required surface profile and design. Pattern to match existing.
- B. Release Agent: Bond breaker compound capable of releasing stamping forms from concrete without creating surface defects or leaving any residue; type as recommended by stamping mat manufacturer, compatible with concrete, form materials and specified coloring agents.

2.5 INTEGRAL COLORING AGENTS

- A. Concrete Pigment: Pure, concentrated mineral pigments specifically intended for mixing into concrete and complying with ASTM C979/C979M.
 - 1. Concentration: Base dosage rates on weight of Portland cement, fly ash, silica fume, and other cementitious materials but not aggregate or sand.
 - 2. Packaging: If pigments are to be added to mix at site, furnish pigments in premeasured disintegrating bags to minimize job site waste.

2.6 ACCESSORY MATERIALS

- A. Curing and Sealing Compound: Clear, non-yellowing, non-staining, breathable, UV stable curing agent and sealer, complying with ASTM C1315 and compatible with all components of stamped concrete systems.
- B. Concrete Cleaner: Biodegradable cleaning and neutralizing agent for removal of curing compounds.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces and areas to receive stamped concrete.
- B. Verify that utility penetrations and peripheral work are complete.
- C. Notify Engineer of conditions that would adversely affect application or subsequent use.
- D. Do not begin preparation or application until unacceptable conditions are corrected.

3.2 PREPARATION

A. Protect adjacent surfaces, areas, adjoining walls, and landscaping from overspray, blown dry materials, and damage due to work of this section.

3.3 FULL-DEPTH CONCRETE SLABS INSTALLATION

- A. See other section(s) for concrete forming and placement.
- B. Where concrete pigment is indicated, add to concrete mix in accordance with pigment manufacturer's instructions.

3.4 STAMPING

- A. Match approved mock-ups for pattern, color, texture, and workmanship.
- B. Use stamping mats to create patterns in concrete as indicated on the drawings; comply with manufacturer's recommendations and instructions.
- C. Use release agent to prevent damage to concrete surface or creation of bugholes during mat removal.
- D. After removal of stamping mats, make minor surface repairs as required.

3.5 CURING

A. Protect recently placed materials from premature drying, excessive hot or cold temperatures and mechanical injury until fully cured.

3.6 SURFACE TREATMENTS

- A. Match approved mock-ups for pattern, color, texture, and workmanship.
- B. Wait at least 28 days before applying any surface treatment materials or mechanical finishing.
- C. Clean curing agent residue off surface prior to application of surface treatment materials.

Apply concrete cleaner in accordance with manufacturer's instructions to remove excess form release agent, efflorescence, cement scale and curing agents.

D. Sealer/Coating Application: Apply uniformly over entire surface in accordance with manufacturer's instructions.

3.7 PROTECTION

- A. Do not allow traffic on finished surfaces for the following periods after application.
 - 1. Foot Traffic: Minimum 24 hours.
 - 2. Heavy traffic: Minimum 72 hours.
- B. Protect finished work from damage during construction and ensure that, except for normal weather, work will be without damage or deterioration at time of Substantial Completion.

SECTION 31 42 00 TEMPORARY SILT FENCE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. This work under this item consists of furnishing, constructing and maintaining a water permeable filter type fence for the purpose of removing suspended soil particles from the water passing through it in accordance with the drawings and these specifications. The work shall include the removal of temporary fencing.

PART 2 PRODUCTS

2.01 MATERIALS

A. Geotextile Fabric may be woven or non-woven consisting only of long chain polymeric yarns or filaments formed into a stable network such that the fibers retain their relative position. The fabric shall be mildew resistant and inert to biological degradation and naturally encountered chemicals, alkalies and acids. The fabric shall contain stabilizers and/or inhibitors to make it resistant to deterioration from direct sunlight, ultraviolet rays and heat. The fabric edges shall be finished in such a manner to prevent raveling. The fabric shall be furnished in widths of not less than 36 inches. The fabric shall conform to the physical requirements of the Mississippi Standard Specifications for Road and Bridge Construction, 714.13.11-Table 1 Type II (90 lb Tensile Strength).

PART 3 EXECUTION

3.01 CONSTRUCTION

A. The silt fence shall be constructed at the locations shown on the drawings or as directed. Posts shall be driven such that not more than 3 feet will protrude above ground. Posts shall be installed at not more than 6 feet apart. Fabric shall be attached to the posts with clips or other approved means. The bottom edge of the fabric shall be turned under 6 inches and buried 6 inches below the ground surface. The 6 inch by 6 inch trench shall be back-filled and tamped after fabric burial.

