

MADISON COUNTY

EMERGENCY MANAGEMENT FACILITY ROOF REPLACEMENT

BID NUMBER 2018-0003

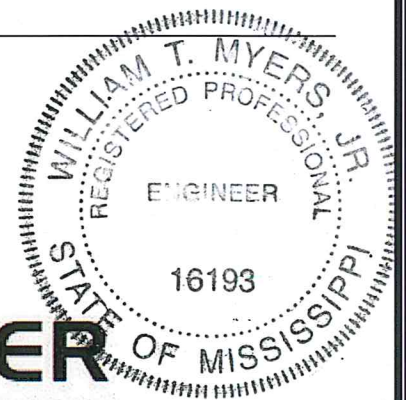
JANUARY 2018

CONTRACT DOCUMENTS AND SPECIFICATIONS

PREPARED BY



NEEL-SCHAFFER
Solutions you can build upon



W T Myers
Project Engineer

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ADVERTISEMENT FOR BIDS
MADISON COUNTY, MISSISSIPPI
EMERGENCY MANAGEMENT FACILITY
ROOF REPLACEMENT PROJECT
BID NUMBER 2018-0003

Bids will be received by the Madison County Board of Supervisors until 10 A.M. Tuesday, February 20, 2018, for the Emergency Management Roof Replacement Project. All bids so received will be publicly opened and read aloud.

Bids may be submitted by either of the following methods:

1. Sealed bids will be received until 10 A.M. Tuesday, February 20, 2018, at the Madison County Chancery Clerk's Office, Rooms 225-228, 146 West North Street, Canton, MS 39046. All sealed bids submitted to the Chancery Clerk's office shall be marked on the outside face of the envelope "Bid: Emergency Management Roof Replacement Project," and shall have the bidder's name and certificate of responsibility number written on the outside of the envelope. If any envelope is not so marked, said bid shall not be opened and considered.
2. Electronic bids will be received until 10 A.M. Tuesday, February 20, 2018, as a PDF file via Madison County's website at <http://www.madison-co.com/bids>. Each bidder submitting a bid electronically as a PDF file shall include its Certificate of Responsibility Number as part of its PDF electronic bid submittal. Any electronic PDF bid that does not include the bidder's certificate of responsibility number shall not be considered.

Plans, specifications, and contract documents are on file and open to public inspection at the Madison County Chancery Clerk's Office, Rooms 225-228, 146 West North Street, Canton, MS 39046, and at the office of Neel-Schaffer, Inc., 125 South Congress Street, Suite 1100, Jackson, Mississippi 39201 (telephone 601-948-3071).

This project generally consists of furnishing and installing a new roof on the Madison County Emergency Management Facility. An electronic copy of the plans, specifications, and contract documents may be procured at no charge by either of the following methods:

1. Download a copy from Madison County's website at <http://www.madison-co.com/bids>.
2. Email a request to hardy@madison-co.com.

The Madison County Board of Supervisors reserves the right to reject any and all bids.

Madison County Board of Supervisors

By: (s) Hardy Crunk, Purchase Clerk

Publication Dates:
January 18 & 25, 2018
Madison County Journal

INSTRUCTIONS TO BIDDERS

**MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT**

MADISON COUNTY, MISSISSIPPI

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1. COORDINATION OF SPECIFICATIONS

Work under this Contract shall be performed in accordance with the Contract Documents, which includes General Conditions, Supplementary Conditions and Technical Specifications contained therein, except where superseded by special provisions contained herein.

2. DATE AND PLACE OF OPENING OF BIDS

The date, time, and place for opening Bids will be as set out in the published "Advertisement for Bids."

The Owner reserves the right to postpone the deadline for submittal of bids and will give notice of any such postponement to each known prospective Bidder.

3. SUBMITTAL OF BIDS

Bids must be submitted on the forms furnished by the Owner.

Bids may be submitted by either of the following methods:

1. Sealed bids will be received until 10 A.M. Tuesday, February 20, 2018, at the Madison County Chancery Clerk's Office, Rooms 225-228, 146 West North Street, Canton, MS 39046. All sealed bids submitted to the Chancery Clerk's office shall be marked on the outside face of the envelope "Bid: Emergency Management Roof Replacement Project," and shall have the bidder's name and Certificate of Responsibility Number written on the outside of the envelope. If any envelope is not so marked, said bid shall not be opened and considered.
2. Electronic bids will be received until 10 A.M. Tuesday, February 20, 2018, as a PDF file via Madison County's website at <http://www.madison-co.com/bids>. Each bidder submitting a bid electronically as a PDF file shall include its Certificate of Responsibility Number as part of its PDF electronic bid submittal. Any electronic PDF bid that does not include the bidder's Certificate of Responsibility Number shall not be considered.

4. PREQUALIFICATION

Contractors desiring to bid on proposed construction contracts who have not been prequalified by the Owner, shall file with the Owner, if requested, a current financial statement showing assets and liabilities as a prerequisite to entering into contracts with the Owner. If prequalification is required, the appropriate submittal information will be requested from bidders during the bid evaluation performed by the Engineer and Owner after receipt of Proposals.

All Bidders must be in good standing with the Owner. Good standing includes, among other things: (a) whether Bidder is currently delinquent on the completion of work under another Owner contract for which it was a successful bidder; (b) whether Bidder is currently in default under another Owner contract for which it was a successful bidder; and (c) whether Bidder has failed to fulfill provisions of another Owner contract for which it was a successful bidder, during the past two years.

5. CERTIFICATE OF RESPONSIBILITY

Prior to filing Bids on Owner projects (in excess of \$50,000), the prospective Bidder must obtain a Certificate of Responsibility from the Mississippi State Board of Public Contractors, establishing his/her classification as to the value and the type of construction on which he/she is authorized to bid. Application must be submitted to the Board at least 30 days prior to a regular Board meeting scheduled every Quarter on the first Tuesday of January, April, July and October.

6. ANNUAL LICENSE TO BID (Not Used)

7. PLANS AND SPECIFICATIONS

Plans, specifications, and contract documents are on file and open to public inspection at the Madison County Chancery Clerk's Office, Rooms 225-228, 146 West North Street, Canton, MS 39046, and at the office of Neel-Schaffer, Inc., 125 South Congress Street, Suite 1100, Jackson, Mississippi 39201 (telephone 601-948-3071).

This project generally consists of furnishing and installing a new roof on the Madison County Emergency Management Facility. An electronic copy of the plans, specifications, and contract documents may be procured at no charge by either of the following methods:

1. Download a copy from Madison County's website at <http://www.madison-co.com/bids>.
2. Email a request to hardy@madison-co.com.

8. OMISSIONS AND DISCREPANCIES

Should a Bidder find discrepancies, errors or omissions in the Drawings or Specifications, or should he be in doubt as to the correctness of the Plan details, dimensions and layout, he should immediately notify the Engineer in order to permit checking and any necessary revisions or modifications.

9. ADDENDA

Prior to the date set for opening of Bids, the right is reserved, in the interests of the Owner, as it may require, to revise or amend the Contract Documents. Such revisions, if any, will be announced by an Addendum or Addenda, and copies of such Addenda will be furnished to all prospective Bidders who have purchased Plans and Specifications for acknowledgment by return fax. If the revisions and Addenda are of a nature which require material changes in quantities or prices Bid, or both, the date set for opening Bids may be postponed to enable Bidders to revise their Bids. In such case, the Addendum or Addenda will include an announcement of the new date for opening Bids.

10. INTERPRETATIONS

No oral interpretation made to any Bidder as to the meaning of the Contract Documents shall be considered an effective modification of any of the provisions of the Contract Documents. In order to ensure appropriate and concise responses, and avoid any misinterpretations, no verbal questions will be received. Written requests for interpretation of the Plans and Specifications shall be submitted to the Engineer at least 10 days prior to opening of Proposals so that a formal decision can be given in writing to all known prospective Bidders in the form of an Addendum. The Contract Documents

contain the provisions required for the construction of the Project. Information obtained from any source other than thru an Addendum shall not affect the risks or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the Contract.

11. BID SECURITY

All Bids shall be accompanied by a Bid Security in the form of a Bid Bond made by a bonding company registered in the State of Mississippi, drawn and made payable to the Owner in an amount equal to five percent of the Bid. The Bid Bond must be enclosed in the same envelope with the Bid. Except as noted below, the Bid Security of all known unsuccessful Bidders will be returned promptly after a Notice of Award has been sent to the successful Bidder or in the event that all Bids are rejected.

The Bid Security of the next two lowest qualified Bidders will be retained until the Contract has been executed with the lowest qualified Bidder. The Bid Security of the successful Bidder will be returned when satisfactory Performance and Payment Bonds have been furnished and approved and the Contract executed.

12. GENERAL INFORMATION

Bidders shall inform themselves and comply with all pertinent Owner regulations and ordinances, State and Federal laws, licenses and tax liabilities which may in any manner affect their Bids and the prosecution of the work. The successful Bidder will be responsible for obtaining all building, plumbing, and electrical permits required by the local city government. Special attention is directed to the rules and regulations published by the Mississippi State Tax Commission outlining certain taxes imposed on Contractors by the state of Mississippi.

13. REJECTION OF PROPOSAL

Proposals may be rejected in the case of any omission, alterations of forms, additions or conditions not called for, unauthorized alternate Bids, incomplete Bids, erasures or irregularities of any kind. Bids received conditioning their consideration or rejection upon Bids for the other work submitted by the same Bidder may be classed as irregular, unless the Contract Documents specifically invite or permit conditional or combination Bids. Bids in which the prices obviously are unbalanced may be rejected.

14. CONDITIONS OF WORK

Each Bidder must inform himself fully of the conditions relating to the construction of the Project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of his obligation to furnish all materials and labor necessary to carry out the provisions of the Contract. Insofar as possible, the Contractor, in carrying out his work, shall employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

15. SECURITY FOR FAITHFUL PERFORMANCE

Simultaneously with the delivery of the Executed Contract, the Contractor shall furnish a Performance Bond and a Payment Bond each in the sum of 100% of the Contract amount as security for faithful performance of the Contract and for the payment of all persons performing labor on the Project under the Contract and furnishing materials in connection with the Contract, as specified in the Contract Documents. The surety of such Bonds shall be issued by a duly authorized surety company listed on the Treasury Department's most current list Circular 570 (as amended) and satisfactory to the Owner.

Attorneys in fact who sign Bid Bonds or Payment Bonds and Performance Bonds must file with each bond a certified and effective dated copy of their Power of Attorney. Failure of the successful Bidder to execute the Contract and to supply the required bonds within 10 calendar days from the date that the Notice of Award is delivered, or within such extended period as the Owner may grant based upon reasons determined sufficient by the Owner, shall constitute a default, and the Owner, at his discretion, may either award the Contract to the next lowest qualified Bidder or readvertise for Bids, and may charge against the Bidder the difference between the amount for which a Contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the Bid Bond. If a more favorable bid is received by readvertising, the defaulting Bidder shall have no claim against the Owner for a refund. The Contractor's bond will not be released until all provisions of the Contract have been fulfilled.

16. INSURANCE

The Contractor will be required to carry the types and amounts of insurance named in the Contract Documents for the full life of the Contract.

17. SUBCONTRACTORS

Bidders are specifically advised that any person, firm or other party to whom it is proposed to award a Subcontract must be acceptable to the Owner. Nothing contained in the Contract Documents shall create any contractual relation between subcontractor and the Owner.

18. METHOD OF AWARD – LOWEST RESPONSIVE BIDDER

The Owner will award the Contract to the lowest and best Bid unless all Bids are rejected. The award will be based on the evaluation of the low bid for the total base bid or the total alternate bid as decided upon by the Owner.

The responsiveness of the low Bidder shall be determined by (1) the completeness and regularity of the Bidder's Proposal; (2) the Bidder's Proposal being without exclusions or special conditions; (3) the Bid Form having no alternative Bids for any item unless requested in the Technical Specifications; and (4) such other factors as may be considered under State law, Federal law or regulation.

The evaluation of the low bidder will be based on whether the Bidder (1) maintains a permanent place of business; (2) has adequate financial status to meet his obligations contingent to the work; (3) is in good standing with the Owner; and (4) such other factors as may be considered under State law, Federal law or other applicable regulation.

19. OBLIGATION OF BIDDER

At the time of the opening of Bids, each Bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Plans and Contract Documents (including all Addenda).

The failure or omission of any Bidder to examine any form, instrument or document shall in no way relieve any Bidder from any obligation in respect to his/her Bid. Submission of Bid shall be accepted as prima facie evidence that Bidder has inspected the site and is familiar with the Contract Documents.

20. SUBSURFACE DATA (Not Used)

21. EXECUTION OF CONTRACT

If the successful Bidder is a corporation, the officer who signs the Contract shall furnish copies of the resolution of the Directors of the corporation authorizing him to sign the contract. Such resolution should bear the seal of the corporation.

Subject to the applicable provisions of law, the Contract shall be in full force and effect only from and after the date when a fully executed and approved counterpart thereof has been rendered or delivered, or both, to the Contractor or his duly authorized agent or representative. Deposit of said counterpart in the United States mail in an envelope or wrapper properly addressed shall constitute compliance with these provisions by the Owner.

22. INTERCHANGEABLE TERMS

The terms "Bid" and "Proposal" wherever they are used in the Contract Documents are interchangeable and have the same meaning. The terms "Contract" and "Agreement", are interchangeable and have the same meaning. The terms "Contract Drawings" and "Plans", are interchangeable and have the same meaning.

23. QUALIFICATIONS OF BIDDER, OWNER'S RIGHTS

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

24. MATERIALS AND EQUIPMENT

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a manufacturer, fabricator, supplier, or distributor, the naming of the item in this manner is intended to establish the type, function and quality required. Materials or equipment of other manufacturers, fabricators, suppliers, or distributors may be accepted by the Engineer if sufficient information is submitted by the Contractor to allow the Engineer to determine that the material or equipment proposed is equivalent to that named in the Contract Documents. Bidders are referred to Article 6.05 of the General Conditions regarding procedures for approval of substitute materials and equipment.

25. NON-RESIDENT BIDDERS

Awarding public contracts to non-resident Bidders will be on the same basis as the non-resident Bidder's state awards contractors to Mississippi Contractors bidding under similar circumstances. In order to ensure that Mississippi's so called "Golden Rule" is followed, state law requires a non-resident Bidder to attach to his bid a copy of his resident state's current laws pertaining to such state's treatment of non-resident contractors.

BIDDER'S PROPOSAL

**MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT**

MADISON COUNTY, MISSISSIPPI

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BIDDER'S PROPOSAL

**MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT**

MADISON COUNTY, MISSISSIPPI

DATE: February 20th, 20 18

PROPOSAL OF Roofing Solutions, L.L.C. DBA Roofing Solutions of Louisiana, L.L.C.
(Name of Bidder)

37302 Commerce Lane, Prairieville, Louisiana 70769
(Address of Bidder)

for construction of the Canton – Madison County Emergency Management Facility Roof Replacement.

The documents on which this Proposal is based include the Instructions to Bidders, Bid Forms, General Conditions, Supplementary Conditions, Supplemental General Conditions, Technical Specifications, Contract Drawings, and all supplements, amendments and addenda for this Project and are made a part hereof by reference.

**TO: MADISON COUNTY
146 WEST NORTH STREET
CANTON, MISSISSIPPI 39046**

Gentlemen:

The following Proposal is submitted on behalf of the undersigned Bidder(s) and no others. Evidence of my (our) authority to submit the Proposal is hereby furnished. The Proposal is submitted without collusion on the part of any person, firm or corporation.

I (We), the undersigned Bidder(s), certify that I (we) have carefully examined the Instructions to Bidders, Bid Forms, General Conditions, Supplemental Conditions, Technical Specifications, Contract Drawings and any and all Addenda thereof.

I (We) further certify that I, (we) have visited and carefully examined the site of the proposed Work and have inspected the location and condition of all public utilities and existing structures or other facilities on the site or adjacent thereto which may be affected by the proposed construction and fully understand all conditions relative to construction difficulties, hazards, labor, transportation and all other factors affecting the prosecution of the work covered by this Proposal.

I (We) understand that the quantities mentioned below are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid. No increase in quantities of work shall be performed until a written change order is duly executed in advance and approved in the public minutes of the Owner.

00300-2

In accordance with the requirements of the Instructions to Bidders, Bid Forms, Federal Supplement to Bidder's Proposal, Technical Specifications, General Conditions, Supplementary Conditions, Contract Drawings, and any Addenda, I (we) propose to furnish all necessary materials, equipment, labor, tools and other means of construction and will do all Work called for by the Contract Documents within the specified Contract Time. The following is my (our) itemized proposal for the project:

Prices – Base Bid

Pay Item	Description	Qty	Unit	Unit / Lump Sum Price
1.0	ACM REMOVAL AND DISPOSAL	1	LS	\$ 6,696.00
2.0	REMOVAL AND DISPOSAL OF EXISTING ROOF SYSTEM	1	LS	\$ 16,712.00
3.0	INSTALLATION OF NEW ROOF SYSTEM	1	LS	\$ 96,542.00
TOTAL BASE BID \$				\$ 119,950.00

THE BIDDER'S "TOTAL BASE BID" ABOVE IS THE TOTAL BID BASED UPON THE SUM OF ALL UNIT PRICES, LUMP SUM PRICES AND THE ESTIMATED QUANTITIES. THIS FIGURE IS FOR INFORMATION ONLY AT THE TIME OF OPENING BIDS. THE OWNER WILL MAKE THE BID TABULATION FROM THE UNIT PRICES AND LUMP SUM PRICES BID. IF THERE IS AN ERROR IN THE TOTAL BY THE BIDDER, IT SHALL BE CHANGED AS ONLY THE UNIT PRICES AND LUMP SUM PRICES SHALL GOVERN.

NOTE: FAILURE OF BIDDER TO INCLUDE PRICES FOR THE ALTERNATE BID ITEMS MAY RENDER HIS PROPOSAL NON-RESPONSIVE.

NOTE: BIDS SHALL INCLUDE ALL SALES TAX AND OTHER APPLICABLE TAXES AND FEES.

I (We) further propose to execute the Contract Agreement as bound herein within ten working days after receipt of Contract Forms from the Owner and to complete the work will be completed within 90 calendar days thereafter.

I (We) agree to pay as liquidated damages the sum of \$300.00 plus any additional actual costs above \$300.00 incurred by the OWNER for each consecutive calendar day beyond the specified Contract Time as provided in the Contract Documents. These actual costs include, but are not limited to, engineering, inspection, and other construction related costs resulting from the CONTRACTOR'S failure to complete the work on schedule.

I (We) also propose to execute a Performance Bond and a Payment Bond, as shown in the Specifications, each in an amount of not less than one hundred percent (100%) of the total of my (our) Bid. These Bonds shall not only serve to guarantee the completion of the Work on my (our) part, but also to guarantee the excellence of both workmanship and materials until the Work is finally accepted.

I (We) enclose or attach a Bid Bond 5 percent of _____, DOLLARS (\$ _____)
(Base Bid Amount)

and hereby agree that in case of my (our) failure to execute the Contract and furnish the Bonds within ten calendar days after delivery of the Notice of Award, the amount of this Bid Bond will be forfeited to the Owner as liquidated damages arising out of my (our) failure to execute the Contract as proposed.

It is understood that in case I (we) am (are) not awarded the Work, the Bid Bond submitted as Bid security will be returned as stipulated in the Contract Documents.

Bidder acknowledges receipt of the following Addenda:

No. _____ Dated _____ No. _____ Dated _____
No. _____ Dated _____ No. _____ Dated _____
No. _____ Dated _____ No. _____ Dated _____
No. _____ Dated _____ No. _____ Dated _____

Respectfully Submitted,

Roofing Solutions, L.L.C. DBA
Roofing Solutions of Louisiana, L.L.C.

Contractor(s)

By: _____ Authorized Representative



Title

37302 Commerce Lne

Prairieville, Louisiana 70769

Address

BIDDER'S CORPORATE DECLARATION

**MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT**

MADISON COUNTY, MISSISSIPPI

(TO BE FILLED IN IF BIDDER IS A CORPORATION)

Date: _____, 20_____.

Our corporation is chartered under the Laws of the state of _____ and the names, titles and business addresses of the executives are as follows:

President

Secretary

Treasurer

DECLARATION OF PARTNERSHIP

(To be filled in if a Bidder is a Partnership)

Our Partnership is composed of the following individuals:

Address

Address

NON-COLLUSION AFFIDAVIT

MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT

MADISON COUNTY, MISSISSIPPI

(THIS AFFIDAVIT MUST BE EXECUTED FOR THE BID TO BE CONSIDERED)

STATE OF Louisiana)
) ss.
COUNTY OF Ascension)

Ileana Romero being first duly sworn,
(Person)
deposes and says that he is Authorized Representative

Roofing Solutions, L.L.C. DBA
(Sole owner, a partner, president, secretary, etc.)
of Roofing Solutions of Louisiana, L.L.C. the party making the foregoing Proposal or Bid;
(Name of Firm)

that such Bid is genuine and not collusive; that said Bidder is not financially interested in, or otherwise affiliated in a business way with any other bidder on the same contract; that said Bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any bidder or person, to put in a sham bid, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Owner or any person or persons interested in the proposed contract; and that all statements contained in said Proposal or Bid are true; and further, that such Bidder has not, directly or indirectly submitted his Bid, or the contents thereof, or divulged information or data relative thereto to any association or to any member or agent thereof.

[Signature]
Affiant

Sworn to and subscribed before me this 20th day of Feb, 2018.

Beverly S. Summers
Notary Public in and for

Ascension County,

(SEAL)

Beverly S. Summers
LA Notary ID #128290
My Commission is for Life

My Commission Expires N/A life, 20 .

BID BOND

**MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT**

MADISON COUNTY, MISSISSIPPI

Roofing Solutions, LLC DBA
Roofing Solutions of Louisiana LLC

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____ as
Principal, and SureTec Insurance Company as Surety, are hereby held and firmly bound unto **
the Owner, in the penal sum of \$ Five Percent (5%) of Total Amount Bid for the payment of which, well and truly
to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and
assigns. Signed this 20th day of February, 20 18.

**Madison County Board of Supervisors

The condition of the above obligation is such that whereas the Principal has submitted to the Owner, a certain
bid, attached hereto and hereby made a part hereof to enter into a contract in writing for the above referenced
project.

NOW THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form
of Contract attached hereto (properly completed in accordance with said Bid) and shall
furnish a bond for his faithful performance of said contract, and for the payment of all persons
performing labor or furnishing materials in connection therewith, and shall in all other
respects perform the agreement created by the acceptance of said Bid,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly
understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed
the penal amount of this obligation as herein stated.

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

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to signed by their proper officers, the day and year first set forth above.

Roofing Solutions, LLC DBA Roofing Solutions of Louisiana LLC

Contractor

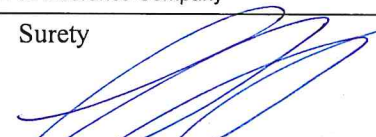
SEAL

By: 

SureTec Insurance Company

Surety

SEAL

By: 
Mary Catherine Turner, Attorney-in-Fact

SureTec Insurance Company

LIMITED POWER OF ATTORNEY

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

Mary Catherine Turner, Meghann Turner, Garrett Turner

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for, providing the bond penalty does not exceed

Five Million and 00/100 Dollars (\$5,000,000.00)

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment shall continue in force until 12/31/2019 and is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

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

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

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 28th day of March, A.D. 2017.

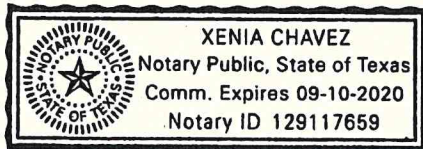


SURETEC INSURANCE COMPANY

By: [Signature]
John Knox Jr., President

State of Texas ss:
County of Harris

On this 28th day of March, A.D. 2017 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.



[Signature]
Xenia Chavez, Notary Public
My commission expires September 10, 2020

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

Given under my hand and the seal of said Company at Houston, Texas this 20th day of Feb, 2018, A.D.

[Signature]
M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.
For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.

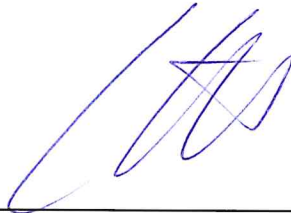
CORPORATE RESOLUTION

BE IT RESOLVED by the Board of Directors of
Roofing Solutions, L.L.C. DBA Roofing Solutions of Louisiana, L.L.C.
in a meeting duly assembled,
that Ileana Romero (Name), Authorized Representative (Title),
of the Corporation, be, and she is hereby authorized, empowered and
directed for and on behalf of the Corporation to negotiate for and sign
any and all bid proposals and/or contracts which this Corporation might
enter into for the furnishing of services for the Corporation under such terms,
conditions and stipulates, and for such consideration as he might deem to be in
the best interest of the Corporation.

I, Lautaro de La Cruz (Name), Secretary of
Roofing Solutions, L.L.C. DBA Roofing Solutions of Louisiana, L.L.C.
do hereby certify that the above
and foregoing is a true and correct copy of a Resolution unanimously
adopted at a meeting of the Board of Directors of said Corporation held
on the day 09 of January, 2018, at which meeting all members
of the Board of Directors were present and voted thereon and that said Resolution
has been spread upon the minute books of the Corporation, and same is now in full
force and effect.

WITNESS MY SIGNATURE this 20th day of February 2018, at

Roofing Solutions, L.L.C.



Managing Member

LSA-R.S. 38:2225

§ 2225. Preference in letting contracts for public work

Effective: August 1, 2014

Currentness

A. If a nonresident contractor bidding on public work in the state of Louisiana is domiciled in a state that provides a percentage preference in favor of contractors domiciled in that state over Louisiana resident contractors for the same type of work, then every Louisiana resident contractor shall be granted the same preference over contractors domiciled in the other state favoring contractors domiciled therein whenever the nonresident contractor bids on public work in Louisiana.

B. Any local law, either by legislative act or otherwise, ordinance, or executive order enacted prior to the effective date of this Act, or enacted hereinafter in conflict with this Section, or granting any local contractor or subcontractor preference over other Louisiana resident contractors shall be contrary to the provision of this Section.

C. The Department of Transportation and Development and the office of facility planning and control within the division of administration shall keep on file a list of all states with a bid preference.

D. The provisions and requirements of this Section shall not be waived by any public entity.

Credits

Acts 1977, No. 103, § 1. Amended by Acts 1983, No. 43, § 1, eff. June 17, 1983; Acts 1984, No. 894, § 2; Acts 2014, No. 759, § 1.

Notes of Decisions (6)

LSA-R.S. 38:2225, LA R.S. 38:2225

The Civil Code and Code of Criminal Procedure are current through the 2015 Regular Session with Acts effective on or before December 31, 2015. All other statutes and codes are current through the 2014 Regular Session.

End of Document

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LSA-R.S. 38:2225.1

§ 2225.1. Contracts in which the state or political subdivision are participants; preferences; assistance; exclusions

Currentness

A. When a participating state agency lets a contract for a public works project that is to be administered by or paid for, in whole or in part by state funds, the agency may require as a condition of letting the contract that not less than eighty percent of the persons employed in fulfilling that contract shall be residents of the state of Louisiana.

B. (1) When a participating political subdivision lets a contract for a public works project that is to be administered by or paid for, in whole or in part, by said political subdivision's funds, the governing authority of the political subdivision may require, as a condition of letting the contract, that not less than eighty percent of the persons employed in fulfilling that contract be residents of the state of Louisiana.

(2) In addition, when the governing authority of Calcasieu Parish may, upon a finding that there is substantial cause to counteract grave economic and social ills, require, as a condition of letting contracts for public works to be paid for solely with parish funds, that not less than fifty percent of the persons employed in fulfilling that contract be residents of Calcasieu Parish. Notwithstanding the provisions of this Paragraph, management personnel and persons whose skills are unavailable for performing the work may be excluded from the requirements of this Paragraph, as said governing authority may determine and provide for in the bid specifications.

C. The Louisiana Workforce Commission, upon request of any state agency, the governing authority of a political subdivision, or a contractor awarded a contract under the provision of this Section, shall assist in identifying craftsmen, laborers, and any other personnel necessary to comply with the requirements of this Section.

D. Notwithstanding the provisions of this Section, management personnel, and persons whose skills are unavailable for performing the work, shall be excluded from the requirements of this Section.

Credits

Added by Acts 1984, No. 361, § 1. Amended by Acts 1989, No. 787, § 1.

Notes of Decisions (1)

CONTRACT FORMS

**MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT**

MADISON COUNTY, MISSISSIPPI

CONTENTS

Contract.....	00500-2
Partnership Certificate.....	00500-5
General Instructions for Bonds.....	00500-6
Performance Bond.....	00500-7
Payment Bond.....	00500-9
Notice of Award.....	00500-11
Notice to Proceed.....	00500-13
Certificate of Sufficiency.....	00500-15
Contract Change Order.....	00500-16

CONTRACT FORMS

**MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT**

MADISON COUNTY, MISSISSIPPI

CONTENTS

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Contract Change Order.....	00500-16

CONTRACT

**MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT**

MADISON, MISSISSIPPI

This Contract, made this the _____ day of _____, 2018, by and Madison County, Mississippi, hereinafter called "Owner" and Roofing Solutions, LLC, DBA Roofing Solutions of Louisiana, LLC doing business as a Corporation located in Prairieville, Louisiana hereinafter called the "Contractor".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. THE CONTRACTOR will commence and complete the "Madison County Emergency Management Facility Roof Replacement" project in strict accordance with the Contract Documents and the Contract Drawings.
2. The Contractor will commence the work required by the CONTRACT DOCUMENTS within 10 calendar days after the date of the NOTICE TO PROCEED and will attain Final Completion within the contract time stipulated in the Advertisement for Bids unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS. The Contractor agrees to pay, as liquidated damages, the actual damages, costs, losses and expenses reasonably incurred by Owner for each consecutive calendar day that he shall be in default in attaining Final Completion within the time stipulated as provided herein.
3. The term "CONTRACT DOCUMENTS" means and includes Advertisement for Bids, Instructions to Bidders, Bidder's Proposal, Bid Bond, Contract, Payment Bond, Performance Bond, General Conditions, Supplementary Conditions, Technical Specifications, Contract Drawings, Notice of Award, Notice to Proceed, Addenda (if any), and all subsequent Change Orders, Supplemental Agreements and/or other modifications as if formally recopied in this Contract.
4. The Contractor agrees to furnish all materials in place and to faithfully complete all of said work contemplated by this Contract in good and workmanlike manner, strictly in accordance with said Contract Documents, Contract Drawings and other requirements of the Owner, and to the complete satisfaction of the Owner or his authorized representatives, and in accordance with the Laws of the state of Mississippi and the Ordinances of the Owner, for which the Owner hereby agrees to pay and the Contractor agrees to accept a sum of money in current funds equal to the contract amount of One Hundred Nineteen Thousand Nine Hundred and Fifty Dollars (\$ 119,950.00) plus the amount of any supplemental agreements and force accounts for extra work authorized and duly set forth in a written change order approved and executed by the Owner and set forth in the public minutes of the Owner and in full compensation for furnishing all materials, the doing of all work contemplated under the Contract, as well as all loss or damage, if any, arising out of the nature of the work, or the action of the weather, and any and all other unforeseen obstructions or difficulties that may be encountered in the prosecution of the same, the Contractor assuming all risks of every kind and description in the performance of this Contract.

-
5. The Contractor shall protect, indemnify and save harmless the Owner from and against any and all damage, loss, claims, judgments or expenses, including but not limited to reasonable attorney's fees, which the Owner may suffer or be subjected to by the performance of the work, including but without limitation injury to or death of any person whomever and destruction or damage to any property whatsoever.
 6. Attached hereto and made a part of this Contract is a Performance Bond, executed by a Surety Company doing business in the state of Mississippi, in the sum of One Hundred Nineteen Thousand Nine Hundred and Fifty Dollars (\$119,950.00).
 7. Attached hereto and made a part of this Contract is a Payment Bond, executed by a Surety Company doing business in the state of Mississippi, in the sum of One Hundred Nineteen Thousand Nine Hundred and Fifty Dollars (\$119,950.00).
 8. The Contractor agrees to allow the Owner, or any of their duly authorized representatives, access to any books, documents, papers and records of the Contractor which are directly pertinent to the project which is the subject of this Contract, for the purpose of making audits, examinations, excerpts and transcriptions, and Contractor agrees to insert an identical clause in any and all subcontracts.
 9. The Owner will pay to the Contractor in the manner and at such times and amounts as set forth in the Contract Documents.
 10. This Contract shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.
 11. If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner his obligations under this Contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Contract, the Owner shall thereupon have the right to terminate this Contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least five days before the effective date of such termination. Notwithstanding the above, the Contractor shall not be relieved of liability to the Owner for damages sustained by the Owner by virtue of any breach of the Contract by the Contractor and the Owner may withhold any payments to the Contractor until such time as the exact amount of damages due the Owner from the Contractor is determined.

IN WITNESS THEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Contract in 5 counterparts, each of which shall be deemed an original on the date first above written.

OWNER

CONTRACTOR

BY _____

BY Huber

ATTEST _____

ATTEST Stephanie Murray

(Seal)

(Seal)

PARTNERSHIP CERTIFICATE

State of _____

County of _____ Ss.

On this _____ day of _____, 2018, before me personally appeared _____, known to me and known by me to be the person who executed the above instrument, who being by me first duly sworn, did depose and say that he is a general partner in the firm of _____; that said firm consists of himself and _____; and that he executed the foregoing instrument on behalf of said firm for the uses and purposes stated herein.

Notary Public in the

County of _____

State of _____

Notary Seal

My Commission Expires:

CORPORATE CERTIFICATE

I, _____ certify that I am the Secretary of the Corporation named as Contractor in the foregoing Contract; that _____, who signed said Contract on behalf of the Contractor was then _____ of said Corporation; that said Contract was duly signed for and in behalf of said Corporation by authority of its governing body and is within the scope of its corporate powers.

Secretary

Corporate Seal

GENERAL INSTRUCTIONS FOR BONDS

1. The surety on each Bond must be a responsible surety company, which is qualified to do business in Mississippi and satisfactory to the Owner.
2. The name, including full Christian name and residence of each individual party to the Bond shall be inserted in the body thereof, and each such party shall sign the Bond with his usual signature on the line opposite the seal and if signed in Maine, Massachusetts or New Hampshire an adhesive seal shall be affixed opposite the signature. The bond must be either signed or countersigned by a Mississippi Resident Agent of the Surety Company.
3. If the principals are partners, their individual names will appear in the body of the Bond with the recital that they are partners composing a firm, naming it; and all the members of the firm shall execute the Bond as individuals.
4. The signature of a witness shall appear in the appropriate place, attesting to the signature of each individual party to the Bond.
5. If the principal or surety is a corporation, the name of the State in which incorporated shall be inserted in the appropriate place in the body of the Bond, and said instrument shall be executed and attested under the corporate seal as indicated in the form. If the corporation has no corporate seal the fact shall be stated, in which case, a scroll or adhesive seal shall appear following the corporate name.
6. The official character and authority of the person or persons executing the Bond for the principal, if a corporation, shall be certified by the secretary or assistant secretary, according to the form attached hereto. In lieu of such certificate there may be attached to the Bond copies of so much of the records of the corporation as will show the official character and authority of the officer signing, duly certified by the secretary or assistant secretary, under the corporate seal, to be true copies.
7. The date of this Bond must not be prior to the date of the Contract in connection with which it is given.
8. Surety Companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

Roofing Solutions, LLC, DBA Roofing Solutions of Louisiana, LLC
(Name of Contractor)

37302 Commerce Lane, Prairieville, Louisiana 70769
(Address of Contractor)

a Corporation hereinafter called Principal, and
(Corporation, Partnership, or Individual)

SureTec Insurance Company
(Name of Surety)

1330 Post Oak Blvd #1100, Houston TX, 77056
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

Madison County
(Name of Owner)

146 West North Street, Canton, MS 39046
(Address of Owner)

hereinafter called OWNER, in the penal sum of One Hundred Nineteen Thousand Nine Hundred and Fifty Dollars, \$(119,950.00) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated _____ day of _____ 2018, a copy of which is hereto attached and made a part hereof for the construction of :

Madison County Emergency Management Facility Roof Replacement

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

NOW, THEREFORE, if the Principal shall promptly make payment of all taxes, licenses, assignments, contributions, damages, penalties, and interest thereon, when and as the same may lawfully be due the state of Mississippi, or any county, municipality, board, department, commission, or political subdivision thereof, by reason of and directly connected with the performance of said Contract or any part thereof as provided by Sections 27-65-1, 27-65-21, 27-67-301 and 31-5-3, supra, or any other applicable statute or other authority, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change,

extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this statement is executed in 5 counterparts, each one of which shall be deemed an original, this the 27th day of March, 2018.

ATTEST:

Ephraim Newmy
(Principal) Secretary
(Seal)

Roofing Solutions, LLC dba Roofing Solutions of Louisiana, LLC

By *[Signature]* Principal

37302 Commerce Lane
(Address)

Prairieville, LA 70769

[Signature]
Witness as to Principal

37302 Commerce Lane
(Address)

Prairieville, LA 70769

ATTEST:

[Signature]
Witness as to Surety
6709 Perkins Road
(Address)
Baton Rouge, LA 70808

SureTec Insurance Company
Surety

By *[Signature]*
Meghann Turner, Attorney-in-Fact

1330 Post Oak Blvd., Suite 1100
(Address)
Houston, TX 77056

NOTE: Date of BOND must not be prior to date of Contract.
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS THAT

Roofing Solutions, LLC, DBA Roofing Solutions of Louisiana, LLC
(Name of Contractor)

37302 Commerce Lane, Prairieville, Louisiana 70769
(Address of Contractor)

a Corporation _____, hereinafter called Principal,
(Corporation, Partnership, or Individual)

and SureTec Insurance Company
(Name of Surety)

1330 Post Oak Blvd #1100, Houston TX, 77056
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

Madison County
(Name of Owner)

146 West North Street, Canton, MS 39046
(Address of Owner)

hereinafter called OWNER, in the penal sum of One Hundred Nineteen Thousand Nine Hundred and Fifty Dollars, \$(119,950.00) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____ 2018, a copy of which is hereto attached and made a part hereof for the construction of:

Madison County Emergency Management Facility Roof Replacement

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this statement is executed in 5 counterparts, each one of which shall be deemed an original, this the 27th day of March, 2018.

ATTEST:

Stephanie Norvany
(Principal) Secretary
(Seal)

Roofing Solutions, LLC dba Roofing Solutions of Louisiana, LLC

By *[Signature]*
Principal

37302 Commerce Lane
(Address)

Prairieville, LA 70769

[Signature]
Witness as to Principal

37302 Commerce Lane
(Address)

Prairieville LA 70769

ATTEST:

[Signature]
Witness as to Surety
6709 Perkins Road
(Address)
Baton Rouge, LA 70808

SureTec Insurance Company

By *[Signature]*
Surety
Meghann Turner, Attorney-in-Fact

1330 Post Oak Blvd., Suite 1100
(Address)

Houston, TX 77056

NOTE: Date of BOND must not be prior to date of Contract.
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

SureTec Insurance Company

LIMITED POWER OF ATTORNEY

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

Mary Catherine Turner, Meghann Turner, Garrett Turner

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for, providing the bond penalty does not exceed

Five Million and 00/100 Dollars (\$5,000,000.00)

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the CEO, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

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

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

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its CEO, and its corporate seal to be hereto affixed this 15th day of March, A.D. 2018.

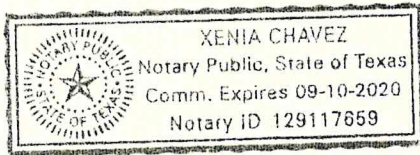
State of Texas ss:
County of Harris



SURETEC INSURANCE COMPANY

By: [Signature]
John Knox Jr., CEO

On this 15th day of March, A.D. 2018 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is CEO of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.



[Signature]
Xenia Chavez, Notary Public
My commission expires September 10, 2020

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

Given under my hand and the seal of said Company at Houston, Texas this _____ day of _____, A.D.

[Signature]
M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.
For verification of the authority of this power you may call (713) 812-0800 any business day between 8:30 am and 5:00 pm CST.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

3/21/2018

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

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

PRODUCER BXS Insurance 4041 Essen Lane, Suite 400 Baton Rouge LA 70809	CONTACT NAME: PHONE (A/C, No, Ext): 225-336-3200 FAX (A/C, No): 225-336-4536	
	E-MAIL ADDRESS:	
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A : Gray Insurance Company		36307
INSURED Roofing Solutions, LLC 37302 Commerce Lane Prairieville LA 70769	ROOFING SO	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
INSURER F :		

COVERAGES **CERTIFICATE NUMBER: 1603902673** **REVISION NUMBER:**


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

INSR LTR	TYPE OF INSURANCE	ADDL INSP	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:			XSGLO74330	1/1/2018	1/1/2021	EACH OCCURRENCE	\$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 50,000
							MED EXP (Any one person)	\$ 5,000
							PERSONAL & ADV INJURY	\$ 1,000,000
							GENERAL AGGREGATE	\$ Unlimited
							PRODUCTS - COMP/OP AGG	\$ 3,000,000
								\$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			XSAL075234	1/1/2018	1/1/2021	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
							BODILY INJURY (Per person)	\$
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
								\$
A	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$			GXS043323	1/1/2018	1/1/2019	EACH OCCURRENCE	\$ 4,000,000
							AGGREGATE	\$ 4,000,000
								\$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			XSWC071045	1/1/2018	1/1/2021	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT	\$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	\$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 The certificate holder is an additional insured on all policies except Workers' Compensation and is provided a Waiver of Subrogation, all if required by written contract. The above insurance policies shall be primary and non-contributory to any other insurance policies maintained by the certificate holder, if required by written contract.

REFER TO ATTACHED 2ND PAGE FOR ADDITIONAL COVERAGES THAT ARE INCLUDED ON THESE POLICIES.

Project: Madison County Emergency Management Facility Roof Replacement

CERTIFICATE HOLDER Madison County 146 West North Street Canton MS 39046	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

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THE GRAY INSURANCE COMPANY

The below coverages apply if the corresponding policy number is indicated on the previous page.

A. Commercial General Liability

General Liability Policy Includes:

Blanket Waiver of Subrogation when required by written contract.