3.02 MAINTENANCE AND REMOVAL

A. The Contractor shall maintain the silt fence removing and replacing fabric which has deteriorated to the extent that it has become ineffective. Excessive accumulations of soil against the fence shall be removed. Maintenance will not be a separate pay item.

B. Unless otherwise directed, all temporary silt fence shall be removed. Upon removal, the silt accumulations shall be removed, the area shall be dressed, and erosion control measures applied to all bare areas. The fence materials will remain the property of the Contractor.

SECTION 32 00 00 SITE IMPROVEMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Work under this section shall consist of furnishing materials, labor and equipment to install and complete all items of work appurtenant thereto. In addition to these general specifications, the following item specifications apply.

- 1. Concrete Curb and Gutter
- 2. Granular Materials (Crushed Limestone)
- 3. Traffic Stripe
- 4. Bituminous Asphalt

B. It is the intent of the specifications that in all particulars, the workmanship, methods and materials of construction shall conform to the best practice and that all items furnished and installed shall be complete.

C. The contractor shall be responsible for furnishing, installing, and testing (unless otherwise noted) all material required for the construction of this project.

1.02 CORRELATION OF DOCUMENTS

A. It is the intent of the Engineer, through the plans and these specifications, to show and/or describe a complete work. Items which are not shown or specified in detail but are required shall be furnished, installed and connected, using first quality workmanship, for which no separate compensation will be allowed. Similarly items set out in one section of the specifications but required in other sections shall be installed as though set out in each section.

1.03 GENERAL GUARANTY

A. In addition to the provisions of Article 13 of the General Conditions, the following provisions shall apply: The Contractor shall, before offering the work for final acceptance, demonstrate that the facilities are operational and in proper working order.

B. Neither the final payment nor any provision in the Contract nor partial or entire use of the facilities by the Owner shall constitute an acceptance or work not done in accordance with the contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of one year from the date of substantial completion of the work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 PROTECTION OF PROPERTY

A. Existing power lines, telephone lines, trees, shrubbery, fences, water mains, gas mains, sewers, cables, conduits, ditches, embankments, buildings, outdoor signs, and other structures in the vicinity of the work not authorized to be removed shall be supported and protected from injury by the Contractor during the construction and until completion of the work affecting them. The Contractor shall be liable for all damages done to such existing facilities and structures and he shall save the Owner harmless from any liability or expense for injuries, damages or repairs to such facilities. Outdoor signs, shrubbery, sod and other landscaping items in way of construction shall be carefully removed and reset.

B. Existing underground installations such as water mains, gas mains, sewers, telephone lines, power lines, and buried structures in the vicinity of the work are indicated on the drawings only to the extent such information has been made available to or discovered by the Engineers in preparing the drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed. The Contractor shall be solely responsible for locating all existing underground installations, including service connections, in advance of excavating or trenching. He shall contact the utilities and present his proposed procedures for accomplishing the work and obtain approval from the utilities before proceeding. Any facility damaged through negligence on the part of the Contractor shall be restored at his expense (including but not limited to damage to water heaters).

C. Any delay, additional work, or extra cost to the Contractor caused by existing underground installations and above ground utilities and structures shall not constitute a claim for extra work, additional payment, or damages.

D. The Contractor shall use maximum care to avoid damage to any facility which is to remain in service in its existing location. Any work required to maintain in service shall be done at the Contractor's expense.

3.02 CONSTRUCTION STAKES, LINES, AND GRADES

A. Contractor to provide control points, bench marks, and general construction staking necessary to lay out the work, or to determine the quantities of work performed. All control points, bench-marks, and baselines set by the Contractor shall be carefully preserved. Resetting control points, bench marks, and baselines shall be at the Contractor's expense. It shall be the responsibility of the Contractor to prove and verify all measurements, whether set by him or by the Engineers, prior to construction.

3.03 CLEARING AND GRUBBING

A. Clearing and grubbing required to be performed to facilitate any item of work shall be performed. Cleared and grubbed materials shall be disposed of by removing from the site.

The Contractor shall assume all responsibility for the satisfactory disposal of all cleared and grubbed materials and no extra payment will be made for clearing and grubbing or the removal of materials.