Blanket Additional Insured (CGL Form# CG 20 10 11 85) when required by written contract.

Primary Insurance Wording Included when required by written contract.

Broad Form Property Damage Liability including Explosion, Collapse and Underground (XCU).

Premises/Operations

Products/Completed Operations

Contractual Liability

Sudden and Accidental Pollution Liability

Occurrence Form

Personal Injury

"In Rem" Endorsement

Cross Liability

Severability of Interests Provision

"Action Over" Claims

Independent Contractors coverage for work sublet

Vessel Liability - Watercraft exclusion has been modified by the vessels endorsement on scheduled equipment.

General Aggregate applies per project or equivalent.

B. Automobile Liability Policy Includes:

Blanket Waiver of Subrogation when required by written contract.

Blanket Additional Insured when required by written contract.

C. Workers Compensation Policy Includes:

Blanket Waiver of Subrogation when required by written contract.

U.S. Longshoremen's and Harbor Workers Compensation Act Coverage

Outer Continental Shelf Land Act

Jones Act (including Transportation, Wages, Maintenance, and Cure),

Death on the High Seas Act & General Maritime Law.

Maritime Employers Liability Limit: \$1,000,000

Voluntary Compensation Endorsement

Other States Insurance

Alternate Employer/Borrowed Servant Endorsement

"In Rem" Endorsement

Gulf of Mexico Territorial Extension

D. Excess Liability Policy Includes:

Coverage is excess of the Auto Liability, General Liability, Employers Liability, & Maritime Employers Liability policies

Blanket Waiver of Subrogation when required by written contract.

Blanket Additional Insured when required by written contract.

March 16, 2018

Mr. Illeana Romero
Roofing Solutions, LLC, DBA Roofing Solutions of Louisiana, LLC
37302 Commerce Lane,
Prairieville, Louisiana 70769

REFERENCE: MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT

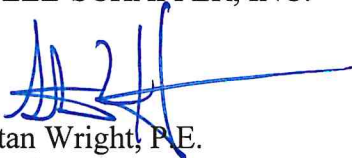
Dear Mr. Romero:

The County of Madison has awarded the contract for construction of the Madison County Emergency Management Facility Roof Replacement Project to Roofing Solutions, LLC, DBA Roofing Solutions of Louisiana, LLC. in the amount of \$119,950.00. Enclosed are the agreement and the required bond forms. Please execute five original counterparts of each and return them all to this office. Return also an insurance certificate indicating Roofing Solutions, LLC, DBA Roofing Solutions of Louisiana, LLC has obtained the insurance coverages required by the Contract. Please ensure the certificate lists The Country of Madison and Neel-Schaffer, Inc. as additional insured. The contract documents require these items be returned within five calendar days.

Please call me at (601) 898-8118 should you have any questions.

Sincerely,

NEEL-SCHAFFER, INC.



Stan Wright, P.E.
Engineer Manager

CMT: cmt

Enclosure

cc: Danny Lee
Hardy Crunk

NOTICE TO PROCEED

Date

To: _____

Attention: _____

REFERENCE: NOTICE TO PROCEED
MADISON COUNTY EMERGENCY MANAGEMENT FACILITY
ROOF REPLACEMENT
MADISON, MISSISSIPPI

Dear _____:

You are hereby notified to commence Work in accordance with the Contract dated _____, on or before _____. You are to complete the Work within ___ consecutive calendar days from the effective date of this Notice to Proceed. The date of Final Completion is therefore _____. Liquidated damages in the amount of the actual damages, costs, losses and expenses reasonably incurred by the OWNER per calendar day for each day the Work has not achieved Final Completion after _____ will be imposed unless the contract time is otherwise adjusted for due cause by change orders to the Contract. Liquidated Damages, as defined herein, will be assessed unless the Contract Time is otherwise adjusted for due cause by change order to the Contract.

The engineering firm of Neel-Schaffer, Inc. will act as the Engineer on behalf of the Madison County, Mississippi for the work to be performed under the contract. William T. (Bill) Myers, Jr., P.E., of Neel-Schaffer, Inc. will be the Design Professional in Responsible Charge for the Engineer.

Please return a copy of this NOTICE TO PROCEED and ACCEPTANCE OF NOTICE to the undersigned and to Neel-Schaffer, Inc., indicating your receipt of this document in the space provided below.

Sincerely,

Madison County Board of Supervisors

Sheila Jones
President

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED

is hereby acknowledged by _____

this, the _____ day

of _____, 20_____.

By _____

Title _____

CERTIFICATE OF SUFFICIENCY

**MADISON COUNTY EMERGENCY MANAGEMENT
FACILITY ROOF REPLACEMENT**

MADISON COUNTY, MISSISSIPPI

I, _____, CHIEF LEGAL OFFICER FOR THE
OWNER, DO HEREBY CERTIFY THAT I HAVE EXAMINED THIS AGREEMENT, THE BONDS AND
EVIDENCE OF INSURANCE OFFERED BY THE CONTRACTOR AND FIND THEM TO BE
PROPERLY EXECUTED, ADEQUATE AND SUFFICIENT.

Date: _____

TOTAL CONTRACT CHANGE	\$
	TOTAL CONTRACT
ORIGINAL CONTRACT AMOUNT:	\$
CURRENT CONTRACT AMOUNT:	\$
THIS CONTRACT CHANGE	
REVISED CONTRACT AMOUNT:	\$
CURRENT CONTRACT COMPLETION DATE:	
TIME EXTENSION REQUIRED BY CHANGE:	
REVISED CONTRACT COMPLETION DATE:	
<p>THIS DOCUMENT SHALL BE AN AMENDMENT TO THE CONTRACT AND ALL PROVISIONS OF THE CONTRACT WILL APPLY.</p> <p>RECOMMENDED BY: _____</p> <p>ENGINEER NEEL-SCHAFFER, INC.</p> <p>DATE</p> <p>ACCEPTED BY: _____</p> <p>CONTRACTOR</p> <p>DATE</p>	

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

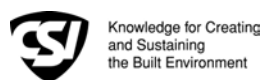
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Construction Specifications Institute

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1420 King Street, Alexandria, VA 22314

American Council of Engineering Companies
1015 15th Street, N.W., Washington, DC 20005

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain

administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times

but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. Intent of Certain Terms or Adjectives

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer's - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement

or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 Before Starting Construction

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 Preconstruction Conference

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 Initial Acceptance of Schedules

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a

Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained

or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

- a. reviewing and checking all such information and data,
- b. locating all Underground Facilities shown or indicated in the Contract Documents,
- c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
- d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will

promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to

entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified

in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection

from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any

deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract

Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or

received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. "*Or-Equal*" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract

Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual

or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Draw-

ings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents

with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or

disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal

shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and
2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and

properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep

Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show

partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall

promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive

bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph

5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work

times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all

costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and

reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the

Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's

observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral

satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 Final Completion Delayed

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 Owner May Terminate for Cause

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or
2. agrees with the other party to submit the Claim to another dispute resolution process, or
3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS

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SUPPLEMENTARY CONDITIONS

1. Definitions

- A. The definition of "Technical Specifications" shall be the same as the definition for Specifications stated in Paragraph 1.01 under item number 43 of the General Conditions (of the EJCDC C-700).
- B. Delete Paragraph 1.01.A.12 of the General Conditions in its entirety.
- C. In Paragraph 1.01A.52 delete the following words, "or responding to differing or unseen subsurface or physical conditions under which the work is to be performed or to emergencies."

2. Commencement of Contract Time: Notice to Proceed

The commencement of Contract Time, as stated in Item 2.03 of the General Conditions is changed to read The Contract Time will commence to run within the sixtieth day after the Effective Date of the Agreement, or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed; but in no event shall the Contract Time commence to run later than the sixtieth day after the Effective Date of the Agreement.

Notice to Proceed may be given at any time within sixty days after the Effective Date of the Agreement. Refer to Item 21 of the Instructions to Bidders regarding execution of the Contract.

3. Before Starting Construction

In addition to the requirements of Paragraph 2.05 of the General Conditions, "**CONTRACTOR** shall deliver to the **OWNER**, with his signed Contract, all bonds and insurance which he is required to purchase and maintain in accordance with Article 5 of the General Conditions. A copy shall also be submitted to the **ENGINEER**. The **OWNER** shall deliver to the **CONTRACTOR** a copy of all policies of insurance which the **OWNER** is required to purchase and maintain in accordance with Article 5 of the General Conditions."

4. Preconstruction Conference

The time period for holding the preconstruction conference as stated in Paragraph 2.06 of the General Conditions shall be within 30 days after the Effective date of the Agreement, but before the **CONTRACTOR** starts the Work at the site.

5. Subsurface and Physical Conditions

Paragraphs 4.02 and 4.03 shall be deleted in its entirety and replaced with the following:

DIFFERING SITE CONDITIONS PROVISION:

Execution of this Contract (Agreement) by the Contractor is a representation that the Contractor has visited the site, that general and local conditions are suitable for the work to be performed and that the Contractor accepts all conditions at the Project site. The Contractor assumes all risks with respect to the requirements of the Contract Documents, including without limitation the characteristics (natural and manmade) of the site, site accessibility, labor rates and availability, weather conditions, and any other matter that could affect the performance and cost of the work.

6. Insurance Requirements

- A. Paragraphs 5.05 and 5.06 shall be deleted in their entirety.
- B. Paragraphs 5.07.B, 5.07.B.1 and 5.07.B.2 shall be deleted in their entirety.
- C. In addition to the requirements of Article 5 of the General Conditions, insurance coverage specified herein constitutes the minimum requirements and said requirements shall in no way lessen or limit the liability of the **CONTRACTOR** under the terms of the Contract. The **CONTRACTOR** shall procure and maintain at his own expense any additional kinds and amounts of insurance that, in his own judgment, may be necessary for his proper protection in the prosecution of the Work.
 - 1. The **CONTRACTOR** shall carry insurance as prescribed herein and all policies shall be with companies satisfactory to the **OWNER**. If a part of this Contract is sublet, the **CONTRACTOR** shall require each Subcontractor to carry insurance of the same kinds and in like amounts as carried by the **CONTRACTOR**, including all additional insureds and waivers of subrogation.
 - 2. Certificates of insurance shall state that 30 days written notice will be given to the **OWNER** before the policy is canceled or changed. No **CONTRACTOR** or Subcontractor will be allowed to start any construction work on this Contract until certificates of all insurance required herein and all coverage requirements specified in contract documents are filed with and approved by the **OWNER**. The certificates shall show the type, amount, class of operations covered, effective dates and the dates of expiration of policies.
 - 3. The **CONTRACTOR** shall secure and maintain in effect for the period of the **CONTRACT** and pay all premiums for the following kinds and amounts of insurance:
 - a. Worker's Compensation and Employer's Liability Insurance: This insurance shall protect the **CONTRACTOR** against all claims under applicable State Worker's Compensation Laws. The **CONTRACTOR** shall also be protected and shall cause each Subcontractor to be protected against claims for injury, disease, or death of employees, which for any reason, may not fall within the provisions of a Worker's Compensation Law. The liability limits shall not be less than the required statutory limits for Worker's Compensation and Employer's Liability limits in the amount of ONE MILLION DOLLARS (\$1,000,000.00). **CONTRACTOR** and subcontractors shall supply **OWNER** endorsements from their carriers evidencing waiver of subrogation in favor of the **OWNER**.

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- b. **CONTRACTOR'S** and Subcontractor's Comprehensive General Liability Insurance, including bodily injury, property damage, contractual and other standard coverage contained in Comprehensive General Liability Insurance, in an amount of not less than ONE MILLION DOLLARS (\$1,000,000) per occurrence and aggregate. **OWNER** shall be provided an endorsement naming the **OWNER** as an insured from the insurer for the work contracted. The Comprehensive General Liability policies carried by both the **CONTRACTOR** and the Subcontractors shall contain an endorsement to include the coverage of the following hazards:
- i. Explosion, collapse, and underground property damage to include any damage or destruction of property below the surface of the ground, such as wires, conduits, pipes, mains, sewers, etc., caused by the **CONTRACTOR'S** operations.
 - ii. The collapse of and structural injury to any building, structure or property on or adjacent to the **OWNER'S** premises or right-of-way caused by the **CONTRACTOR'S** operations in the removal of other buildings, structures, or supports, or by excavation below the surface of the ground.
 - iii. Contractual Liability Coverage for the Hold Harmless segments of the Contract Documents.
- c. **CONTRACTOR'S** Contingent or Protective Liability and Property Damage: In case part of this Contract is sublet, the **CONTRACTOR** shall secure contingent or protective liability and property damage insurance to protect the **CONTRACTOR** from any and all claims arising from the operation of Subcontractors in the execution of Work included in the Contract. In no case shall the amount of such protection be less than the limits of \$500,000/\$1,000,000 for Public Liability Insurance and \$500,000/\$1,000,000 for Property Damage Insurance. The coverage in each case shall be acceptable to the **OWNER**.
- d. Auto Liability: The **CONTRACTOR** shall maintain Auto Liability Insurance in the amount of not less than ONE MILLION DOLLARS (\$1,000,000) Combined Single Limit to protect him from any and all claims arising from the use of the following:
- i. **CONTRACTOR'S** own automobiles and trucks.
 - ii. Hired and non-owned automobiles and trucks.
 - iii. Automobiles and trucks owned by Subcontractors.
- The aforementioned is to cover use of automobiles and trucks on and off the site of the Project. The **OWNER** shall be provided an endorsement from the insurer naming the **OWNER** as an insured for the work contracted.
- e. **OWNER'S** Protective Liability Policy: The **CONTRACTOR** shall maintain **OWNER'S** Protective Liability Insurance with the **OWNER** as the named insured, and the **ENGINEER**, and their servants, agents and employees as additional insureds, in an amount not less than ONE MILLION DOLLARS (\$1,000,000).
- f. Umbrella Liability: The **CONTRACTOR** shall provide **OWNER** a certificate of insurance evidencing Umbrella Liability Insurance in the amount of not less than ONE MILLION DOLLARS (\$1,000,000).

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- g. Builder's Risk and Boiler and Machinery Insurance: The **CONTRACTOR** shall purchase and maintain Builder's Risk and Boiler and Machinery Insurance in the amount of the total value of the materials necessary for the project. A certificate evidencing such coverage shall be on file with the **OWNER**.
 - h. Property Insurance: No property insurance is required for this project.

7. Contractor's Responsibilities

Delete Paragraph 6.02.B in its' entirety.

8. Record Documents

In addition to the requirements of Paragraph 6.12 of the General Conditions, **CONTRACTOR** shall provide accurate 'mark-ups' acceptable to the **ENGINEER** on or before the date of Substantial Completion of the Project for use by the **ENGINEER** in the preparation of 'record' drawings. Final payment will not be made to the **CONTRACTOR** prior to the **ENGINEER** receiving these mark-ups from the **CONTRACTOR**.

9. Limitations on ENGINEER'S Responsibilities

In addition to the requirements of Paragraph 9.09.B, when it comes to his attention, the **ENGINEER** will immediately notify the **OWNER** in the event that the **CONTRACTOR** is not complying with the Contract Documents or is conducting the Work in such a manner that could be considered grounds for termination of the Contract. The **CONTRACTOR** shall retain responsibility for performing all Work in compliance with the Contract Documents.

The following language shall be added to Paragraph 9.09.B:

“Consistent with the express provisions of this Section 00700, Article 6.13, Article 6.17.D.2, Article 9.02.B, Article 9.09, this Article 9.09.B, and Article 14.02.B.4.b, any reference to “safety” elsewhere in this contract, including but not limited to those found in Section 00700, Articles 4.02.B.1, 4.04.A.2.d, 4.04.B.1, 4.06.B.1, 6.02.B, 6.14, 6.15, 6.16, 6.17.C.1.c, and 13.02.A, does not impose upon the Engineer any duty, obligation or other contractual undertaking to administer the “safety” aspects of Contractor’s performance, or any other matter relating to the Contractor’s means, methods, techniques, sequences or procedures. Contractor’s contractual safety obligations and means and methods during construction are the sole responsibility of the Contractor and are not being administered, overseen or reviewed in any way by the Engineer in performing its contractual obligations”

10. Change of the Contract Time

In addition to the requirements of Paragraph 12.03 of the General Conditions, rainstorms which are encountered in the project area on a regular and seasonal basis do not constitute an abnormal weather condition.

11. Payments to **CONTRACTOR**

Paragraph 14.02, Application for Payments, is deleted in its' entirety and the following substituted therefore:

- A. Monthly Estimates and Partial Payments: The **CONTRACTOR'S** partial payment period shall end on the last day of each month. The **CONTRACTOR** shall submit acceptable Application for Payment to the **ENGINEER** by the date indicated on the payment schedule as supplied to **CONTRACTOR** by **ENGINEER** provided that the amount due on completed work is at least \$500.00. The partial payment request shall be filled out and signed by the **CONTRACTOR** covering the work completed as of the date of the request and accompanied by such supporting documentation as is required by the Contract Documents and also as the **ENGINEER** may reasonably require. At the discretion of the **OWNER**, the **ENGINEER** may be authorized to include in any monthly estimate advances covering approximately 95 percent of the value of unused materials delivered and stored on the site of the work. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site, the Application for Payment shall also be accompanied by such data, satisfactory to **OWNER**, as will establish **OWNER'S** title to the material and equipment and protect **OWNER'S** title to the material and equipment and protect **OWNER'S** interest therein, including applicable insurance. Each subsequent Application for Payment shall include an affidavit of **CONTRACTOR** stating that all previous progress payments received on account of the Work have been applied to discharge in full all of **CONTRACTOR'S** obligations reflected in prior Applications for Payment.
- B. After each monthly estimate has been approved, the **OWNER** shall pay to the **CONTRACTOR** 95 percent of the amount of said estimate. From the total value of each estimate there will be deducted an amount equivalent to 5 percent of the whole as a retainage to be held by the **OWNER**. The monthly estimates will be approximate only and subject to correction in any subsequent estimate rendered following discovery of the error. At the discretion of the **OWNER**, the **ENGINEER** may be authorized to include any monthly advances covering approximately 95 percent of the value of unused materials delivered and stored on the site of the work.
- C. Subsequent to discovery of any defective or questionable work, an amount equal to the estimated value of such work will be deducted from the next current estimate. The sum will not be included in a subsequent estimate until the defects have been remedied to the **ENGINEER'S** satisfaction.
- D. The **OWNER** reserves the right to withhold payment of any monthly estimate that becomes due if, in the opinion of the **OWNER'S** Attorney, such action is warranted because of any breach of the Contract Provisions or malfeasance on the part of the **CONTRACTOR** or because the progress or the quality of the work is unsatisfactory and does not comply with the Plans and Specifications.

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- E. For construction contracts over \$250,000.00, the **CONTRACTOR** may, at his option, withdraw the 50 percent of the retainage after 50 percent of the work has been completed, as approved by the **ENGINEER**, provided retainage be withheld at 2.5 percent for the remainder of the project. Retainage will be withheld at a rate of 5 percent until final completion for construction contracts under \$250,000.00.

Paragraph 14.02.C of the General Conditions is modified to read “60 days after presentation of the Application for Payment to **OWNER** with **ENGINEER’S** recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by **OWNER** to **CONTRACTOR**.”

Paragraph 14.07.C of the General Conditions is modified to read, "If the Application and accompanying documentation are appropriate as to form and substance, **OWNER** shall, within 60 days after receipt thereof, pay **CONTRACTOR** the amount recommended by **ENGINEER**."

Delete Paragraph 14.09.A.2 in its entirety.

12. List of Contract Drawings: Not Used.
13. Liquidated and Special Damages

The **CONTRACTOR** will be subject to liquidated damages in accordance with the Advertisement for Bids.

14. Suspension of Work and Termination

In Paragraph 15.04.A delete the following words: “or Engineer fails to act on any Application for Payment within thirty days, after it is submitted” and add the words “if the”. In Paragraph 15.04.B delete the following words: “if Engineer has failed to act on an Application for Payment within thirty days after it is submitted” and add the words “if the”.

**** END OF SECTION ****

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 LOCATION OF WORK

All of the work of this Contract is located at 1633 W. Peace Street, Canton, MS.

1.02 WORK TO BE DONE

- A. The CONTRACTOR shall furnish all labor, materials, equipment, tools, services and incidentals to complete all work required by these Specifications and as shown on the Drawings.
- B. The CONTRACTOR shall perform the work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, cleanup, replacements and restoration required as a result of damages caused during this construction.
- C. All materials, equipment, skills, tools and labor which are reasonably and properly inferable and necessary for the proper completion of the work in a substantial manner and in compliance with the requirements stated or implied by these Specifications or Drawings shall be furnished and installed by the CONTRACTOR without additional compensation, whether specifically indicated in the Contract Documents or not.
- D. The CONTRACTOR shall comply with all county, state, federal, and other codes which are applicable to the proposed construction work.

1.03 GENERAL DESCRIPTION OF WORK TO BE PERFORMED

- A. The Work included in the Contract shall be as described in the Contract Documents.
- B. All work shall be done as described in the Specifications and as shown on the Drawings, complete, tested and ready for use.

1.04 WORK SEQUENCE

- A. All work to be done under the Contract shall be done with minimum inconvenience to the OWNER. The CONTRACTOR shall coordinate his work with the Owner such that existing drainage, water service, electrical service and sewer service are maintained at all times.

1.05 CONSTRUCTION AREAS

- A. CONTRACTOR shall limit his use of the construction areas for Work and for storage, to allow for:

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1. Work by other contractors.
 2. OWNER use.
- B. Coordinate use of work site under direction of ENGINEER.
 - C. Assume full responsibility for the protection, security and safekeeping of products under this Contract stored on the site.
 - D. Move any stored products, under CONTRACTOR'S control which interfere with operations of the OWNER or other contractors.
 - E. Obtain and pay for the use of additional storage or work areas needed for operations.

1.06 OWNER OCCUPANCY

- A. OWNER will have full access to all existing facilities during the entire period of construction. Cooperate with ENGINEER in all construction operations to minimize conflict and to facilitate OWNER usage.
- B. CONTRACTOR shall at all times conduct his operations as to insure the least inconvenience to the general public.

1.07 PLANS AND SPECIFICATIONS

- A. Specifications: The Technical Specifications consist of three parts: General, Products, and Execution. The General section contains general requirements which govern the work. The Products and Execution sections modify and supplement these by detailed requirements of the work and shall always govern whenever there appears to be a conflict.
- B. Intent:
 1. All work called for in the Specifications applicable to the Contract but not shown on the Plans in their present form or vice versa shall be of like effect as if shown or mentioned in both. Work not specified in either the Plans or in the Specifications but involved in carrying out their intent or in the complete and proper execution of the work is required and shall be performed by the CONTRACTOR as though it were specifically delineated or described at the CONTRACTOR'S expense.
 2. The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.
- C. Conflict between Drawings and Specifications. Where an obvious conflict exists between the Plans and Specifications, the ENGINEER shall decide which governs and the CONTRACTOR shall comply with the decision. Such decision shall not be grounds for additional payment to the CONTRACTOR, i.e., the CONTRACTOR shall include the price of the most expensive alternative in his bid.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.01 Scope of Work

- A. Lump Sum Contract Basis: Payment of the lump sum established in the Bidding and Contract Documents for the Madison County Emergency Management Roof Replacement, shall be full compensation for furnishing and/or installing all labor, materials, equipment and incidentals required to complete the work as specified and indicated in the Contract Documents.
- B. Alternates: None.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01026

SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 Requirements Included

The Schedule of Values is an itemized list that establishes the value or cost of each part of the work as defined in Section 01025, Part 1.04 and Part 1.05. All other work shall be paid according to the Prices Bid Table. It shall be used as the basis for preparing progress payments and may be used as a basis for negotiations concerning additional work or credits which may arise during the construction.

Quantities and unit prices may be included in the schedule when approved by or required by the ENGINEER.

1.02 Preparation

- A. Schedule shall show breakdown of labor, materials equipment and other costs used in preparation of the Bid.
- B. Costs shall be in sufficient detail to indicate separate amounts for each Section of the Specifications.
- C. CONTRACTOR may include items for bond, insurance, temporary facilities and job mobilization within the mobilization bid item.
- D. Schedule of Values shall be prepared on 8-1/2 inch by 11 inch white paper.
- E. Use Table of Contents of the Specifications as basis for Schedule format and identify each item with number and title in the Table of Contents. List sub-items of major products or systems as appropriate or when requested by ENGINEER.
- F. When requested by ENGINEER, support values with data that will substantiate their correctness.
- G. The sum of the individual values shown on the Schedule of Values must equal the total Contract Price.
- H. The manner in which overhead and profit are shown shall be supported by the ENGINEER.
- I. Schedule shall show the purchase and delivery costs for materials and equipment that the CONTRACTOR anticipates he shall request payment for prior to their installation.

1.03 **Submittal**

Submit two copies of Schedule to ENGINEER for approval at least 20 days prior to submitting first application for a progress payment. After review by ENGINEER, revise and resubmit Schedule as required until it is approved.

**** END OF SECTION ****

SECTION 01027

APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.01 Requirements Included

Submit Applications for Payment to the ENGINEER in accordance with the General Conditions and in the form required by the OWNER.

1.02 Format and Data Required

- A. Submit Applications for Payment typed with itemized values on form EJCDC C-620 (Contractor's Application For Payment).
- B. Provide detailed substantiating data on additional sheets, including paid invoices where applicable.
- C. Provide additional pages of the itemized values as needed.
- D. Complete all applicable items on Page 1 and all Columns (A-G) on Page 2.
- E. Applications for Payment that are incomplete will be returned to the Contractor.

1.03 Preparation of Application for Progress Payments

- A. Application Form:
 - 1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.
 - 2. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets.
 - 3. Execute certification with signature of a responsible officer of the CONTRACTOR.
- B. Continuation Sheets:
 - 1. Fill in total list of all scheduled component items of work, with item number and scheduled dollar value for each item.
 - 2. Fill in dollar value in each column for each scheduled line item when work has been performed or products stored. Round off values to the nearest dollar or as specified for Schedule of Values.
 - 3. List each Change Order executed prior to date of submission by Change Order Number and description.
 - 4. To receive payment for materials stored on site, submit copies of the original paid invoices with the application for payment.

1.04 Substantiating Data for Progress Payments

- A. Provide substantiating data containing suitable information for review of costs requested with

the applications for progress reports identifying:

1. The payment item to which the substantiating data applies.
 2. Application number and date.
 3. Detailed list of enclosures.
 4. For stored materials:
 - a. Item number and identification as shown on application.
 - b. Description of specific material and invoice of delivered material.
 - c. Consolidated inventory of stored materials showing:
 - (1) Materials received.
 - (2) Materials used.
 - d. Additional stored materials may not be claimed upon reaching 75% completion of the total project.
 - e. Stored Materials shall be inventoried jointly prior to each pay request.
- B. Submit one copy of data for each copy of application for payment.
- C. The CONTRACTOR is to maintain an updated set of record drawings in accordance with Section 01720. As a prerequisite for monthly progress payments, the CONTRACTOR is to exhibit the updated record drawings for review by the OWNER and the ENGINEER.

1.02 Preparation of Application for Final Payment

- A. Fill in application form as specified for progress payments.
- B. Use continuation sheet for presenting the final statement of accounting.

1.03 Submittal Procedure

- A. Submit applications for payment to the ENGINEER at the times stipulated in the General Conditions.
- B. Initially a pencil draft application shall be informally submitted to the ENGINEER who shall review the draft with the CONTRACTOR and make adjustments as appropriate. The CONTRACTOR shall then prepare a formal typed application using the informally approved amounts and submit six (6) complete sets to the ENGINEER.
- C. When the ENGINEER finds the application properly completed and correct, as informally approved, he will transmit it to the OWNER for payment with a copy to the CONTRACTOR.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01041

PROJECT COORDINATION

PART 1 GENERAL

1.01 WORK PROGRESS

The CONTRACTOR shall furnish personnel and equipment which will be efficient, appropriate, and large enough to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the time stipulated in the contract. If at any time such personnel appear to the ENGINEER to be inefficient, inappropriate, or insufficient for performing the quality of work required or for producing the rate of progress aforesaid, he may order the CONTRACTOR to increase the efficiency, change the character or increase the personnel and equipment, and the CONTRACTOR shall conform to such order at his own expense. Failure of the ENGINEER to give such order shall in no way relieve the CONTRACTOR of his obligations to perform the work at the specified quality and rate of progress.

1.02 FLOOR OPENINGS

All floor openings shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property.

1.03 PROTECTION OF THE WORK AND THE EXISTING BUILDING

- A. All newly constructed work shall be carefully protected from injury in any way. No wheeling or walking or placing of heavy loads on it shall be allowed. All portions of the work injured shall be reconstructed by the CONTRACTOR at his own expense.
- B. All portions of the existing building not directly related to the work shall be protected in a suitable manner. Should any parts of the building become damaged during the work, all such damaged items shall be completely repaired and made good by the CONTRACTOR at his own expense and to the satisfaction of the ENGINEER. If, in the final inspection of the work, any defects, faults or omissions are found, the CONTRACTOR shall cause the same to be repaired or removed and replaced by proper materials and workmanship without extra compensation for the materials and labor required. Further, the CONTRACTOR shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein for at least the guarantee period described in the Contract.
- C. The CONTRACTOR is responsible for the security of all equipment, material, tools, machinery, supplies and related items for the work.

1.04 UTILITIES

- A. Utilities for the purpose of these specifications shall be considered as including, but not limited to: pipelines, conduits, cables, transmission lines, gas lines, and appurtenances; storm drains and sanitary sewers; hvac and related mechanical items.
- B. The Contractor shall notify the Owner and the proper authority of the utility involved when relocation of these lines is required. The Contractor shall coordinate all work by the utility so that the progress of construction will not be hampered.
- C. The Contractor shall assume full responsibility for the protection of all utilities, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such utilities from damage of any kind. Any damage resulting from the Contractor's work shall be repaired by the Contractor at his/her expense..
- D. The Contractor(s) may use the on-site electrical, water & toilet facilities for project-related requirements without cost.
- E. The Owner reserves the right to discontinue providing such services at his/her discretion. If such services are discontinued, the Contractor shall provide such services at no additional cost to the Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01200
PROJECT MEETINGS

PART 1 GENERAL

1.01 Requirements Included

- A. The ENGINEER shall schedule and administer a preconstruction meeting, construction progress meetings, and specially called meetings throughout the progress of the work. The ENGINEER will:
 - 1. Prepare agenda for meetings.
 - 2. Make physical arrangements for meetings.
 - 3. Preside at meetings.
 - 4. Record the minutes; include significant proceedings and decisions.
 - 5. Reproduce and distribute copies of minutes.

- B. The CONTRACTOR and representatives of, where appropriate, subcontractors and suppliers shall attend meetings. The representative shall be qualified and authorized to act on behalf of the entity each represents.

- C. The CONTRACTOR shall attend and identify at the meetings the actual status of the Contract Work and, when the Work is not being performed consistently with the Contract Documents and construction schedules, shall identify at the meetings the steps he is taking to resolve the inconsistency.

1.02 Pre-construction Meeting

- A. The CONTRACTOR shall participate in a preconstruction meeting to be held after the effective date of the Agreement and prior to the date of Notice to Proceed.

- B. The following are expected to be in attendance:
 - 1. OWNER'S Representative and other staff as appropriate.
 - 2. ENGINEER and his professional consultants as appropriate.
 - 3. CONTRACTOR's Representative and Construction Superintendent.
 - 4. Subcontractor's representative and construction superintendent.
 - 5. Utility representatives as appropriate.
 - 6. Others as appropriate.

- C. The following matters are expected to be addressed:
 - 1. Distribution and discussion of:
 - a. List of major subcontractors.
 - b. Project construction schedules.
 - 2. Critical work sequencing.
 - 3. Project Coordination.
 - 4. Designation of responsible personnel.
 - 5. Procedures and processing of:

-
- a. Field decisions.
 - b. Proposal requests.
 - c. RFI's
 - d. Submittals.
 - e. Change Orders.
 - f. Applications for Payment.
 6. Distribution of Contract Documents.
 7. Procedures for maintaining Record Documents.
 8. Use of premises:
 - a. Office, work and storage areas.
 - b. OWNER'S requirements.
 - c. Construction Staging Area
 9. Construction facilities, controls and construction aids.
 10. Temporary utilities.
 11. Housekeeping procedures.
 12. Insurance certifications.
 13. Liquidated damages for delay.
 14. Laboratory testing of material requirements.
 15. Contract Closeout.

1.03 Construction Progress Meetings

- A. Special construction progress meetings will be held as determined by the Owner or Engineer.
- B. The following are expected to be in attendance:
 1. OWNER Representative and other staff as appropriate.
 2. The ENGINEER.
 3. CONTRACTOR's Representative and/or construction Superintendent.
 4. Subcontractors as appropriate.
 5. Suppliers as appropriate.
 6. Others as appropriate.
- C. The following matters are expected to be addressed:
 1. Review and approve minutes of previous meeting.
 2. Review of work progress.
 3. Field observations, problems, conflicts.
 4. Problems which impede Construction Schedule.
 5. Review of off-site fabrication, delivery schedules.
 6. Corrective measures and procedures to regain Construction Schedule.
 7. Revisions to Construction Schedule.
 8. Progress and schedule during succeeding work period.
 9. Payment applications and processing.
 10. Submittals.
 11. Maintenance of quality standards.
 12. Changes, substitutions, and Change Orders.
 13. Review proposed changes for:
 - a. Effect on Construction Schedule and completion date.
 - b. Effect on other contracts of the Project.
 14. Other matters as appropriate.

-
15. Record drawings.
- D. The CONTRACTOR shall be prepared to discuss the above topics and to make commitments for resolving deficiencies.
- E. The CONTRACTOR shall provide a current submittal log at each progress meeting in accordance with Section 01340.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01340

SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

PART 1 GENERAL

1.01 Requirements Included:

- A. The Contractor shall submit to the Engineer for review and exception, if any, such working drawings, shop drawings, test reports and data on materials and equipment (hereinafter in this article called data), and material samples (hereinafter in this article called samples) as are required for the proper control of work, including but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.
- B. Within fifteen (15) calendar days after the Effective Date of the Agreement, the Contractor shall submit to the Engineer a complete list of preliminary data on items for which Shop Drawings are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way relieve the Contractor from submitting complete shop drawings, data, and samples in accordance with the Specifications. This procedure is required in order to expedite final review of Shop Drawings.
- C. The Contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting. This log should include the following items:
 - 1. Submittal Description and Number assigned.
 - 2. Date to Engineer.
 - 3. Date returned to Contractor (from Engineer).
 - 4. Status of Submittal (No exceptions taken, returned for confirmation or resubmittal, rejected).
 - 5. Date of Resubmittal and Return (as applicable).
 - 6. Date material released (for fabrication).
 - 7. Projected date of fabrication.
 - 8. Projected date of delivery to site.
 - 9. Status of O&M manuals submittal.

1.02 Contractor's Responsibility

-
- A. It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the Drawings and data shall bear Contractor's stamp showing that they have been so checked. Shop drawings submitted to the Engineer without the Contractor's stamp or evidence that the Contractor has not performed the required review will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the Contract Documents.
 - B. Determine and verify:
 - 1. Field measurements.
 - 2. Field construction criteria.
 - 3. Catalog numbers and similar data.
 - 4. Conformance with Specifications and indicate all variances from the Specifications.
 - C. The Contractor shall furnish the Engineer a schedule of Shop Drawing submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.
 - D. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him by the Engineer with no exceptions taken.
 - E. The Contractor shall submit to the Engineer all drawings and schedules sufficiently in advance of construction requirements to provide no less than twenty-one (21) calendar days for checking and appropriate action from the time the Engineer receives them.
 - F. The Contractor shall submit five (5) copies of shop drawings and descriptive or product data submittal to complement shop drawings to the Engineer which will be retained for his use.
 - G. The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by Engineer of the necessary shop drawings.
 - H. The Contractor shall utilize a Sequential Numbering System for submittals (1-999). Resubmittals or confirming material shall be assigned a letter next to the submittal number, i.e. A= second submittal, B= third submittal, etc.
 - I. Submittals shall include a certified statement of compliance to the requirements detailed in the specifications in addition to other submittal requirements. This certification shall be prepared by the manufacturer and not the local supplier. Validity of the authority and position of the person signing the certification shall be verified by a Notary Public. The statement of compliance shall address each point of conformance contained in the governing specifications with definite comments of either compliance or non-compliance. Statements of non-

compliance with points of conformance shall be accompanied by a statement of justification as to the reason for non-conformance and why the non-complying feature is considered to be either equal to or better than the specified feature. The Engineer will use the certified statement of compliance in his evaluation of the submittal rendering a judgment as to equality to the specified product and issuing a statement as to whether the product is acceptable for or rejected from incorporation into the work.

- J. When a manufacturer named in the controlling specification is chosen to supply a product and the details of manufacture, size, and installation are shown on this standard catalog cut sheets, the manufacturer may submit the certified statement of compliance as detailed above along with installation details specific to the work such as laying schedules, etc. as required, deleting the standardized catalog data.

1.03 Engineer's Review of Shop Drawings

- A. The Engineer's review of drawings, data and samples submitted by the Contractor will cover only general conformity to the Specifications, external connections, and dimensions which affect the installation.
- B. The review of drawings and schedules will be general, and shall not be construed:
 - 1. as permitting any departure from the Contract requirements;
 - 2. as relieving the Contractor of responsibility for any errors, including details, dimensions, omissions and materials;
- C. If the drawings or schedules as submitted describe variations per subparagraph (1.04.D), and show a departure from the Contract requirements which Engineer finds to be in the best interest of the Owner and to be so minor as not to involve a change in Contract Price or Time, The Engineer may return the reviewed Drawings without noting any exception.
- D. When reviewed by the Engineer, each of the shop drawings will be identified as having received such review being so stamped and dated. Shop Drawings stamped "NOT APPROVED" and with required corrections shown will be returned to the Contractor for correction and resubmittal.
- E. Resubmittals will be handled in the same manner as first submittals. The Contractor shall direct specific attention to revisions other than the corrections requested by the Engineer on previous submissions by written details or markings on the resubmitted Shop Drawings. The Contractor shall make any corrections required by the Engineer.
- F. If the Contractor considers any correction indicated on the Drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.
- G. The Engineer will review a submittal/resubmittal a maximum of three times after which cost of review will be borne by the Contractor. The cost of engineering shall be equal to the Engineer's charges to the Owner under the terms of the Engineer's agreement with the

Owner.

- H. When the Shop Drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions or approval from the Engineer.
- I. No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor, and will be considered "NOT APPROVED" until resubmitted.

1.04 SHOP DRAWINGS

- A. Shop drawings shall be complete and detailed.
- B. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the Contractor for resubmission.
- C. Each shop drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:
 - 1. Number and title of the drawing.
 - 2. Date of drawing or revision.
 - 3. Name of project building or facility.
 - 4. Name of contractor and subcontractor submitting drawing.
 - 5. Clear identification of contents and location of the work.
 - 6. Specification number and title.
- D. If Drawings show variations from Contract requirements because of standard Shop practice or other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such Drawings have been reviewed.
- E. Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material as required. Materials and equipment lists shall give for each item thereon the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish, and all other pertinent data.
- F. The Contractor shall provide a list including the equipment name, address, and telephone number of the manufacturer's representative and service company so that service and/or spare

parts can be readily obtained for all mechanical and electrical equipment furnished.

- G. All manufacturers or equipment suppliers who proposed to furnish equipment or products shall submit an installation list to the Engineer along with the required Shop Drawings. The installation list shall include at least five installations where identical equipment has been installed and has been in operation for a period of at least one (1) year.
- H. Only the Engineer will utilize the color red in marking Shop Drawing submittals.
- I. Before final payment is made, the Contractor shall furnish to Engineer five (5) sets of record shop drawings all clearly revised, complete and up to date showing the permanent construction as actually made for all reinforcing and structural steel, miscellaneous metals, process and mechanical equipment, yard piping, electrical system and instrumentation system.

1.05 Working Drawings

- A. Working drawings shall be considered to mean the Contractor's plans for temporary structures.
- B. Copies of working drawings as noted in subparagraph 1.02, shall be submitted to the Engineer where required by the Contract Documents or requested by the Engineer, and shall be submitted at least thirty (30) calendar days (unless otherwise specified by the Engineer) in advance of their being required for work.
- C. The Engineer will not review working drawings but shall use them as information to monitor the work performed by the Contractor.

1.06 Samples

- A. The Contractor shall furnish for the review of the Engineer samples required by the Contract Documents or requested by the Engineer. Samples shall be delivered to the Engineer as specified or directed and the Contractor shall prepay all shipping charges. Materials or equipment for which samples are required shall not be used in work until reviewed by the Engineer.
- B. Samples shall be of sufficient size and quantity to clearly illustrate:
 - 1. Functional characteristics of the product, with integrally related parts and attachment devices.
 - 2. Name of Contractor and Subcontractor
 - 3. Material or Equipment represented
 - 4. Place of Origin
 - 5. Name of Producer and Brand (if any).

6. Location in Project

(Samples of finished materials shall have additional marking that will identify them under the finished schedules.)

- C. The Contractor shall prepare a transmittal letter in triplicate for each shipment of samples containing the information required in subparagraph 1.06B above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the Engineer under separate cover and the remaining copy shall be for the Contractor's records. Review of a sample shall be only for the characteristics or use named and shall not be construed to change or modify any Contract requirements.
- D. Reviewed samples not destroyed in testing shall be sent to the Engineer or stored at the site of the work. Reviewed samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the reviewed samples. Samples which failed testing or were rejected will be returned to the Contractor at his expense, if so requested at time of submission.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Material and equipment incorporated into the Work shall:

- A. Conform to applicable specifications and standards.
- B. Comply with size, make, type, and quality specified to the greatest extent possible, detailing all aspects and providing explicit reasons for parameters not in compliance and specifically approved in writing by the Engineer.
- C. Manufactured and Fabricated Products:
 - 1. Design, fabricate, and assemble in accord with the best engineering and standard shop practices.
 - 2. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.
 - 3. Two or more items of the same kind shall be produced, by the same manufacturer.
 - 4. Products shall be suitable for service conditions.
 - 5. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
- D. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.02 APPROVAL OF MATERIALS

- A. Only new materials and equipment shall be incorporated in the Work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Engineer. No material shall be delivered to the Work without prior approval of the Engineer.
- B. The Contractor shall submit to the Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable the Engineer to identify the particular product along with references to the applicable section(s) of the specifications to form an opinion as to its conformity to the specifications. The data shall comply with Paragraph 1.06 of this Section.