3.04 CLEANING UP

A. The attention of the Contractor is directed to the section of the General Conditions regarding cleaning up.

3.05 TESTING

A. Proctor tests, density tests, concrete, and asphalt testing shall be performed by the Contract and included in the bid.

B. The location of density tests shall be at the direction of the Engineer. Generally in selected borrow material one sample will be taken mid depth and one on top of the material. One proctor test for selected borrow material and crusher run stone each shall be required for each source of supply.

C. In the event of failed density tests, the Contractor shall continue to compact and add water until optimum moisture content is reached and the samples meet or exceed the specified minimum density.

D. Unless otherwise noted in the specifications or construction plans, all other testing shall be borne by the Contractor and will not be a separate pay item.

F. The Contractor is responsible for submitting concrete and asphalt mix designs

SECTION 32 05 16 GRANULAR MATERIALS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. This item shall consist of the provision of crushed stone, selected borrow material, washed gravel, clay gravel, and other various borrow materials for incorporation into the work as specified elsewhere or directed.

B. The Contractor shall furnish certified test reports of the proposed materials and gradations prior to incorporation into the work.

PART 2 PRODUCTS

2.01 MATERIALS

A. Crushed Stone

1. Crushed Stone shall consist of fragments of sound, durable limestone, free from disintegrated stone, salt, alkali, vegetable matter, or adherent coatings and other deleterious substances; and shall be reasonably free from thin or elongated pieces. The percentage of wear shall not exceed 50%.

2. The gradation of the crushed stone shall be as follows:

1			6		
TYPE	FINE	MEDIUM	COARSE	CRUSHER RUN	
Square Opening	Percent Passing, (by weight)				
3 inch	1111-		100		
2 inch			60-70		
1 1/2 inch				100	
1 1/4 inch		100	5-40		
1 inch		90-100	0-10	90-100	
3/4 inch	100	20-60			
1/2 inch	95-100	0-10			
3/8 inch	<mark>45-90</mark>			<mark>45-85</mark>	
No. 4	0-15	0-3		<u>30-65</u>	
No. 16	0-3				
No. 40				15-30	
No. 200				4-15	

PART 3 EXECUTION

3.01 EQUIPMENT

A. Hauling equipment shall be pneumatic tired vehicles having dump bodies suitable for discharging material into the spreading machines.

B. Mechanical spreaders shall be approved, self-propelled and steerable units with accurate variable forward and reverse speeds and capable of spreading the mixture in widths and thicknesses applicable to the requirements of the work. The spreader shall be equipped with a receiving hopper having sufficient capacity for a uniform spreading operation. The hopper shall be equipped with a distribution system to place and maintain a uniform supply of mixture evenly.

C. The spreader unit shall be mounted on crawler tracks to avoid undesirable deformations. The screed or strike-off assembly shall effectively produce a finished surface to required evenness and texture without tearing or gouging the mixture.

D. Pneumatic Tired Rollers shall be self-propelled units designed to maintain dependable forward and reverse speeds ranging to 5 miles per hour with pneumatic tires mounted on 7 or more wheels, with 3 minimum leading and 4 minimum following wheels so spaced that the tires on 1 axle will overlap those on the other by approximately 1/2 inch. Tire shall be suspended individually or shall oscillate in pairs at one end. Tire shall be of equal size and diameter providing a continuous and complete rolling width of not less than 60 inches. The unit shall be so constructed as to provide uniform loading of 4,000 pounds to 8,000 pounds on each individual wheel.

E. Steel wheel rollers shall be 8-10 ton tandem rollers. Rollers shall be equipped with adjustable scrapers.

F. Vibratory rollers shall be drum type units not less than 3 feet in width, capable of securing the desired compaction.

G. Sprinkling equipment shall consist of tank trucks, pressure distributors or other approved equipment designed to apply a uniform amount of water and controlled quantities to variable widths.

H. Motor graders rated at not less than 10 tons shall be power driven and equipped as deemed necessary with power controls, wheel base width and blade length to meet the capacity and efficiency requirements of the work.

3.02 SUBGRADE PREPARATION

A. The top portion of the subgrade, both cut and fill sections, shall be shaped correctly and brought to a firm, unyielding layer. The top 6 inches shall be compacted to at least 95% Standard Proctor Method density at optimum moisture content.

B. Rolling and compaction of the entire area shall be done with equipment which will attain

maximum results. Sheepsfoot, rubber-tired, or flat rollers shall be used as, in the opinion of the Engineers, conditions require. Any portion of the area which is not accessible to a roller shall be compacted to the required density by other approved means.

C. Any irregularities or depressions that develop under rolling shall be corrected by loosening the material at those places and adding, removing, or replacing material until the surface is smooth and uniform. All soft and yielding material which will not compact readily when rolled or tamped shall be removed as directed by the Engineers and replaced with suitable material.

D. During all compaction operations, the water content of the material shall be constantly adjusted, if necessary, by sprinkling or loosening and subsequent evaporating to within 2% by weight of the optimum moisture content.

E. At all times the top of the subgrade shall be kept in such condition that it will drain readily and effectively. The Contractor shall protect the subgrade from damage, and in no case will vehicles be allowed to travel in a single track. If ruts are formed, the subgrade shall be reshaped and rolled.

F. The top of the subgrade shall be of such smoothness that when tested, it shall not show any deviation in excess of 1/2 inch nor shall it be more than 0.05 foot from the true established grade.

G. Where material is encountered that will not permit satisfactory compaction for subgrade, excavation, disposal and replacement for this material will be required and will be considered as incidental to subgrade preparation. No extra pay will be allowed for this item.

3.03 CONSTRUCTION

A. Crushed limestone base course shall be constructed in layers not to exceed 6 inches in compacted thickness. The first layer shall be constructed upon an approved underlying course. In constructing any required subsequent layer of the stone base the previously laid layer(s) shall have been constructed in accordance with these specifications and shall have been maintained free of all ruts or irregularities and loose material and at the proper moisture content.

B. Spreading, shaping and compacting of the crushed stone shall be performed during daylight hours only.

C. To facilitate the bond between layers of the crushed stone base, subsequent layer(s) shall be placed upon previously placed layers as soon as practicable.

D. The contractor shall avoid cutting into the underlying completed course or layer at any time, and by any method. He shall be responsible for maintaining the proper moisture content in the material including the vertical faces of half width spreads of construction.

E. Materials shall be discharged from trucks into the spreaders, and at all times approximately 1/3 of a batch shall be retained in the hopper of the spreader to avoid

segregation of the aggregates.

F. After each layer of the stone is placed and the rolling nears completion, the course and the adjoining one shall be rolled together with special effort being exercised at the point where the joint occurs.

G. The surface course shall be constructed in approximately equal layers each of which is not to exceed 4 inches in compacted thickness. The Contractor shall be responsible for spreading loose material so as to minimize segregation and degradation, and in such amounts as to yield the required compacted thickness and grades.

H. Compacting shall begin promptly after satisfactory spreading of the material and while moisture content is at optimum. Unless otherwise directed by the Engineer, compacting operations shall be in the following sequence:

I. The steel wheel rollers shall be used to intensify the initial set provided by the spreader unit. As the steel wheel roller(s) progress to a satisfactory distance, the vibrating roller(s) shall be introduced onto the base layer to key aggregates and fill voids. Rolling with the pneumatic tired roller(s) shall follow with the roller(s) being operated in straight paths in both forward and reverse motion. Essential turning shall be made at slow speeds to avoid displacement of the materials.

J. A motor grader may be used in conjunction with compacting operations to correct the distribution of materials however, special care will be necessary to prevent segregation or degradation of the material.

K. The density of the completed portions of each layer of the base course shall be 100% Standard Proctor density.

L. When completed the base course layers shall be smooth, hard, dense, unyielding, and well bonded. It shall be the Contractor's responsibility to:

Maintain optimum moisture content by reducing or accelerating loss of moisture.
 Make adjustments as necessary to meet thickness, line, grade, and density

requirements.

3. Minimize segregation or degradation of aggregates.

4. Remove from the site and for the full layer depth any materials found to be unsatisfactory and replace with satisfactory material.

5. Avoid cleavage lines in the base.

6. Insure a completed base course meeting all requirements of these specifications.

3.04 CONSTRUCTION LIMITATIONS

A. No stone shall be place upon an underlying course, or layer, when such course is or layer is frozen, rutted or otherwise deformed, nor when it is not to the required grade and cross section and does not have the proper moisture content and required density.

B. No stone shall be placed when the atmospheric temperature is below 35 degrees F. or

when the latest weather bulletin indicates the probability of freezing temperatures within 12 hours in the area in which the project is located.