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- C. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by the Contractor. If the Engineer requires, the Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the specifications. Such samples shall be furnished, stored, packed, and shipped as directed at the Contractor's expense. Except as otherwise noted, the Contractor will make arrangements for and pay for the tests. Where such tests confirm compliance with the specifications, the Owner will reimburse the actual charges of the testing firm paid by the Contractor.
 - D. Contractor shall submit data and samples sufficiently early to permit consideration, approval, manufacture, and delivery of materials before they are necessary for incorporation in the work. Any delay of approval resulting from the Contractor's failure to submit samples or data promptly shall not be used as a basis of claim against the Owner or the Engineer.
 - E. The materials and equipment used in the Work shall correspond to the approved samples or other data.

1.03 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

- A. When Contract Documents require that installation of the Work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including five copies to the Engineer. One complete set of the installation instructions shall be available for use on the job site during and through completion of the Work.
- B. Handle, install, connect, clean, condition and adjust products as required by the manufacturer's instructions and in conformity with specified requirements.
 - 1. Should the specified requirements conflict with the manufacturer's instructions, the manufacturer's instructions shall have priority unless changes are authorized in writing by the manufacturer.
 - 2. Should job conditions conflict with the manufacturer's instructions, consult with the manufacturer for clarification.
 - 3. Clarifications of installation instructions shall be issued only by the manufacturer, shall be in writing, and shall be distributed to all parties involved in the installation as stated above and prior to alteration of the installation procedures.
 - 4. Do not proceed with the Work without clear instructions concerning the specific installation procedures.
- C. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by the manufacturer.

1.04 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of Products as required by the currently approved construction schedule coordinating each delivery to avoid conflict with other work and conditions at the site.
 - 1. Deliver Products in a undamaged condition, in the manufacturer's original containers

or packaging and with identifying labels intact and legible.

2. Prior to accepting delivery, inspect shipments to assure compliance with approved submittal, and that the Products have been properly protected and are undamaged.
- B. Provide equipment and personnel to handle Products preventing soiling or damage to the Products or their protective packaging.

1.05 STORAGE AND PROTECTION

- A. Store Products in accord with manufacturer's instruction, with seals and labels intact and legible.
1. Store products subject to damage by the elements in weathertight enclosures.
 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
 3. Store fabricated products above the ground, on blocking or skids, prevent spoiling, staining or corrosion. Cover products which are subject to deterioration with impervious sheet coverings and provide adequate ventilation to avoid condensation.
 4. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- B. All materials and equipment to be incorporated in the Work shall be handled and stored in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and other injury, theft or damage.
- C. Cement and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All miscellaneous steel, structural steel and reinforcing steel shall be stored off the ground, kept free of accumulations of dirt and grease, and in areas free of standing water to minimize rusting. Precast concrete sections shall be handled and stored in a manner to prevent staining, chipping or cracking. Brick, block and similar masonry products shall be handled and stored in a manner to reduce staining, breaking, chipping, cracking, and spalling.
- D. All materials which, in the opinion of the Engineer, have become so damaged as to be unfit for the use intended, including aesthetics, shall be promptly removed from the site of the work.
- E. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections and exercise or rotate moving parts of stored products as required by the manufacturer to assure that products are maintained under specified conditions and free from damage or deterioration.
- F. Provide substantial coverings as necessary to protect installed products from damage caused by traffic and subsequent construction operations. Remove the protective covering when no longer needed.

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- G. The Contractor shall be responsible for all material, equipment, and supplies sold and delivered to the Owner under this Contract until final inspection of the Work and acceptance thereof by the Owner. In the event any such material, equipment, and supplies are lost, stolen, damaged, or destroyed prior to final inspection and acceptance they shall be replaced by the Contractor.
- H. Should the Contractor fail to take proper action to properly store and handle equipment supplied under this Contract, the Owner retains the right to notify the Contractor in writing of the deficiencies, to correct all deficiencies and deduct the cost associated with these corrections from the contractor's Contract. These costs may be comprised of expenditures for labor, equipment usage, administration, clerical, engineering and any other costs associated with making the necessary corrections.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 01630

SUBSTITUTIONS

PART 1 GENERAL

1.01 General

Requests for review of a substitution shall conform to the requirements of Article 6.05 of the General Conditions and shall contain complete data substantiating compliance of proposed substitution with Contract Documents.

1.02 Substitutions

- A. During a period of 30 days after execution of Contract, ENGINEER will consider written requests from CONTRACTOR for substitution of products or construction methods (if specified).
1. After end of specified period, requests will be considered only in case of unavailability of products or other conditions beyond control of CONTRACTOR.
 2. If the CONTRACTOR proposes to use products other than named manufacturers in the technical Specification, the ENGINEER reserves the right to require the CONTRACTOR to submit information within the first 30 days after the NOTICE TO PROCEED verifying that the proposed equipment will comply with the Specifications.
- B. Requests for review of a substitution shall conform to the requirements of Article 6.05 of the General Conditions, and shall contain complete data substantiating compliance of proposed substitution with the Contract Documents.
- C. In making request for substitution, CONTRACTOR represents:
1. CONTRACTOR has investigated proposed product or method, and determined that it is equal or superior in all respects to that specified.
 2. CONTRACTOR will provide the same or better warranties or bonds for proposed substitution as for product or method specified.
 3. CONTRACTOR waives all claims for additional costs or extension of time related to proposed substitution that subsequently may become apparent.
- D. Proposed substitutions will not be accepted if:
1. They are only shown or implied on the Shop Drawings.
 2. Acceptance will require substantial revision of Contract Documents.
 3. They will change design concepts or Specifications.
 4. They will delay completion of the Work, or the work of other contractors.
- E. The ENGINEER will determine whether substitute brands or products are equal to those specified in the Contract Documents. No substitute will be ordered or installed without the ENGINEER'S prior written acceptance.
- F. The OWNER may require CONTRACTOR to furnish at CONTRACTOR'S expense a

special performance guarantee or other surety with respect to any substitute.

- G. If the ENGINEER determines that a proposed substitute is not equal to that specified or described in the Drawings or Specifications, CONTRACTOR shall furnish one of the brands or products specified or described, at no additional cost to the OWNER.
- H. Engineering Costs:
1. The ENGINEER will record all time required in evaluating substitutions proposed by CONTRACTOR and in making any change in the Drawings or Specifications occasioned thereby. Whether or not the ENGINEER accepts a proposed substitute CONTRACTOR will reimburse the OWNER for the actual cost of the ENGINEER for evaluating any proposed substitute which either does not meet the requirements of the Drawings and Specifications, or the acceptance of which would require changes to other portions of the Work.
 2. CONTRACTOR shall reimburse OWNER for all associated engineering costs, including redesign, additional shop drawing reviews, investigations, consultant fees and revision of the Contract Documents required because of the substitution.
- I. The time required by the ENGINEER to evaluate and either accept or reject proposed substitutes is included in the Contract Time and no extension of the Contract Time shall be allowed therefore.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01710

CLEANING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Cleaning shall include daily "policing" of the work and surrounding areas to clear general debris waste paper, wood scraps, broken concrete, loose riprap, and other objectionable material along with the final cleanup of site(s) required for project acceptance. **DAILY CLEANUP IS REQUIRED.**

1.02 DISPOSAL REQUIREMENTS

Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute daily cleaning to keep the Work, the site and adjacent properties, free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
- B. Provide onsite containers for the collection of waste materials, debris and rubbish. All waste materials including containers, food debris and other miscellaneous materials must be disposed of daily in onsite containers.
- C. Remove demolished materials, waste, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

3.02 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Broom clean exterior paved surfaces and rake clean other surfaces of the grounds impacted by the work.
- D. Prior to final completion or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas to verify that the entire Work is clean.

*** * END OF SECTION * ***

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

Maintain at the site for the Owner one record copy of:

- A. Conformed Drawings.
- B. Conformed Specifications.
- C. Change Orders and other Modifications to the Contract.
- D. Engineer's Field Orders or written instructions.
- E. Approved Shop Drawings, Working Drawings and Samples.
- F. Field Test records.
- G. Construction photographs.
- H. Latest, Approved Progress Schedule.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in a manner and location to prevent damage.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI section numbers.
- C. Maintain documents in a clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by the Owner.
- E. As a prerequisite for monthly progress payments, the Contractor is to exhibit the currently updated "record documents" for review by the Owner.

1.03 MARKING DEVICES

Provide felt tip marking pens for recording information in the color code designated by the Owner.

1.04 RECORDING

- A. Label each document "PROJECT RECORD" with rubber stamp.
- B. Record information concurrently with construction progress and do not conceal any work until required information is recorded.
- C. Legibly mark drawings to record actual construction (as-built drawings):
 - 1. The Contractor shall use the following color code in marking Contract Drawings:
 - a. Yellow for no change.
 - b. Red to indicate additions, deletions and changes.
 - 2. Elevations of various structure elements in relation to elevation datum.
 - a. Elevations referenced to control points established by the Owner's agent.
 - b. Specifically, elevations of drainage culvert inverts, ditch grades, top of roadway and driveway curbs, bridges, etc.
 - 3. Location of internal utilities and appurtenances concealed in the construction by referencing to visible and accessible features of the structure.
 - 4. Field changes of dimension and detail.
 - 5. Changes made by Field Order or by Change Order.
 - 6. Details not on original contract drawings.
- D. Specifications and Addenda; Legibly mark each Section to record:
 - 1. Manufacturer, trade name, catalog number, and Supplier of each Product and item of equipment actually installed.
 - 2. Changes made by Field Order or by Change Order.
- E. Shop Drawings (with Engineer's review stamp).
- F. Construction photographs (electronic copies on dvd):
 - 1. Minimum 4 photos (2 @ N. wall, 2 @ S. wall) of floor framing repair (prior to wood flooring installation,
 - 2. Minimum 2 photos (1 @ N. wall, 1 @ S. wall) of finished wood flooring and base

trim,

3. Minimum 3 photos (1 @ N. door threshold, 1 @ S. door threshold, 1 @ W. door threshold)

1.05 SUBMITTAL

- A. At Contract close-out, deliver Record Documents to the Owner.
- B. Accompany submittal with transmittal letter in duplicate, containing:
 1. Date.
 2. Project title and number.
 3. Contractor's name and address.
 4. Title and number of each Record Document.
 5. Signature of Contractor or his authorized representative.
- C. At Contract close-out, deliver a copy of the as-built drawings to the Engineer.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION(NOT USED)

*** * END OF SECTION * ***

SECTION 01740

WARRANTIES AND BONDS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds, as in Articles 5 and 13 of the General Conditions.
- B. Co-execute submittals when so specified.
- C. Review submittals to verify compliance with Contract Documents.
- D. Submit to the Owner for review.

1.02 SUBMITTAL REQUIREMENTS

- A. Assemble and include warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, couplers, and subcontractors including effective dates.
- B. Number of original signed copies required. Two (2) each.
- C. Table of Contents. Neatly typed in orderly sequence. Provide complete information for each item.
 - 1. Product or work item.
 - 2. Firm, with name of principal, address and telephone number.
 - 3. Scope.
 - 4. Date of beginning warranty, and bond.
 - 5. Duration of warranty.
 - 6. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect the validity of warranty or bond.
 - 7. Contractor, name of responsible principal, address and telephone number.

1.03 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 - 1. Size 8-1/2-inches x 11-inches, punch sheets for standard 3-post binder.
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS." List:
 - a. Title of Project.
 - b. Name of Contractor.
- C. Binders: Commercial quality, three-post binder, with durable and cleanable plastic covers and maximum post width of 2-inches, "D" ring.

1.04 WARRANTY SUBMITTAL REQUIREMENTS

- A. For all components of the work, unless stated otherwise in the specifications for each individual item of equipment, submit a written warranty from the manufacturer to replace promptly any component thereof which, in the sole opinion of the Engineer, has defects in design, workmanship, materials, or performance within a one (1) year period following the date of acceptance for operation (Substantial Completion) by the Owner. The manufacturer's warranty period shall be concurrent with the Contractor's for one (1) year, unless otherwise specified, commencing at the time of acceptance for operation (beneficial use) by the Owner and shall be read in conjunction with the Contractor's warranty which shall operate together to provide for replacement of defective components and restoration of proper operation. The Contractor shall be solely responsible for both warranties.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

*** * END OF SECTION * ***

SECTION 06100
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Wood blocking, metal blocking, cants, and nailers.
 2. Rooftop equipment bases and support curbs.

1.2 RELATED WORK

- A. Section 07411 – Metal Roof System

1.3 QUALITY ASSURANCE

- A. Rouge Grade Carpentry – Visible grade-mark of mill licensed by SPIB.
- B. Lumber grading rules and wood species shall be in conformance with PS 20. Materials furnished under this section shall comply with the grading rules of SPIB.
- C. Identify all lumber and plywood by the mark of a approved testing and grading agency.
- D. Testing: ASTM E-84, maximum 25 flame spread rating.

1.4 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials, both before and after exposure to elevated temperatures when tested according to ASTM D 5516 and ASTM D 5664.
 3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to

Project site.

4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
5. Manufacturers' product data for construction adhesive, including printed statement of VOC content.
6. Composite wood manufacturer's product data for each composite wood product used indicating that bonding agent used contains no urea formaldehyde.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
 1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 3. Provide dressed lumber, S4S, unless otherwise indicated.
 4. Provide dry lumber with 15 percent maximum moisture content at time of dressing for 2inch nominal thickness or less, unless otherwise indicated.
- B. Plywood Panels:
 1. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated.
 2. Thickness: As needed to comply with requirements specified but not less than thickness indicated.
 3. Factory mark panels according to indicated standard.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPA C2 (lumber) and AWPA C9 (plywood), except that lumber that is not in contact with the ground and is continuously

protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and not containing arsenate.
- B. Kiln-dry material after treatment to maximum moisture content of 19 percent for lumber and 15 percent for plywood. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete in exterior walls and at roof substrate/structure.

2.3 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including the following:
 1. Rooftop equipment bases and support curbs.
 2. Blocking.
 3. Cants.
 4. Nailers.
 5. Furring.
 6. Grounds.
- B. For items of dimension lumber size, provide Construction, Stud, or No. 2 grade lumber with 15 percent moisture content.

2.4 PANEL PRODUCTS

- A. Miscellaneous Concealed Plywood: Exposure 1 sheathing, span rating to suit framing in each location, and thickness as indicated but not less than 5/8”.
- B. Telephone and Electrical Equipment Backing Panels, Including those at Water Treatment: DOC PS 1, Exposure 1, A-C Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 5/8” thick.

2.5 FASTENERS

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- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Section for material and manufacture.
 - 1. Where wood is exposed to weather, in ground contact or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153 or stainless steel.
 - 2. Fasteners in contact with preservative-treated wood: Fasteners, including nuts and washers shall be either: hot-dipped galvanized steel, stainless steel, silicon bronze or copper. Fasteners other than nails, timber rivets, wood screws and lag screws shall be permitted to be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B 695, Class 55 minimum. Connectors that are used in exterior applications shall have coating types and weights in accordance with the treated wood or connector manufacturer's recommendations, but a minimum of ASTM A 653, type G185 zinc-coated galvanized steel, or equivalent, shall be used.
 - B. Nails, Wire, Brads, and Staples: FS FF-N-105.
 - C. Wood Screws: ASME B18.6.1.
 - D. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
 - E. Bolts: Steel bolts complying with ASTM A 307, Grade A with ASTM A 563 hex nuts and, where indicated, flat washers.
 - F. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
 - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

2.6 MISCELLANEOUS MATERIALS

- A. Adhesive, Including Gluing Furring and Sleepers to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by roofing Manufacturer.
 - 1. Use adhesives that have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- B. Metal stud backing (alternate to replace wood blocking) as follows:
 - 1. "Notch Tite" brand Flat-Reinforced Backing (1.25 x 6" x 16 GA; 9'-4" length)

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2. "Metal-Lite" brand flush mount backing (1.25" x 6" x 14 GA)

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- C. Apply field treatment complying with AWPAC M4 to cut surfaces of preservative-treated lumber and plywood.
- D. Securely attach carpentry work as indicated and according to applicable codes and recognized standards.
- E. Countersink fastener heads on exposed carpentry work and fill holes with wood filler.
- F. Use fasteners of appropriate type and length. Pre-drill members when necessary to avoid splitting wood.
- G. Cutting and Repairing: Do such work as normally required and done for mechanical and other trades.
- H. Blocking: Furnish and install blocking, furring, brackets, etc., as required to properly carry out all work shown and reasonably inferred by the Drawings and Specifications.
- I. Underlayment Installation:
 1. Acclimate underlayment by standing individual panels on edge in rooms where they are to be installed 24 to 48 hours prior to installation.
 2. Plywood underlayments shall be installed immediately before laying finished floor.
 3. Install plywood underlayment smooth side up with face grain perpendicular to floor joists. Stagger end joints in underlayment panels and offset end and edge joints of underlayment panels by at least two inches from joints in SW floor panels.
* Panel edge and ends shall be space 1/16".
 4. Underlayment nailing shall be 3" o.c. along edge 3/8" minimum to 1/2" maximum from edge and 6" o.c. each way in field. Begin in corner adjacent to previous panels working diagonally across to opposite corner. **DO NOT TACK PANELS FIRST.**

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- J. Nailers and Wood Cants: Nailers, 2" stock unless otherwise noted, of the proper widths. Bevel nailers for concrete ½" both sides and properly place in forms. Bolt nailers in place on steel or masonry. Furnish ledgers bolted to wall in locations shown and as required.
 - K. Shoring: Furnish and place all necessary shoring and bracing of types and sizes best suited for the conditions to be met. Shoring must comply with all governing requirements.
 - L. Provide wood curbs, required blocking and cants around all openings through the roof indicated on all architectural, mechanical and electrical drawings. Check drawings for all trades and furnish for all openings indicated.
 - M. Plywood Backer Boards:
 - 1. Electrical, telephone, video and alarm equipment locations: install 5/8" plywood over gypsum board, fastening into studs @ 8" o.c. Seal all vertical joints top, bottom and ends with Tremco sealant.
 - 2. Water Treatment Equipment: Install 5/8" exterior grade plywood over gypsum board. Finish with Class A FRP, panels to be butt jointed where they meet another panel. Apply Type IA acrylic fire stop sealant along all top and side top edges.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

END OF SECTION

SECTION 07210

BUILDING INSULATION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Blanket-type insulation, thermal blocks, steel straps (bands), fabric liner and related items as required and as specified herein.

1.02 SUBMITTALS

- A. Product data for insulation specified to Design Professional in Responsible Charge that verifies the insulation meets or exceeds the requirements of the Contract Documents.
- B. Product installation instructions.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

Provide from the following:

- A. Thermal Design.
- B. Therm-All.
- C. Owens-Corning.
- D. Certain-Teed Corp.
- E. John Manville.

2.02 MATERIALS

- A. Unless more stringent requirements are noted on the drawings, provide blanket insulation with and without facing with minimum R-value = R-19 + R-11 LS.
- B. Provide flame spread index not more than 25 (per ASTM E 84 or UL 723).
- C. Provide smoke spread index not more than 450 (per ASTM E 84 or UL 723).
- D. Adhesives, fasteners, support straps, fabric liner: As recommended by Manufacturer.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Examine and clean existing roof structure in compliance with the asbestos test report, Appendix A.
- B. Verify adjacent materials are dry and ready to receive insulation.
- C. Verify mechanical and electrical services within plenum have been installed and tested.

3.02 INSTALLATION

- A. Install vapor barrier, straps, fiberglass insulation and thermal blocks in accordance with manufacturer's instructions. R-19 batt perpendicular to purlins and R-11 LS batt parallel to purlins.
- B. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within the plane of insulation. Leave no gaps or voids.
- C. Take special care to ensure that plane of insulation is continuous; leave no gaps or voids.

END OF SECTION

SECTION 07411
METAL ROOF SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Trapezoidal-rib, seamed joint, standing seam metal roof panels, with related metal trim and accessories.
- B. Removal and disposal of existing asbestos-containing materials (ACM).
- C. Removal and disposal of existing metal roofing, roofing insulations and appurtenances.

1.2 RELATED SECTIONS

- A. Section 07210 - Building Insulation.
- B. Section 07900 – Sealants
- C. Appendix A – Asbestos Bulk Sampling Report by Earthcon (November 15, 2017)

1.3 REFERENCES

- A. American Architectural Manufacturer's Association (AAMA): www.aamanet.org:
 - 1. AAMA 621 - Voluntary Specifications for High Performance Organic Coatings on Coil Coated Architectural Hot Dipped Galvanized (HDG) & Zinc-Aluminum Coated Steel Substrates.
 - 2. AAMA 809.2 - Voluntary Specification Non-Drying Sealants.
- B. American Society of Civil Engineers (ASCE): www.asce.org/codes-standards:
 - 1. ASCE 7-10 - Minimum Design Loads for Buildings and Other Structures.
- C. ASTM International (ASTM): www.astm.org:
 - 1. ASTM A 653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 2. ASTM A 755 - Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
 - 3. ASTM A 792/A 792M - Standard Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.