C. No stone shall be placed when over 10 percent of the stone placed in the previous day's operation fails to meet specified requirements for surface finish or density until the Contractor has made such adjustments or changes in equipment, operating procedure, and methods as are necessary to assure the securing or required results.

3.05 TESTS

A. Sampling and testing shall be in accordance with the following standard methods of the AASHTO: Sampling, T-2; Sieve Analysis, T-27; Liquid Limit, T-89; Plasticity Index, T-90.

B. The loss by abrasion test shall be as specified under AASHTO Test T-96

3.06 SOURCE OF SUPPLY

A. Obtain approval of sources of supply of all materials prior to delivery of any material. Submit samples of each as directed.

B. Testing reports shall be provided to the Engineers and reviewed prior to material being hauled or delivered to the site.

SECTION 32 12 15 BITUMINOUS SURFACE COURSE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. This item shall consist of a surface course composed of mineral aggregate and bituminous material, mixed in a central mixing plant and placed on a prepared course in accordance with the plans and specifications.

B. The materials, composition, construction methods, inspection, testing, measurements, payment, and all other requirements for a satisfactory completed finished product shall meet the requirements of Section S-401, S-403 and all other sections referenced by these sections of the "Mississippi Standard Specifications for State Aid Road and Bridge Construction", 2004 Edition, as issued by the Division of State Aid Road Construction.

PART 2 PRODUCTS (NOT USED)

SECTION 32 16 00 CONCRETE CURB AND GUTTER

PART 1 GENERAL

1.01 SECTION INCLUDES

A. This item shall consist of Concrete Header Curbs and Concrete curb and gutter poured on a prepared sub-grade in one course and in accordance with the sections as to the dimensions and grades shown on the plans. Concrete shall be as specified under the heading "Concrete and Reinforcing."

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 PREPARING SUBGRADE

A. The subgrade upon which these items are constructed shall be compacted to a firm and uniform density and grade. Should the alignment of these items fall along an existing side ditch, all unsuitable materials shall be excavated and wasted, and the backfill shall be made of selected borrow materials, all as previously set out. Subgrade compaction shall reach at least 95% Standard Proctor Method density at optimum moisture content.

3.02 PLACING AND FINISHING

A. Concrete shall be placed in forms sufficiently strong to prevent any lateral deflection. Templates shall be set at a maximum spacing of 10 feet except in driveway turnouts. The concrete shall be placed in the forms to the final depth required and shall be tamped and spaded until it is consolidated and mortar entirely covers and forms the top surface. The exposed surfaces of the concrete shall be floated smooth and the edges rounded to the radii shown on the plans. Before the concrete is given the final finishing, the surface shall be tested with a straight-edge, and the irregularities of more than 1/4 inch in length of the placement shall be eliminated.

3.03 EXPANSION JOINTS

A. Pre-molded expansion joints, ¹/₂ inch thick, shall be placed at intervals not to exceed 30 feet, unless otherwise directed by the Engineer. The expansion joint material shall fill the full cross-section and any protruding material shall be trimmed flush with the surface after the concrete has set. Immediately after removal of the forms, the outer edges of filled joints shall be carefully exposed.

3.04 BACKFILL

A. After the concrete has set sufficiently, the spaces adjacent to and behind the structure shall be backfilled to the required elevation as directed by the Engineer. Back slopes shall be graded to present well-drained, pleasing slopes.

SECTION 32 17 23 TRAFFIC STRIPE

PART 1 GENERAL

1.1 DESCRIPTION

A. The WORK under this Section includes providing all labor, materials, tools and equipment necessary for furnishing and placing painted traffic markings as shown on the Drawings.

B. Details not shown on the Drawings shall be in conformity with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD) and the "Mississipip Standard Specifications for State Aid Road and Bridge Construction".

C. This WORK shall also include re-striping all paint markings to their original conditions, if damaged by the CONTRACTOR's operations.

PART 2 PRODUCTS

A. White and yellow traffic marking paint shall be methyl methacrylate and conform to AASHTO M 248, Type F.

B. Blue marking paint shall match CBJ Street Department disability blue marking paint and be compliant with the most current ADA requirements

PART 3 EXECUTION

3.1 GENERAL

A. Lines shall be applied as solid as shown on the Drawings.

B. Gaps not marked as a result of template use for spray-applied auxiliary markings shall be filled with marking material after template removal.

C. Pavement markings shall be free of uneven edges, overspray, or other readily visible defects which detract from the appearance or function of the pavement markings.

D. Lines shall be sharp, well defined, and uniformly retroreflective. The width of the applied shall be the width specified plus or minus ¹/₄-inch. Fuzzy lines, excessive overspray, or non-uniform applications are unacceptable. Pavement markings which are improperly applied, located, or reflectorized shall be corrected. Lines applied with insufficient material quantities shall be properly reapplied. Improperly located lines shall be removed. New lines shall then be applied in the correct locations at the CONTRACTOR's expense, including the furnishing of approved materials.

E. Methods and equipment used for pavement preparation, marking removal shall be subject

to the approval of the ENGINEER.

F. Other construction WORK, such as shoulder paving, topsoil placement and grading, and seeding, shall be scheduled and performed in a manner to avoid damage to applied pavement markings.

3.2 PAVEMENT PREPRARATION

A. The CONTRACTOR shall clean all visible loose or foreign material from the surface to be marked. The pavement marking equipment shall be equipped with an air jet to remove all debris from the pavement in advance of the applicator gun. The air jet shall operate when marking material is being applied and be synchronized with marking material application.

B. Pavement markings shall be applied only when the surface is clean and dry. The CONTRACTOR shall power broom clean all surfaces where edge lines are to be applied. When required by the ENGINEER, other surfaces shall also be power broom cleaned.

C. Marking shall not be applied to Portland cement concrete until the concrete in the areas to be marked is clean of membrane curing material and is dry.

3.3 LAYOUT AND PREMARKING

A. The CONTRACTOR shall lay out the locations of all lines, words and other symbols to assure their proper placement. The layout and premarking lines shall be approved by the ENGINEER before marking operations are started. When applying longitudinal or transverse lines, the CONTRACTOR shall use existing lines, construction joints or premarking to guide this marking equipment.

3.4 LINE PLACEMENT TOLERANCE

A. Pavement marking lines shall be straight or smoothly curved, true to the alignment of the pavement, and shall not deviate laterally from the proper location at a rate of more than two inches in 100 feet. No deviation greater than three inches will be permitted.

3.5 LINE TYPES

A. Marking materials shall be applied at a minimum rate of 16.5 gallons per mile per four inch wide stripe, with a 20 mill minimum thickness.

B. Parking lot stall marking lines shall be continuous white stripes, four inches in width.

3.6 EQUIPMENT AND APPLICATION OF PAINTED TRAFFIC MARKINGS

A. The markings shall be applied by machine methods acceptable to the ENGINEER. The paint machine shall be of the spray type capable of satisfactorily applying the paint under pressure with uniformity of feed through nozzles spraying directly upon the pavement. Each machine shall be capable of applying two separate stripes, either solid or skip, at the

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same time. Each paint tank shall be equipped with a mechanical agitator. Each nozzle shall be equipped with satisfactory cutoff valves which will apply broken or skip lines automatically. Each nozzle shall have a mechanical bead dispenser that will operate simultaneously with the spray nozzle and distribute the beads in a uniform pattern at the rate specified. Each nozzle shall also be equipped with suitable line guides consisting of metallic shrouds or air blasts.

B. The paint shall be thoroughly mixed prior to application, and shall be applied when the air temperature is above 40°F and rising, to a clean and dry surface.

C. The painted area shall be protected from traffic until the paint is thoroughly dry.

3.7 REMOVAL OF PAVEMENT MARKINGS

A. When indicated on the Drawings, pavement markings shall be removed. The markings shall be removed by high-pressure water blast, sand blast, high temperature burning with excess oxygen, or other methods, with the approval of the ENGINEER. Care shall be exercised during marking removal not to scar, discolor or otherwise damage the pavement surface. Overpainting or other methods of covering markings in lieu of removal shall not be permitted.

SECTION 32 31 13 CHAIN LINK FENCES AND GATES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Fence framework, fabric, and accessories.
 - 2. Excavation for posts.
 - 3. Concrete post foundations.
 - 4. Gates and hardware.
 - 5. Privacy screen.

1.2 REFERENCES

- A. ASTM International (ASTM):
 - 1. A392 Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric.
 - 2. A780 Standard Practice for Repair of Damaged and Uncoated Areas of Hot- Dip Galvanized Coatings.
 - 3. C94 Standard Specification for Ready-Mixed Concrete.
 - 4. F567 Standard Practice for Installation of Chain Link Fence.
 - 5. F626 Standard Specification for Fence Fittings.
 - 6. F900 Standard Specification for Industrial and Commercial Swing Gates.
 - 7. F1043 Standard Specification for Strength and Protective Coatings of Metal Industrial Chain Link Fence Framework.
 - 8. F1083 Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.
- B. Chain Link Fence Manufacturers Institute (CLFMI) Product Manual.