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4. ASTM A 980 - Standard Specification for Steel, Sheet, Carbon, Ultra High Strength Cold Rolled.
 5. ASTM C 645 - Specification for Nonstructural Steel Framing Members.
 6. ASTM C 920 - Specification for Elastomeric [Joint Sealants](#).
 7. ASTM D 1003 - Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics.
 8. ASTM D 2244 - Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.
 9. ASTM D 4214 - Test Methods for Evaluating Degree of Chalking of Exterior Paint Films.
 10. ASTM E 1514 - Standard Specification for Structural Standing Seam Steel Roof Panel Systems.
 11. ASTM E 1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.
 12. ASTM E 1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference.
 13. ASTM E 1680 - Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems.
 14. ASTM E 1980 - Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.
- D. FM Global (FM): www.fmglobal.com:
1. ANSI/FM 4471 - Approval Standard for Class 1 Panel Roofs.
- E. International Accreditation Service (IAS):
1. IAS AC 472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems, Part B.
- F. Underwriters Laboratories, Inc. (UL): www.ul.com:
1. UL 580 - Tests for Uplift Resistance of Roof Assemblies

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Prior to start of work, conduct preinstallation meeting at the site attended by Owner, Design Professional in Responsible Charge (DPRC), Manufacturer's technical representative, Installer supervisor and related trade contractors.
1. Review highlights of "Asbestos Bulk Sampling Report" (App. A).

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2. GC to provide copies of action items required during the work as recommended in the asbestos test report (App. A).
 3. Discuss roof demolition and removal, and safety-related issues.
 4. Review methods and procedures related to roofing installation, including Manufacturer's written instructions.
 5. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - a. Verify Installer's supervisor and contact information.
 - b. If Installer's supervisor is different from the one approved (per paragraph 1.5), provide supervisor's qualifications per paragraph 1.6 and contact information.
 6. Examine existing conditions as required for final clarifications.
 7. Review base flashing, special roofing details, roof drainage, roof penetrations, equipment curbs, and conditions of other construction that will affect roofing system.
 8. Review governing regulations and requirements for insurance and certificates if applicable.
 9. Review temporary protection requirements for roofing system during and after installation.
 10. Review RFI procedures.
 11. Review procedures for DPRC's observations during the work.
 12. Review roof observation and repair procedures after roofing installation.
 13. There shall be no deviations made from this specification or the approved shop drawings without the prior written approval of the specifier. Any deviation from the manufacturer's installation procedures must be supported by a written certification on the manufacturer's letterhead and presented for the specifier's consideration.
 14. Upon completion of the installation, the Installer shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer to determine whether corrective work will be required before the warranty will be issued. Notify the building owner and DPRC seventy-two (72) hours prior to the manufacturer's final inspection.

1.5 QUALITY ASSURANCE

- A. Manufacturer/Source: Provide metal roof panel assembly and accessories from a single Manufacturer providing fixed-base roll forming, and accredited under IAS AC 472 Part B.
- B. Manufacturer Qualifications: Approved Manufacturer listed in this Section, or submit Manufacturer for approval with minimum five years' experience in manufacture of standing seam metal roof products in successful use in similar commercial or industrial applications.
 - 1. Substitutions are allowed as stipulated in Division 01 General Requirements.
 - 2. Approved manufacturer's must meet separate requirements of Submittals Article.
- C. Installer Qualifications: shall be certified by metal panel Manufacturer with minimum of five (5) years' experience with successfully completed projects of a similar nature and scope.
- D. Installer's Qualifications:
 - 1. Certified by metal panel Manufacturer approved for the work.
 - 2. Five (5) years minimum experience with successfully completed projects of a similar nature and scope.
- E. Installer's Field Supervisor shall:
 - 1. Have a minimum of five (5) years' experience as a supervisor of metal building and/or metal roof system installation.
 - 2. Have experience as a supervisor of standing seam metal roof installations for at least three (3) projects within the past two (2) years.
 - 3. Be on site at all times when metal roofing work is in progress.
- F. All local, state and federal laws shall be followed for removal and disposal of existing ACM.

1.6 ACTION SUBMITTALS

- A. Product Data: Manufacturer's data sheets for specified products.
- B. Shop Drawings: Show layouts of metal panels. Include details of each condition of installation, panel profiles, and attachment to building. Provide details at a minimum scale 1-1/2-inch per foot of edge conditions, joints, fastener and sealant placement, flashings, openings, penetrations, roof accessories (e.g. gutters, downspouts, lightning

arresting equipment) and special details. Make distinctions between factory and field assembled work.

1. Indicate points of supporting structure that must coordinate with metal panel system installation.
 2. Include data indicating compliance with performance requirements.
 3. Include structural data indicating compliance with requirements of authorities having jurisdiction.
- C. Samples for Initial Selection: For each exposed product specified including sealants. Provide representative color charts of Manufacturer's full range of colors.
- D. Samples for Verification: Provide 12-inch long section of each metal panel profile. Provide color chip verifying color selection.

1.7 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: Indicating compliance of products with project requirements, witnessed by a professional engineer.
- B. Qualification Information: For Installer firm and Installer's field supervisor.
- C. IAS Accreditation Certificate: Indicating that Manufacturer is accredited under provisions of IAS AC 472.
- D. Certification by professional engineer that design of the roof system meets or exceeds the minimum requirements of the Contract Documents.
- E. Manufacturer's Warranty: Sample copy of Manufacturer's standard warranty.

1.8 CLOSEOUT SUBMITTALS

- A. Maintenance data.
- B. Manufacturer's Warranty: Executed copy of Manufacturer's standard warranty.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Protect products of metal panel system during shipping, handling, and storage to prevent staining, denting, deterioration of components or other damage. Protect panels and trim bundles during shipping.
1. Deliver, unload, store, and erect metal panel system and accessory items without misshaping panels or exposing panels to surface damage from weather or construction operations.
 2. Store in accordance with Manufacturer's written instructions. Provide wood collars for stacking and handling in the field.

1.10 COORDINATION

- A. Coordinate sizes, profiles, and locations of roof curbs and other roof-mounted equipment and roof penetrations, based upon sizes of actual selected equipment.
- B. Coordinate mechanical, electrical and other trades as required to complete the work.
- C. Verify existing structure as required to prosecute the work prior to roof panel selection/design by Manufacturer.

1.11 WARRANTY

- A. Special Weathertightness Warranty: On Manufacturer's standard form, in which Manufacturer agrees to repair or replace metal panel assemblies that fail to remain weathertight, including leaks, without monetary limitation within twenty (20) years from date of Substantial Completion.
- B. Special Panel Finish Warranty: On Manufacturer's standard form, in which Manufacturer agrees to repair or replace metal panels that evidence deterioration of factory-applied finish within twenty (20) years from date of Substantial Completion, including:
 - 1. Fluoropolymer Two-Coat System:
 - a. Color fading more than 5 Hunter units per ASTM D 2244.
 - b. Chalking in excess of No. 6 rating per ASTM D 4214.
 - c. Failure of adhesion, peeling, checking, or cracking.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Basis of Design Manufacturer: **MBCI Metal Roof and Wall Systems, Division of NCI Group, Inc.**; Houston TX. Tel: (877)713-6224; Email: info@mbci.com; Web: www.mbci.com.
 - 1. Provide basis of design product, or comparable product approved by DPRC.

2.2 PRE-APPROVED MANUFACTURERS

- A. MBCI
- B. Reed's Metals
- C. Kirby Building Systems (a.k.a. Gulf States)
- D. ACI Building Systems

2.3 PERFORMANCE REQUIREMENTS

- A. General: Provide metal roof panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on Manufacturer's standard assemblies.
- B. System Performance: Comply with ASTM E 1514 and requirements of this Section.
- C. Delegated Design: Design of metal roof panel assembly shall be supervised by a qualified professional engineer in the state of the project using the performance requirements and design criteria noted in the Contract Documents. Whenever there is a conflict between these requirements and criteria, the more stringent shall govern.
- D. Structural Performance: Provide metal panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated:
 - 1. Wind Loads: Determine loads based on uniform pressure, importance factor, exposure category, and basic wind speed indicated on Contract Drawings.
 - a. Wind Uplift Testing: Certify capacity of metal panels by actual testing of proposed assembly per ASTM E 1592.
 - b. Wind Uplift Resistance: Unless noted otherwise on the Contract Drawings, comply with UL 580 for wind-uplift class UL-90.
 - 2. Snow Loads: As indicated.
 - 3. Deflection Limits: Withstand inward and outward wind-load design pressures in accordance with ASCE 7 with maximum deflection as follows of the span with no evidence of failure or excessive deflection:
 - a. Live: span/180
 - b. Wind: span/180
 - c. Dead + live: span/120
- E. Air Infiltration, ASTM E 1680:
 - 1. Maximum 0.0001 cfm/sq. ft. (0.001 L/s per sq. m) of roof area at test-pressure difference of -1.57 lbf/sq. ft. (-75.2 Pa).
 - 2. Maximum 0.0028 cfm/sq. ft. (0.014 L/s per sq. m) of roof area at test-pressure difference of -20.00 lbf/sq. ft. (-958 Pa).
- F. Water Penetration Static Pressure, ASTM E 1646: No uncontrolled water penetration at a static pressure of 20 lbf/sq. ft.
- G. Thermal Movements: Allow for thermal movements from variations in both ambient and internal temperatures. Accommodate movement of support structure caused by thermal expansion and contraction. Allow for deflection and design for thermal stresses caused by temperature differences from one side of the panel to the other.

H. Hail Resistance: Provide assembly listed with UL as Class 4 hail resistant (or better).

2.4 METAL ROOF PANELS

- A. Mechanically Seamed, Concealed Fastener, Trapezoidal Seam Metal Roof Panels: Structural metal roof panel consisting of formed metal sheet with raised trapezoidal ribs at panel edges, installed by lapping and mechanically interconnecting edges of adjacent panels, and attaching panels to supports using concealed clips and fasteners in a weathertight installation.
1. Basis of Design: MBCI, Double-Lok, www.mbc.com/doublelok.html.
 2. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792, structural quality, Grade 50, Coating Class AZ50, prepainted by the coil-coating process per ASTM A 755/A 755M.
 - a. Nominal Thickness: 24 gage coated thickness.
 - b. Panel Surface: Smooth with minor ribs in pan.
 - c. Exterior Finish: Fluoropolymer two-coat system.
 - d. Color: As selected by Owner from Manufacturer's standard colors.
 3. Panel Width: 24 inches.
 4. Panel Seam Height: Not less than 2-3/8 inch.
 5. Joint Type: Double folded.

2.5 METAL ROOF PANEL ACCESSORIES

- A. General: Provide complete metal roof panel assembly incorporating trim, copings, fasciae, gutters and downspouts, and miscellaneous flashings, in Manufacturer's standard profiles. Provide required fasteners, closure strips, splice plates, support plates, and sealants as indicated in Manufacturer's written instructions and in the Contract Documents.
- B. Flashing and Trim: Match material, thickness (min. of 0.024 inch), and finish of metal panel face sheet.
- C. Two Piece Floating Clips: ASTM C 645, with ASTM A 653, G90 (Z180) hot-dip galvanized zinc coating, configured for concealment in panel joints, and identical to clips utilized in tests demonstrating compliance with performance requirements.
- D. Panel Fasteners: Self-tapping screws and other acceptable corrosion-resistant fasteners recommended by roof panel Manufacturer. Where exposed fasteners cannot be avoided, supply fasteners with EPDM or neoprene gaskets, and heads matching color of metal panels by means of factory-applied coating.

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- E. Joint Sealers: Manufacturer's standard or recommended liquid and preformed sealers and tapes, and as follows:
 - 1. Factory-Applied Seam Sealant: Manufacturer's standard hot-melt type.
 - 2. Tape Sealers: Manufacturer's standard non-curing butyl tape, AAMA 809.2.
 - F. Steel Sheet Miscellaneous Framing Components: ASTM C 645, with ASTM A 653, G60 hot-dip galvanized zinc coating.
 - G. Closures: Provide closures at ridge and eaves of the same metal as the roof panels.
 - H. Backing Plates: Provide metal backing plates at panel end splices fabricated from the material recommended by the Manufacturer.
 - I. Pipe Penetration Flashings: Flexible boot type with stainless steel compression ring and stainless steel pipe strap with silicone-type boots at hot pipes.
 - J. Gutters and Downspouts: Formed from same material as roof panels. Match profile of gable trim, complete with end pieces, outlet tubes, and other items as required. Fabricate in minimum of 96" long sections and in accordance with SMACNA's "Architectural Sheet Metal Manual." Furnish gutter supports from same material as gutters and spaced at a maximum of 36" o.c. Provide aluminum wire ball strainers at outlets. Finish TBD by Owner.
 - K. Roof Curbs: Fabricate from aluminum sheet, minimum of 0.080" thick with bottom skirt profiled to match roof panel profile, and welded top box, integral with internal fastener flange, and water diverter. Fabricate curb and subframing to withstand indicated loads, and of size indicated and/or as verified. Finish to match roof panels.
 - 1. Insulate roof curb with 1" thick rigid insulation.

2.6 FABRICATION

- A. Contractor shall verify dimensions and relevant structural conditions prior to fabrication.
- B. General: Provide factory fabricated and finished metal panels and accessories meeting performance requirements, indicated profiles, and structural requirements.
- C. Fabricate metal panel joints configured to accept factory-applied sealant providing weathertight seal and preventing metal-to-metal contact and minimizing noise resulting from thermal movement.
- D. Form panels in continuous lengths for full length of detailed runs, except where otherwise indicated on approved shop drawings.
- E. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with Manufacturer's written instructions, approved shop drawings, and project drawings. Form from materials matching metal panel substrate and finish.

2.7 FINISHES

- A. Finishes, General: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin Manufacturers' written instructions.
- B. Fluoropolymer Two-Coat System: 0.2 – 0.3 mil primer with 0.7 - 0.8 mil 70 percent PVDF fluoropolymer color coat, AAMA 621.
 - 1. Basis of Design: MBCI, Signature 300.
- C. Interior Finish: 0.5 mil total dry film thickness consisting of primer coat and wash coat of Manufacturer's standard light-colored acrylic or polyester backer finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Remove and properly dispose of existing ACM in accordance with the recommendations of App. A.
- B. Remove existing roof panels, insulation and related appurtenances and dispose of legally off-site.
- C. Examine metal panel system substrate. Inspect for allowable tolerances and other conditions that would adversely affect installation of metal panel installation.
 - 1. Inspect metal panel support substrate to determine if support components are sufficient. Confirm presence of acceptable supports at recommended spacing to match installation requirements of metal panels.
 - 2. Panel Support Tolerances: Confirm that panel supports are within tolerances acceptable to metal panel system Manufacturer but not greater than the following:
 - a. 1/4 inch in 20 feet in any direction.
 - b. 3/8 inch over any single roof plane.
- D. Upon discovery of damaged or substandard roof structure, notify DPRC.
- E. Correct out-of-tolerance work and other deficient conditions prior to proceeding with metal roof panel system installation.

3.2 PREPARATION

- A. Prepare mechanical, electrical and other appurtenances as required to complete the work.

-
- B. Miscellaneous Supports: Install subframing, girts, furring, and other miscellaneous panel support members according to ASTM C 754 and Manufacturer's written instructions.
 - C. Insulation: Provide and install in accordance with Section 07211 "Pre-engineered Building Insulation" and approved shop drawings.
 - D. Flashings: Provide flashings as required to complete metal roof panel system. Install in accordance with Section 07620 "Sheet Metal Flashing and Trim" and approved shop drawings.

3.3 METAL PANEL INSTALLATION

- A. Mechanically-Seamed, Trapezoidal Standing Seam Metal Roof Panels: Install weathertight metal panel system in accordance with Manufacturer's written instructions, approved shop drawings, and project drawings. Install metal roof panels in orientation, sizes, and locations indicated, free of waves, warps, buckles, fastening stresses, and distortions. Anchor panels and other components securely in place. Provide for thermal and structural movement.
- B. Attach panels to supports using clips, screws, fasteners, and sealants recommended by Manufacturer and indicated on approved shop drawings.
 - 1. Fasten metal panels to supports with concealed clips at each location indicated on approved shop drawings, with spacing and fasteners recommended by Manufacturer.
 - 2. Seamed Joint: Crimp standing seams with Manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.
 - 3. Provide weatherproof jacks for pipe and conduit penetrating metal panels of types recommended by Manufacturer.
 - 4. Dissimilar Materials: Where elements of metal panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by Manufacturer.

3.4 ACCESSORY INSTALLATION

- A. General: Install metal panel trim, flashing, and accessories using recommended fasteners and joint sealers, with positive anchorage to building, and with weather tight mounting. Provide for thermal expansion. Coordinate installation with flashings and other components.
 - 1. Install components required for a complete metal panel assembly, including trim, copings, flashings, sealants, closure strips, and similar items.
 - 2. Comply with details of assemblies utilized to establish compliance with performance requirements and Manufacturer's written installation instructions.

-
3. Provide concealed fasteners except where noted on approved shop drawings.
 4. Set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently weather resistant.
- B. Joint Sealers: Install joint sealers where indicated and where required for weathertight performance of metal panel assemblies, in accordance with Manufacturer's written instructions.
1. Prepare joints and apply sealants per requirements of Division 07 Section "[Joint Sealants](#)."

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports.
- B. Final Roof Inspection: Contractor shall arrange for roofing system Manufacturer's certified representative to inspect roofing installation on completion and submit report to DPRC.
1. Notify DPRC and Owner 72 hours in advance of date and time of inspection.
- C. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.6 CLEANING AND PROTECTION

- A. Remove temporary protective films immediately in accordance with metal roof panel Manufacturer's instructions. Clean finished surfaces as recommended by metal roof panel Manufacturer.
- B. Replace damaged panels and accessories that cannot be repaired to the satisfaction of the DPRC.
- C. Perform daily clean up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.
- D. Prior to the Manufacturer's inspection for warranty, the Installer must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

END OF SECTION

SECTION 07900

SEALANTS AND CAULK

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Furnish all materials, labor, equipment, and incidentals required to perform all caulking, sealants, joint fillers, gaskets, and related work necessary for the proper completion of the project as required by the Contract Documents.

1.02 RELATED WORK

- A. Section 07411 – Metal Roof System.

1.03 REFERENCES

- A. ASTM C834 - Standard Specification for Latex Sealing Compounds
- B. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications.
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants
- D. ASTM C1193 - Standard Guide for Use of Joint Sealants
- E. ASTM D1667 - Standard Specification for Flexible Cellular Materials - Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam)
- F. National Sanitation Foundation (NSF): ANSI/NSF Standard 61 - Drinking Water System Components-Health Effects

1.04 SUBMITTALS

- A. Submit to the ENGINEER for review in accordance with the provisions of Section 01340, product data including detailed product information and colors on materials proposed and material installation methods.
- B. Submit for review two sets of special-colored sealant samples in representative quantities.
- C. Submit certification by the manufacturer that the products supplied comply with local regulations controlling the use of volatile organic compounds (VOCs).

1.05 ENVIRONMENTAL REQUIREMENTS

-
- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.06 WARRANTY

- A. Provide a five-year warranty for exterior sealants.
- B. Warranty: Replace sealants which fail because of loss of cohesion or adhesion, or do not cure.

PART 2 - PRODUCTS

2.01 SEALANTS

- A. General Purpose Exterior Sealant: Polyurethane; ASTM C920, Grade NS, Class 25, Uses M, G, and A multi-component.
 - 1. Standard colors matching finished surfaces.
 - a. Control, expansion, and soft joints in masonry.
 - b. Joints between concrete and other materials.
 - c. Joints between metal frames and other materials.
 - d. Other exterior joints for which no other sealant is indicated.
- B. Exterior Metal Lap Joint Sealant: Butyl or polyisobutylene, nondrying, non-skinning, non-curing.
 - 1. Applications: Use for:
 - a. Concealed sealant bead in sheet metal work.
 - b. Concealed sealant bead in siding overlaps.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Verify that substrate surfaces and joint openings are ready to receive Work.
- B. Verify that joint backing and release tapes are compatible with sealant.
- C. Remove loose materials and foreign matter that might impair adhesion of sealant.
- D. Clean and prime joints in accordance with manufacturer's instructions.
- E. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

3.02 INSTALLATION

-
- A. Perform Work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
 - B. Perform installation in accordance with ASTM C1193.
 - C. Perform acoustical sealant application Work in accordance with ASTM C919.
 - D. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
 - E. Install bond breaker where joint backing is not used.
 - F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
 - G. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
 - H. Tool joints concave.

3.03 CLEANING

- A. Clean adjacent soiled surfaces.

3.04 PROTECTION OF FINISHED WORK

- A. Protect sealants until cured.
- B. Remove and replace sealants that have been damaged during construction or are not acceptable.