1.3 SYSTEM DESCRIPTION

- A. Fence: 10 feet high; Layout as indicated on Drawings.
- B. Gates: See Drawings for gate locations and sizes.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Materials and Components: Conform to CLFMI Product Manual.
- B. Chain Link Fabric:

- 1. Zinc-coated steel fabric: ASTM A392, hot dipped galvanized before or after weaving, Class 2 2.0 ounces per square foot.
- 2. Fabric selvage:
 - a. Mesh size 2 inches or more:
 - 1) 72 inches high and over: Knuckle finish one end, twist finish opposite end.
- 3. Wire gage: minimum 11.
- 4. Mesh size: Conform to CLFMI Product Manual for allowable size per gage.
- C. Framework (Typical):
 - 1. Round steel pipe and rail, ASTM F1043, Group IA Heavy Industrial Fence Framework, Schedule 40 galvanized pipe per ASTM F1083.
 - 2. Grade: Regular.
 - 3. Finish: Exterior zinc coating Type A, interior zinc coating Type A.
 - 4. Sizes:
 - a. Line posts: minimum 2-3/8 inch OD.
 - b. End, corner, pull posts: 2-7/8 inch 4 inch OD.
 - c. Top, brace, bottom, and intermediate rails, 1-5/8 inches OD.
- D. Framework (Removable if indicated on drawings): Same as Typical except as noted below.
 - 1. Temporary Fence Panels: Stand-alone panels constructed of Typical framework.
 - 2. Temporary Fence Panel Stands: 2-3/8 inch OD (minimum) welded in rectangle base (approx. 16 inch x 36 inch) with welded uprights sized to receive Typcial line, end, or corner posts.
- E. Tension Wire: Metallic coated steel marcelled tension wire: 7 gage, ASTM A824, Type II
 Zinc-Coated Class 5 2.0 ounces per square foot.
- F. Fittings:
 - 1. Tension and brace bands: Pressed galvanized steel, ASTM F626, minimum 12 gage, minimum 3/4 inch width, minimum zinc coating of 1.20 ounces per square foot, with 5/16 3/8 inch galvanized steel carriage bolts.
 - 2. Terminal post caps, line post loop tops, rail and brace ends, boulevard clamps, and rail sleeves: ASTM F626, pressed steel galvanized after fabrication, a minimum zinc coating of 1.20 ounces per square foot.
 - 3. Truss rod assembly: ASTM F626, 3/8 inch diameter steel truss rod with pressed steel tightener, minimum zinc coating of 1.2 ounces per square foot, capable of withstanding 2000 pound tension.
 - 4. Tension bars: ASTM F626, galvanized steel, single piece length 2 inches less than fabric height, minimum zinc coating thickness of 1.2 ounces per square foot.

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- a. Bars for 2 and 1-3/4 inch mesh: Minimum cross section of $3/16 \ge 3/4$ inch.
- b. Bars for 1 inch mesh: Minimum cross section of $1/4 \ge 3/8$ inch.
- c. Bars for 3/8, 1/2, and 5/8 inch mesh: Attached to terminal post using galvanized steel strap having minimum cross section of 2 x 3/16 inch with holes spaced 15 inches on center to accommodate 5/16 inch carriage bolts.
- G. Tie Wire and Hog Rings: ASTM F626, minimum zinc coating of 1.20 ounces per square foot, 9 gage galvanized steel wire.
- H. Swing Gates:
 - 1. ASTM F900, galvanized steel, welded fabrication, 1.900 inch OD frame members, ASTM F1043, Group IA, ASTM F1083 Schedule 40 pipe, spaced maximum 8 feet apart vertically and horizontally.
 - 2. Welded joints protected with zinc-rich paint in accordance with ASTM A780.
 - 3. Positive locking gate latch fabricated from 5/16 inch thick x 1-3/4 inch pressed steel galvanized after fabrication.
 - 4. Galvanized malleable iron or heavy gage pressed steel post and frame hinges.
 - 5. Fabric to match fencing.
 - 6. Gate posts: ASTM F1043, Group IA, ASTM F1083 Schedule 40 pipe, 4 inch OD.
- I. Concrete: ASTM C94; 2500 psi 28 day strength, 2 to 3 inch slump.
- J. Privacy Screen:
 - 1. Material Composition: Knitted (HDPE) high density polyethylene.
 - 2. Coverage: Continuous full-height panels along fence fabric at straight runs and gates. Place screen material on both sides of fence.
 - 3. Shade Percentage: 88%.
 - 4. Color: Green.
 - 5. Edges: 2 inch polypropylene webbing reinforcement with 3/8 inch grommets at 24 inch on center.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Framework (Typical):
 - 1. Drill post holes into undisturbed or compacted soil.
 - 2. Set posts in concrete footings in accordance with ASTM F567.
 - 3. Minimum footing depth: 24 inches plus an additional 3 inches for each 1 foot increase in fence height over 4 feet.
 - 4. Minimum footing diameter: Four times largest cross section of post up to 4.000 inches and three times largest cross section of posts greater than 4.000 inches.
 - 5. Gate post footings: Comply with minimum requirements listed in ASTM F567.
 - 6. Place concrete around posts in continuous pour, tamp and dome top away from post. Check for vertical and top alignment; brace posts until concrete has set.

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- 7. Locate top of footing at grade.
- 8. Install line posts at maximum 8 feet on center.
- 9. Top rail: Install 21 foot lengths continuous through line post. Splice rail using minimum 6 inch long sleeves. Secure rail to terminal posts with brace band and rail end.
- 10. Field cut bottom rail and secure to line posts with boulevard bands or rail ends and brace bands.
- 11. Brace and truss end, corner, pull and gate posts for fence 6 feet and higher and fences 5 feet and higher without top rail in accordance with ASTM F567.
- 12. Install bottom rail; attach to posts with clamp type fittings.
- 13. Tension wire:
 - a. Install tension wire 4 inches up from bottom of fabric.
 - b. Stretch wire taut, independently and prior to fabric, between terminal posts and secure to terminal post using brace band.
 - c. Secure wire to chain link fabric with 9 gage hog rings spaced maximum 18 inches on center and to each line post with tie wire.
- B. Framework (Removable if indicated on drawings):
 - 1. Provide temporary fence panels in sizes conforming to typical fence height and typical line post spacing.
 - 2. Provide panel stands at maximum 8 feet on center.
 - 3. Brace and truss end, corner, pull and gate posts for fence 6 feet and higher and fences 5 feet and higher without top rail in accordance with ASTM F567.
 - 4. Install continuous top and bottom rail supports to splice temporary fence panels; attach to posts with clamp type fittings.
 - 5. Tension wire:
 - a. Install tension wire 4 inches up from bottom of fabric.
 - b. Stretch wire taut, independently and prior to fabric, between terminal posts and secure to terminal post using brace band.
 - c. Secure wire to chain link fabric with 9 gage hog rings spaced maximum 18 inches on center and to each line post with tie wire.
- C. Fabric:
 - 1. Install fabric to outside of framework.
 - 2. Attach fabric to terminal post by threading tension bar through fabric; secure tension bar to terminal post with tension bands and 5/16 inch carriage bolts spaced maximum 12 inches on center.
 - 3. Stretch fabric taut, without sag. Secure fabric to line posts with the wires spaced maximum 12 inches on center and to rails at maximum 18 inches on center.
 - 4. Secure fabric to tension wire with hog rings spaced maximum 18 inches on center.
 - 5. Wrap tie 360 degrees around post or rail and twist ends twisted together three full turns. Cut off excess wire and bend over.
 - 6. Installed fabric ground clearance: Maximum 2 inches.

- D. Swing Gates:
 - 1. Install in accordance with ASTM F567, with gates plumb in closed position and having 3 inch bottom clearance, grade permitting.
 - 2. Maximum hinge and latch offset opening space from gate frame to post: 3 inches in closed position.
 - 3. Set double leaf gate drop bar receivers in concrete footing minimum 6 inch diameter x 24 inches deep.
 - 4. Install gate leaf holdbacks for double leaf gates.
- E. Privacy Screen:
 - 1. Install in accordance with screen manufacturer's recommendations.
 - 2. Do not cut slits or holes in privacy screen.

3.2 INSTALLATION TOLERANCES

- A. Maximum Variation from Plumb: 1/4 inch in 10 feet.
- B. Maximum Offset from True Position: 1 inch.