END OF SECTION

APPENDIX 'A'



EarthCon Consultants, Inc.
Post Office Box 1246
Madison, Mississippi 39130

Phone: 601-853-2134
Fax: 601-856-3978
Toll-Free: 877-389-6476
www.earthcon.com

November 15, 2017

Mr. Danny Lee
Madison County Board of Supervisors
Post Office Box 608
Canton, Mississippi 39046
Phone: (601) 855-5533; Fax: (601) 826-9011

Re: Asbestos Bulk Sampling Report
Madison County Emergency Management Services Complex
1633 West Pence Street
Canton, Mississippi
EarthCon Project No. 02.20170326.55

Dear Mr. Lee:

On October 20, 2017, EarthCon Consultants, Inc. (EarthCon) conducted an asbestos bulk sampling of the metal roof material at the Madison County Emergency Management Services Complex located at 1633 West Pence Street in Canton, Mississippi. The sampling was conducted by Mr. W. Hal Moore, Mississippi Certification No. ABI-00002284, expiration date January 25, 2018, and Mr. Reginald Sampson, Mississippi Certification No. ABI-00001921, expiration date September 28, 2018, to evaluate the roof for the presence of asbestos-containing materials (ACMs) prior to replacement. This report describes the inspection tasks and presents our findings and recommendations.

Copies of the Inspectors' certifications are found in Attachment A.

At the time of the inspection, all areas of the client specified structure were accessible and were visually inspected. ACM materials were identified and the locations are indicated on Figure 1.

During the survey, eight (8) representative samples of suspect ACMs, some containing multiple layers, were collected for laboratory analysis from the interior and exterior of the roof. The samples were submitted to International Asbestos Testing Laboratories for analysis by the Environmental Protection Agency (EPA) recommended Polarized Light Microscopy (PLM) and Dispersion Staining Method. Suspect materials identified during the survey consisted of the following homogeneous building component materials:

- | <u>Miscellaneous</u> | <u>Thermal System Insulation</u> |
|---|--|
| <ul style="list-style-type: none">• Roofing Material – Sky Lights• Roofing Material – Vent Fan• Roofing Material – HVAC | <ul style="list-style-type: none">• Ceiling/Wall Insulation (Interior) |

The following homogeneous building materials were determined to contain asbestos minerals in quantities greater than one (1) percent:

- Roofing Materials – Sky Lights (Sample #: 01 & 02)
- Roofing Materials – HVAC (Sample #: 05 & 06)

Sample results are found in Attachment B, Laboratory Report.

All other samples analyzed indicated that no asbestos was detected in the following materials.

- Roofing Materials – Vent Fans (Sample #: 03 & 04)
- Ceiling/Wall Insulation (Sample #: 07 & 08)

Specific locations of each collected sample can be found in Attachment C.

Conclusions and Recommendations

Based on the tasks undertaken for the asbestos material survey and existing building conditions at the time of the survey, EarthCon has developed the following conclusions and recommendations:

1. As a result of the survey, the aforementioned non-friable, non-regulated ACMs were identified on the roof of the Madison County Emergency Management Complex scheduled for replacement:

ACM Location	ACM Description	ACM Condition/ Classification*	Approximate Square Feet
Sky Lights	Flashings	NF/NR	350 SF
HVAC/Miscellaneous Flashings (Locations Shown on Diagram)	Flashings	NF/NR	250 SF

*F = Friable; NF = Non-Friable; R = Regulated; NR = Non-Regulated

**SF = Square Feet; LF = Linear Feet; CF = Cubic Feet; NA = Not Applicable

2. The abatement contractor or owner is required to notify the Mississippi Department of Environmental Quality (MDEQ) of planned abatement activities at least ten (10) working days prior to the scheduled start of these activities, as required by EPA 40 CFR Part 61.145 (b).

-
3. All asbestos-containing waste material (demolition debris) shall be transported and deposited at an EPA (MDEQ)-approved landfill site in accordance with EPA 40 CFR Part 61.150 (b)-(e). The disposal site shall be operated in accordance with EPA 40 CFR Part 61.154.

Limitations

This report was prepared for the sole and exclusive use and reliance of Madison County Board of Supervisors and presents conclusions based solely upon the agreed scope of work outlined in this report and EarthCon Proposal No. 02.01210021.55.01.17346, dated October 10, 2017. No other parties may rely on this report, in whole or in part, without the express written authorization of EarthCon, such authorization to be evidenced by a secondary client agreement executed by EarthCon and the secondary client. EarthCon makes no warranties or guarantees as to the accuracy or completeness of information, if any, provided or compiled by individuals or entities other than EarthCon. It is possible that, as a result of the limitations imposed on the scope of work, there exists relevant information that was not considered in the conclusions rendered in this report. Additional information, which was not found or available to EarthCon at the time of writing this report, may result in modification of the conclusions presented herein. This report is not intended to be and is not a legal opinion. The services performed by EarthCon have been conducted in a manner consistent with the level of care ordinarily exercised by members of our profession currently practicing at the same time under similar conditions. No other warranty, expressed or implied, is made.

Should you have any questions concerning the contents of this report, please contact me at your convenience (601) 853-2134. EarthCon Consultants, Inc., Inc. appreciates the opportunity to provide Madison County Board of Supervisors with environmental consulting services.

Sincerely,
EarthCon Consultants, Inc.



W. Hal Moore
Senior Project Manager



Roy L. Hill
Principal Geologist

Attachments

ATTACHMENTS

ATTACHMENT A
INSPECTOR CERTIFICATIONS

State of Mississippi

*Department of Environmental Quality
Office of Pollution Control*

Certificate of Licensure

In accordance with the Asbestos Abatement Accreditation and Certification Act,
Enacted as 1989 Mississippi Law, Chapter 505

Be it known that

W. Hal Moore

Having submitted acceptable evidence of qualifications and
training and other appropriate information, is hereby granted this

***Asbestos Inspector
Certification***

***Certificate No.: ABI-00002284
Expiration Date: Jan 25th, 2018
Training Expires on Jan 25th, 2018***


Chief, Asbestos & Lead Certification Branch

40533 LIC20170001

State of Mississippi

*Department of Environmental Quality
Office of Pollution Control*

Certificate of Licensure

In accordance with the Asbestos Abatement Accreditation and Certification Act,
Enacted as 1989 Mississippi Law, Chapter 505

Be it known that

Reginald Sampson

Having submitted acceptable evidence of qualifications and
training and other appropriate information, is hereby granted this

***Asbestos Inspector
Certification***



*Certificate No.: ABI-00001921
Expiration Date: Sep 28th, 2018
Training Expires on Sep 28th, 2018*

Chief, Asbestos & Lead Certification Branch

40765 LIC20170003

ATTACHMENT B
LABORATORY REPORT



Environmental Challenges
BUSINESS SOLUTIONS®

EARTHCON CONSULTANTS, INC.

110 Weisenberger Road
 Madison, Mississippi 39110
 Telephone: (601) 853-2134 Fax: (601) 856-3978
 Email: hmoore@earthcon.com; nmatthys@earthcon.com;
rclarke@earthcon.com

Lab Name:	
Cooler No.:	
FedEx No.:	

CHAIN-OF-CUSTODY

Client Name: EarthCon Consultants, Inc. 110 Weisenberger Road Madison, Mississippi 39110	Project Name/Location: <u>Madison Co. Emergency Management - Madison, MS</u> Sampler (print/signature): <u>20170326.55</u>	Project No.:
		H/M/S (lab use):

Item No.	Field No.	Sample Description	Collection		Analysis Required	Lab No. (for lab use only)
			Date	Time		
1	01	Roofing Material	10/20/17		PLM	6372107
2	02					6372108
3	03	Roofing Material vent FAN				6372109
4	04					6372110
5	05	Roofing Material HVAC				6372111
6	06					6372112
7	07	Ceiling and wall Insulation				6372113
8	08					6372114

Relinquished By: <u>Requid Day</u>	Date/Time: 10/20/17	Accepted By:	Date/Time:	Relinquished By:	Date/Time: 10/30/17	Accepted By:	Date/Time:
Relinquished By:	Date/Time:	Accepted By:	Date/Time:	Relinquished By:	Date/Time:	Accepted By:	Date/Time:


CERTIFICATE OF ANALYSIS

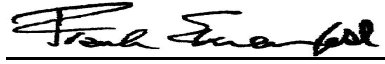
Client: EarthCon Consultants, Inc PO Box 1246 Madison MS 39130	Report Date: 10/30/2017 Report No.: 550458 - PLM Project: Madison Co Emergency Management Project No.: 20170326.55
Client: EAR166	

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6372107 Client No.: 1 <u>Percent Asbestos:</u> <i>15 Chrysotile</i>	Analyst Observation: Black Roof Material Client Description: Roofing Material <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Facility: <u>Percent Non-Fibrous Material:</u> 85
Lab No.: 6372108 Client No.: 2 <u>Percent Asbestos:</u> <i>15 Chrysotile</i>	Analyst Observation: Black Roof Material Client Description: Roofing Material <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Facility: <u>Percent Non-Fibrous Material:</u> 85
Lab No.: 6372109 Client No.: 3 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Roof Material Client Description: Roofing Material <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Vent Fan Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6372109(L2) Client No.: 3 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Black Roof Material Client Description: Roofing Material <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Vent Fan Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6372110 Client No.: 4 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Grey Roof Material Client Description: Roofing Material <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Vent Fan Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6372110(L2) Client No.: 4 <u>Percent Asbestos:</u> <i>None Detected</i>	Analyst Observation: Black Roof Material Client Description: Roofing Material <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Vent Fan Facility: <u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 10/24/2017
Date Analyzed: 10/30/2017
Signature: 
Analyst: Randy Caran

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EarthCon Consultants, Inc
PO Box 1246
Madison MS 39130


Client: EAR166

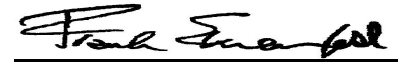
Report Date: 10/30/2017
Report No.: 550458 - PLM
Project: Madison Co Emergency Management
Project No.: 20170326.55

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6372111 Client No.: 5 <u>Percent Asbestos:</u> 35 Chrysotile	Analyst Observation: Black Roof Material Client Description: Roofing Material <u>Percent Non-Asbestos Fibrous Material:</u> 2 Fibrous Glass	Location: HVAC Facility: <u>Percent Non-Fibrous Material:</u> 63
Lab No.: 6372112 Client No.: 6 <u>Percent Asbestos:</u> 35 Chrysotile	Analyst Observation: Black Roof Material Client Description: Roofing Material <u>Percent Non-Asbestos Fibrous Material:</u> 2 Fibrous Glass	Location: HVAC Facility: <u>Percent Non-Fibrous Material:</u> 63
Lab No.: 6372113 Client No.: 7 <u>Percent Asbestos:</u> None Detected	Analyst Observation: Brown Insulation Client Description: Insulation <u>Percent Non-Asbestos Fibrous Material:</u> 100 Cellulose	Location: Ceiling And Wall Facility: <u>Percent Non-Fibrous Material:</u> None Detected
Lab No.: 6372114 Client No.: 8 <u>Percent Asbestos:</u> None Detected	Analyst Observation: Brown Insulation Client Description: Insulation <u>Percent Non-Asbestos Fibrous Material:</u> 100 Cellulose	Location: Ceiling And Wall Facility: <u>Percent Non-Fibrous Material:</u> None Detected

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 10/24/2017
Date Analyzed: 10/30/2017
Signature: 
Analyst: Randy Caran

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EarthCon Consultants, Inc
PO Box 1246
Madison MS 39130

Client: EAR166

Report Date: 10/30/2017
Report No.: 550458 - PLM
Project: Madison Co Emergency Management
Project No.: 20170326.55

Appendix to Analytical Report

Customer Contact: Hal Moore
Analysis: US EPA 600, R93-116

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com
iATL Office Manager: cdavis@iatl.com
iATL Account Representative: Shirley Clark
Sample Login Notes: See Batch Sheet Attached
Sample Matrix: Bulk Building Materials
Exceptions Noted: See Following Pages

General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

This report shall not be reproduced except in full, without written approval of the laboratory.

Information Pertinent to this Report:

Analysis by US EPA 600 93-116: Determination of Asbestos in Bulk Building Materials by Polarized Light Microscopy (PLM).

Certifications:

- NIST-NVLAP No. 101165-0
- NY-DOH No. 11021
- AIHA-LAP, LLC No. 100188

Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analytical Methodology Alternatives: Your initial request for analysis may not have accounted for recent advances in regulatory requirements or advances in technology that are routinely used in similar situations for other qualified projects. You may have the option to explore additional analysis for further information. Below are a few options, listed as the matrix followed by the appropriate methodology. Also included are links to more information on our website.

Bulk Building Materials that are Non-Friable Organically Bound (NOB) by Gravimetric Reduction techniques employing PLM and TEM: ELAP 198.6 (PLM-NOB), ELAP 198.4 (TEM-NOB)

Loose Fill Vermiculite Insulation, Attic Insulation, Zonolite (copyright), etc.: US EPA 600 R-4/004 (multi-tiered analytical process)
Sprayed On Insulation/Fireproofing with Vermiculite (SOF-V): ELAP 198.8 (PLM-SOF-V)>

CERTIFICATE OF ANALYSIS

Client: EarthCon Consultants, Inc
PO Box 1246
Madison MS 39130

Client: EAR166

Report Date: 10/30/2017
Report No.: 550458 - PLM
Project: Madison Co Emergency Management
Project No.: 20170326.55

Soil, sludge, sediment, aggregate, and like materials analyzed for asbestos or other elongated mineral particles (ex. erionite, etc.): ASTM D7521, CARB 435, and other options available

Asbestos in Surface Dust according to one of ASTM's Methods (very dependent on sampling collection technique – by TEM): ASTM D 5755, D5756, or D6480

Various other asbestos matrices (air, water, etc.) and analytical methods are available.

Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a list with highlighted disclaimers that may be pertinent to this project. For a full explanation of these and other disclaimers, please inquire at customerservice@iatl.com.

- 1) Note: No mastic provided for analysis.
- 2) Note: Insufficient mastic provided for analysis.
- 3) Note: Insufficient material provided for analysis.
- 4) Note: Insufficient sample provided for QC reanalysis.
- 5) Note: Different material than indicated on Sample Log / Description.
- 6) Note: Sample not submitted.
- 7) Note: Attached to asbestos containing material.
- 8) Note: Received wet.
- 9) Note: Possible surface contamination.
- 10) Note: Not building material. 1% threshold may not apply.
- 11) Note: Recommend TEM-NOB analysis as per EPA recommendations.
- 12) Note: Asbestos detected but not quantifiable.
- 13) Note: Multiple identical samples submitted, only one analyzed.
- 14) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.080%.
- 15) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.125%.

Recommendations for Vermiculite Analysis:

Several analytical protocols exist for the analysis of asbestos in vermiculite. These analytical approaches vary depending upon the nature of the vermiculite mineral being tested (e.g. un-processed gange, homogeneous exfoliated books of mica, or mixed mineral composites). Please contact your client representative for pricing and turnaround time options available.

iATL recommends initial testing using the EPA 600/R-93/116 method. This method is specifically designed for the analysis of asbestos in bulk building materials. It provides an acceptable starting point for primary screening of vermiculite for possible asbestos.

Results from this testing may be inconclusive. EPA suggests proceeding to a multi-tiered analysis involving wet separation techniques in conjunction with PLM and TEM gravimetric analysis (EPA 600/R-04/004).

Further information on this method and other vermiculite and asbestos issues can be found at the following: Agency for Toxic Substances and Disease Registry (ATSDR) www.atsdr.cdc.gov, United States Geological Survey (USGS) www.minerals.usgs.gov/minerals/, US EPA www.epa.gov/asbestos. The USEPA also has an informative brochure "Current Best Practices for Vermiculite Attic Insulation" EPA 747F03001 May 2003, that may assist the health and remediation professional.

The following is a summary of the analytical process outlines in the EPA 600/R-04/004 Method:

- 1) **Analytical Step/Method:** Initial Screening by PLM, EPA 600R-93/116
Requirements/Comments: Minimum of 0.1 g of sample. ~0.25% LOQ for most samples.
- 2) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.
- 3) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Floats" only.
- 4) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.
- 5) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004

CERTIFICATE OF ANALYSIS

Client: EarthCon Consultants, Inc
PO Box 1246
Madison MS 39130

Client: EAR166

Report Date: 10/30/2017
Report No.: 550458 - PLM
Project: Madison Co Emergency Management
Project No.: 20170326.55

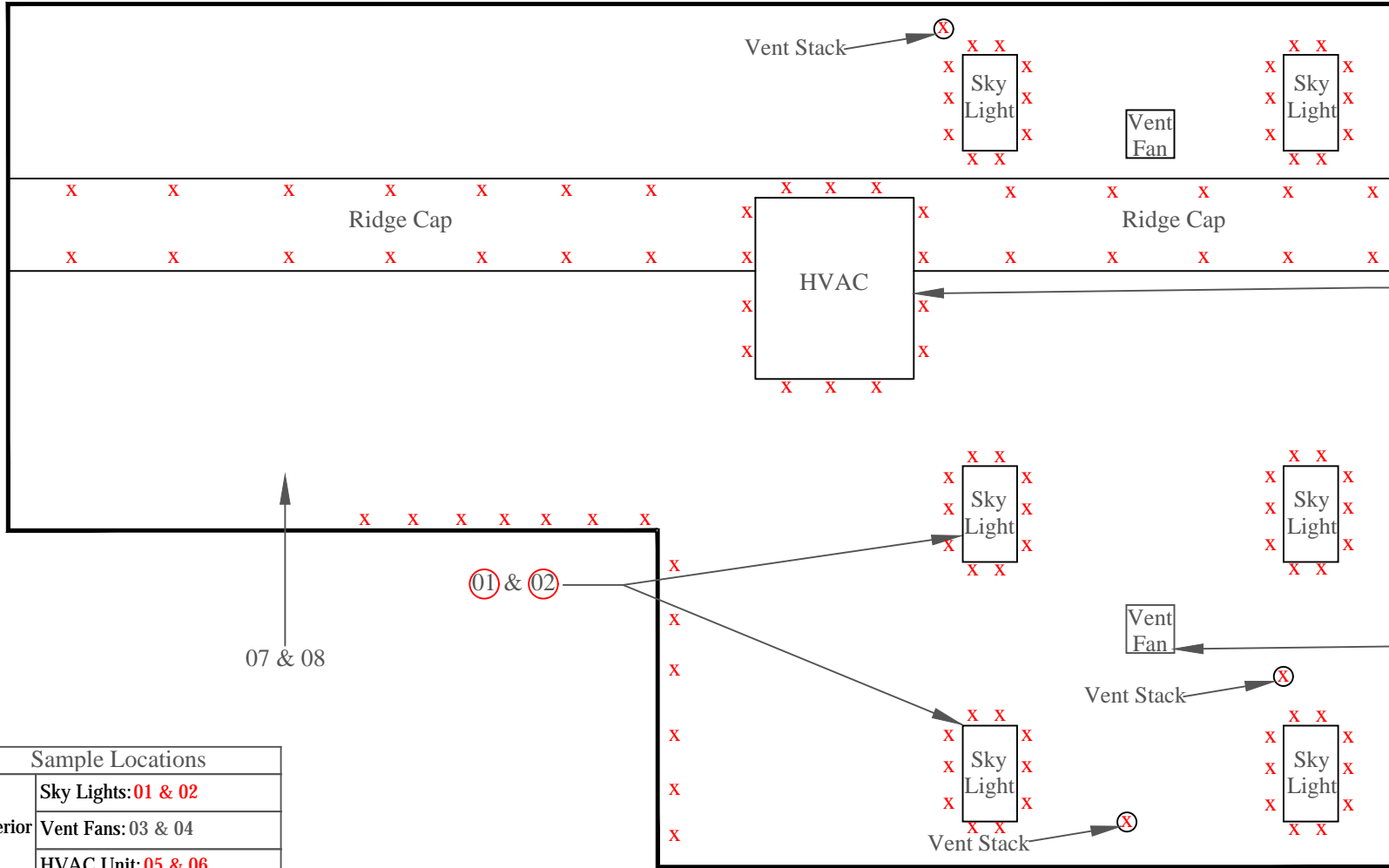
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Suspension" only.

LOQ, Limit of Quantitation estimates for mass and volume analyses.

*With advance notice and confirmation by the laboratory.

**Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).

ATTACHMENT C
SAMPLE LOCATIONS



Sample Locations	
Exterior	Sky Lights: 01 & 02
	Vent Fans: 03 & 04
	HVAC Unit: 05 & 06
Interior	Insulation in Ceiling: 07 & 08



LEGEND:
 01 Asbestos Containing Sample
 03 Non-Asbestos Containing Sample
 x Asbestos Containing Material

Earth Consulting Group, Inc.
 P.O. Box 1246 Madison, MS 39130 Tel:(601)853-2134 Fax:(601)856-3978

DRAWN BY: KB	CHECKED BY: HM	SCALE: NTS	DATE: 11/06/17	PROJECT NO: 02.20170326.55
PROJECT: Madison County Emergency Management Complex - Canton, MS				
TITLE: ASBESTOS MATERIAL SURVEY-ROOF				FIGURE 1

ATTACHMENT D
SITE PHOTOS

Madison County Emergency
Management Complex
1633 West Pence Street
Canton, Mississippi



Photo 1: Spray Applied Ceiling Insulation



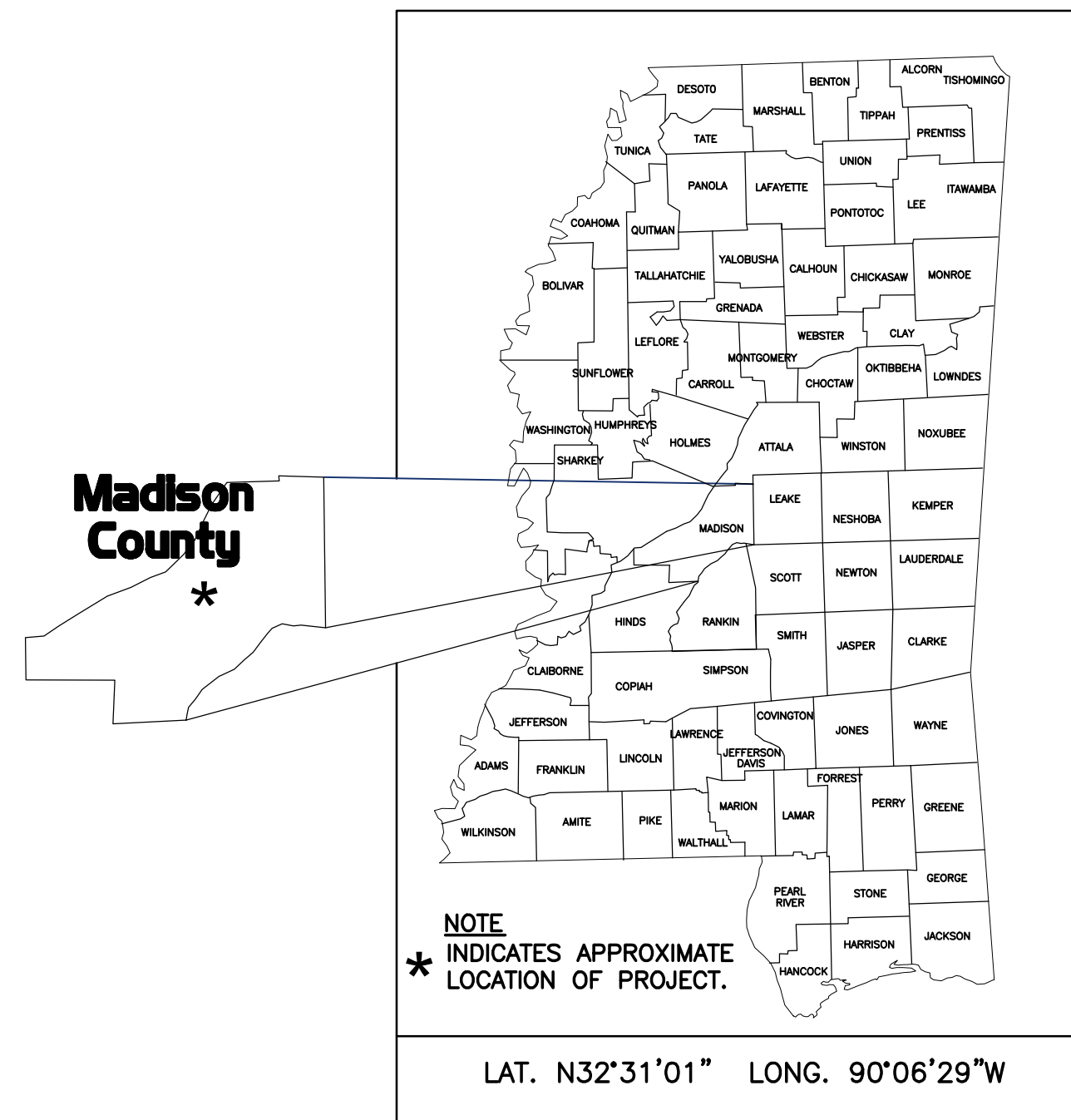
Photo 2: Spray Applied Ceiling Insulation

ROOF REPLACEMENT - 2017 CANTON - MADISON COUNTY EMERGENCY MANAGEMENT CANTON, MISSISSIPPI

DECEMBER 2017

MADISON COUNTY BOARD OF SUPERVISORS

SHEILA JONES DISTRICT 1
TREY BAXTER DISTRICT 2
GERALD STEEN DISTRICT 3
DAVID BISHOP DISTRICT 4
PAUL GRIFFIN DISTRICT 5

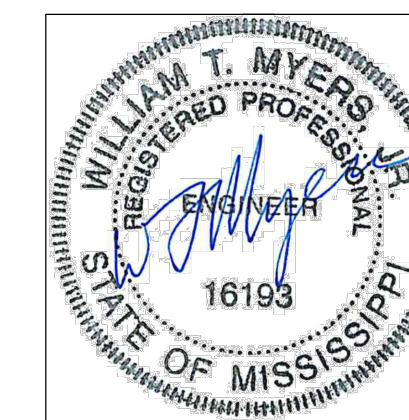


LOCATION MAP

INDEX OF DRAWINGS

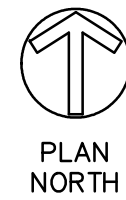
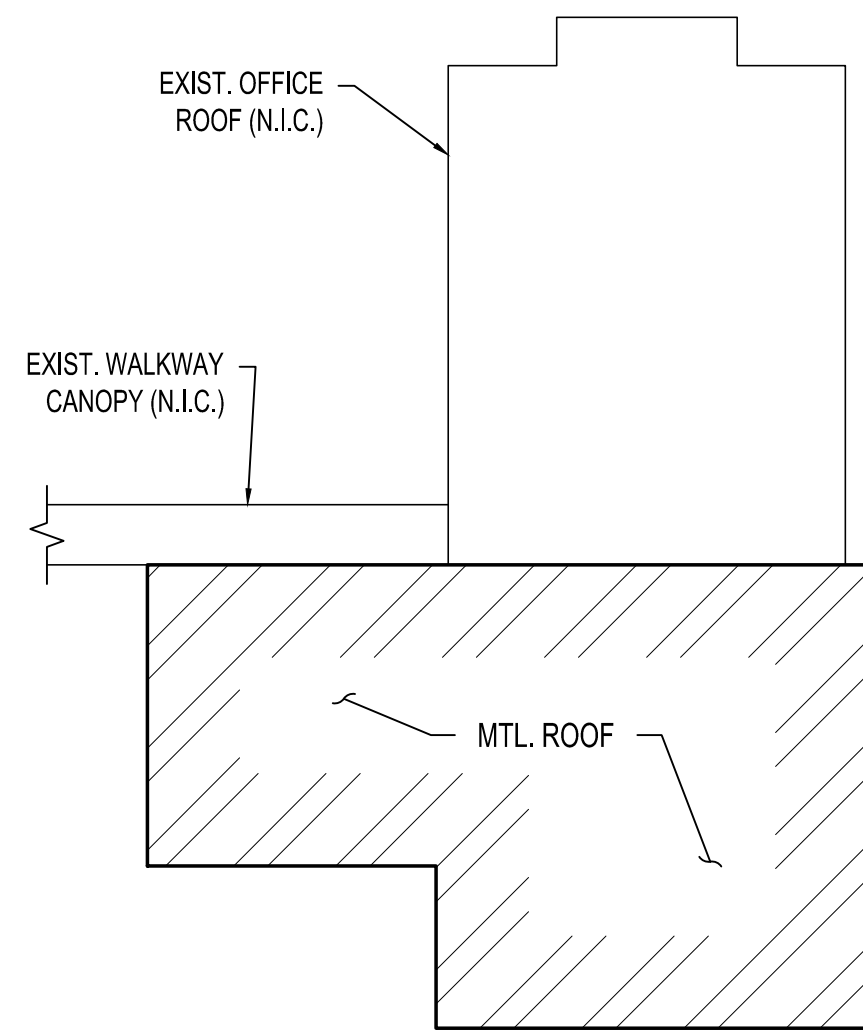
<u>DRAWING NAME</u>	<u>DRAWING NO.</u>
COVER SHEET	
GENERAL NOTES + ROOF PLANS	EMR-1
SECTIONS + DETAILS	EMR-2

PREPARED BY:

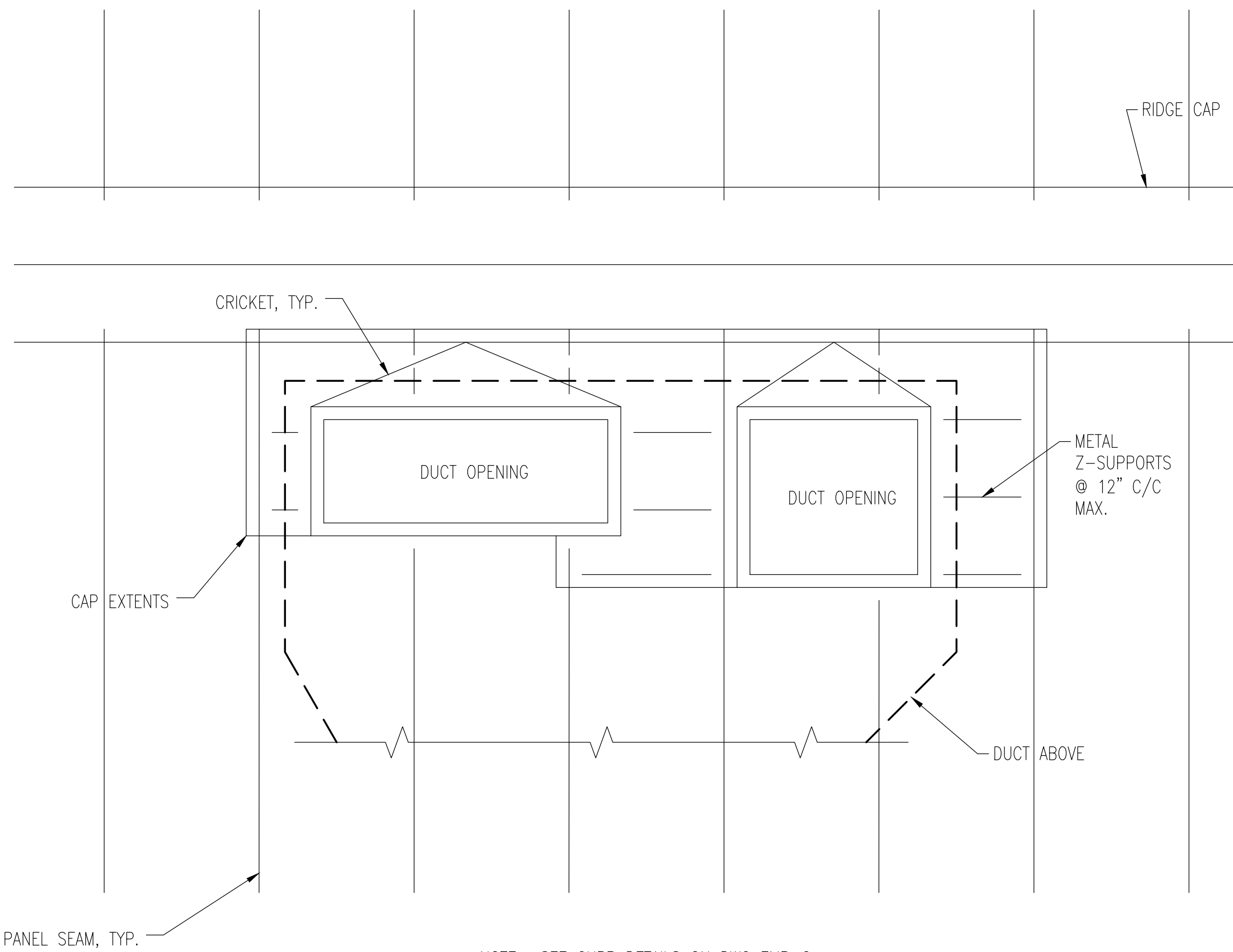


DATE: 12-20-17
William T. (Bill) Myers, Jr., P.E.
Mississippi License No. 16193

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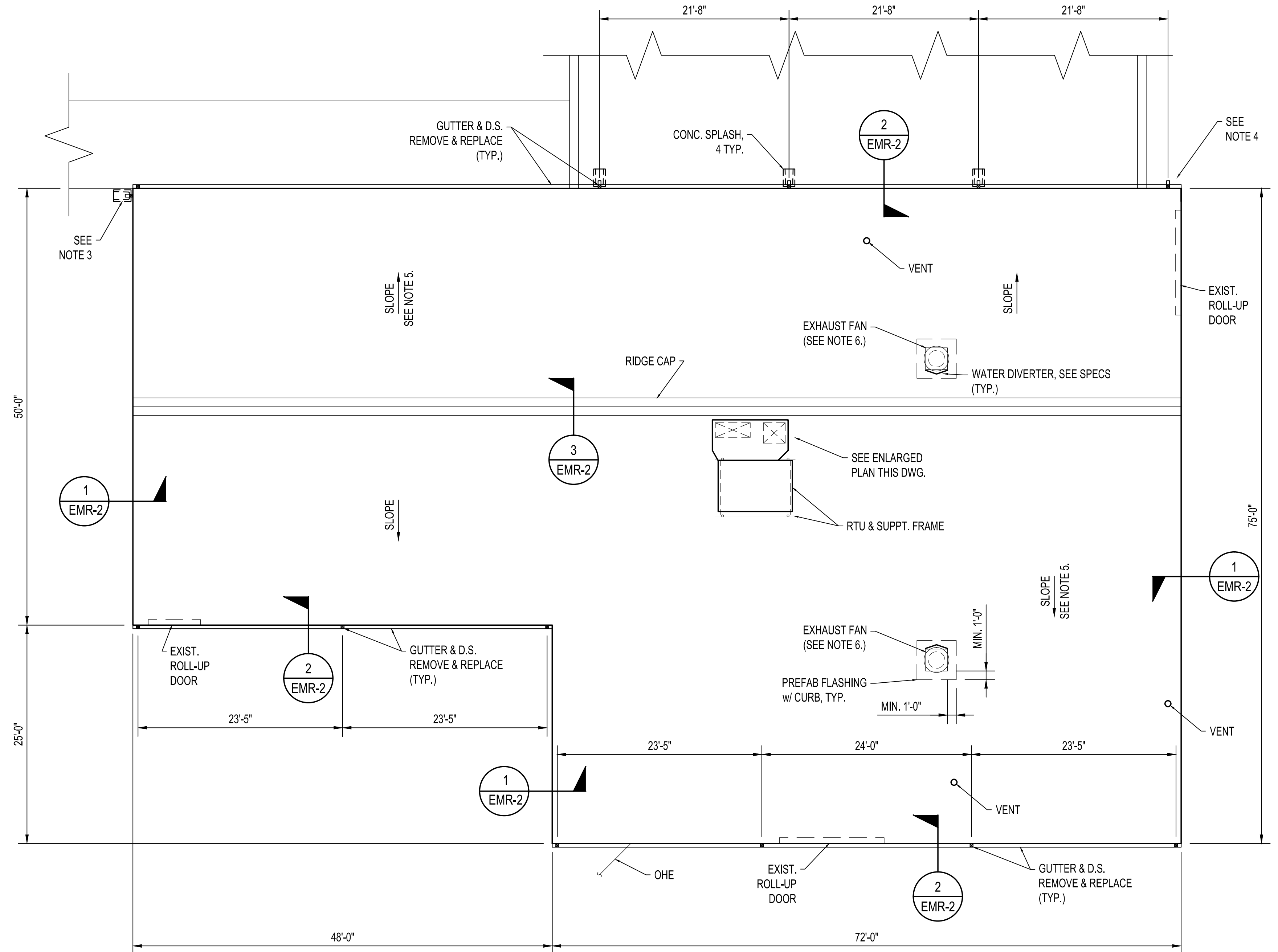


KEY PLAN
NTS



NOTE: SEE CURB DETAILS ON DWG EMR-2.

ENLARGED PLAN
NTS.



ROOF PLAN
NTS

NOTES:

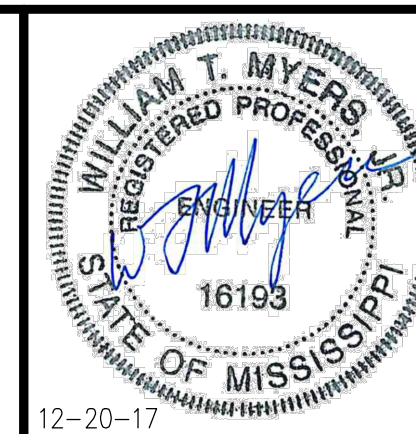
- ALL DIMENSIONS ARE APPROXIMATE. GC SHALL FIELD VERIFY AS REQUIRED TO PROSECUTE THE WORK.
- THE PRIMARY ROOF EQUIPMENT IS INDICATED ON PLAN, BUT NOT ALL ELECTRICAL, ROOF PENETRATIONS OR OTHER RELATED APPURTENANCES ARE SHOWN. BIDDERS SHALL VISIT THE SITE PRIOR TO BID AS REQUIRED TO VERIFY.
- ROUTE D.S. AROUND BUILDING CORNER TO WEST SIDE & DOWN TO GROUND AS INDICATED.
- CONNECT D.S. TO EXISTING DRAIN.
- SLOPE EST. 1/2" TO 1" TO 12". FIELD-VERIFY.
- REMOVE EQUIPMENT AS REQUIRED, INSTALL PREFAB CURB w/ WATER DIVERTER PER SPECS, THEN REINSTALL EQUIPMENT.
- SEE DWG EMR-2 AND ROOFING SPEC FOR ADDITIONAL INFO.

NOTICE TO DRAWING HOLDER

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REVISIONS				DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.:	13242.003
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B	12-20-17	WTM	BID ISSUE	SCALE:	AS NOTED
				SURVEYED BY:	
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				DRWN:	WTM DATE: 11/2017
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				QA/QC:	DATE:

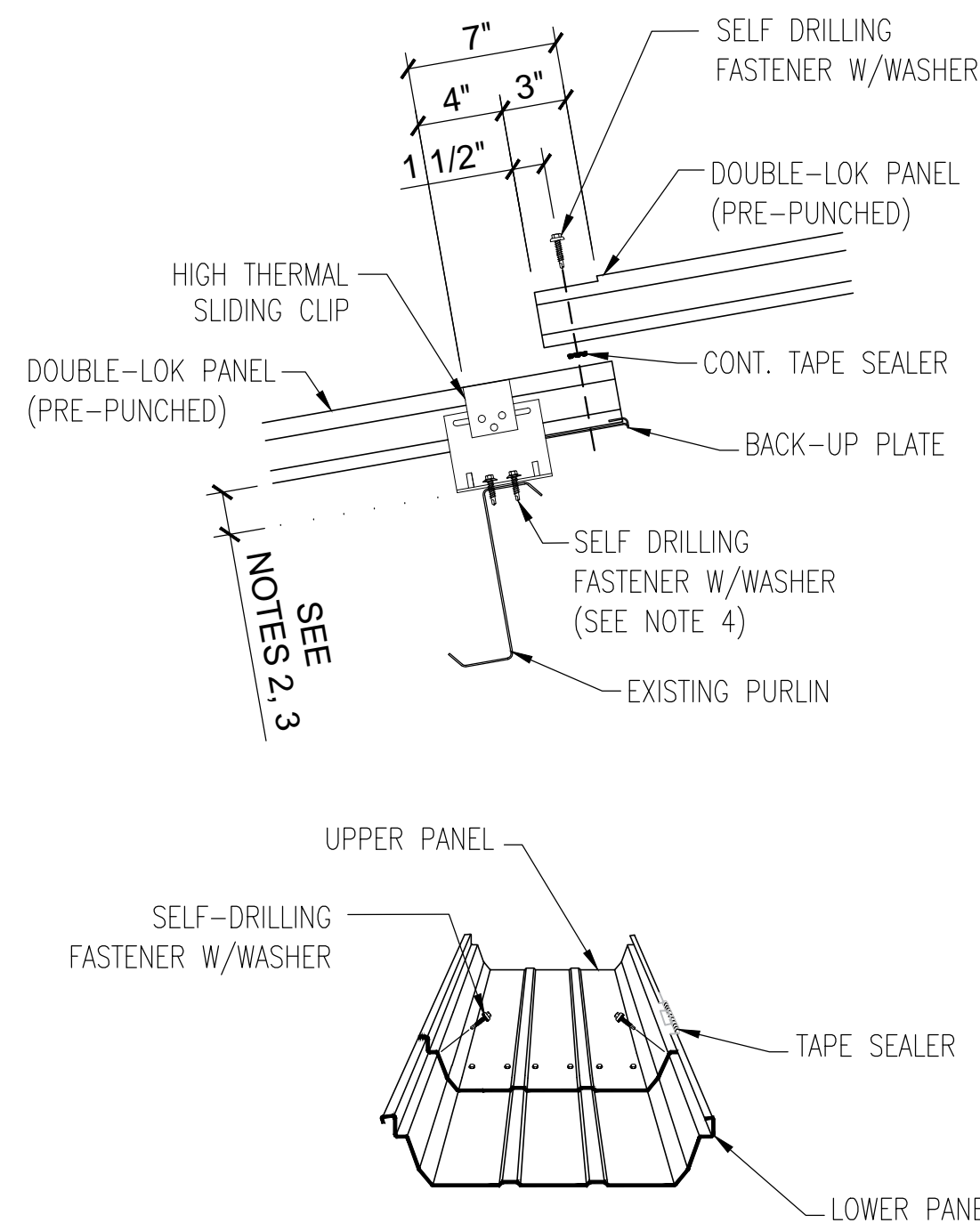
ROOF REPLACEMENT - 2017
MADISON COUNTY
EMERGENCY MANAGEMENT FACILITY
MADISON COUNTY, MISSISSIPPI



GENERAL NOTES
& ROOF PLANS

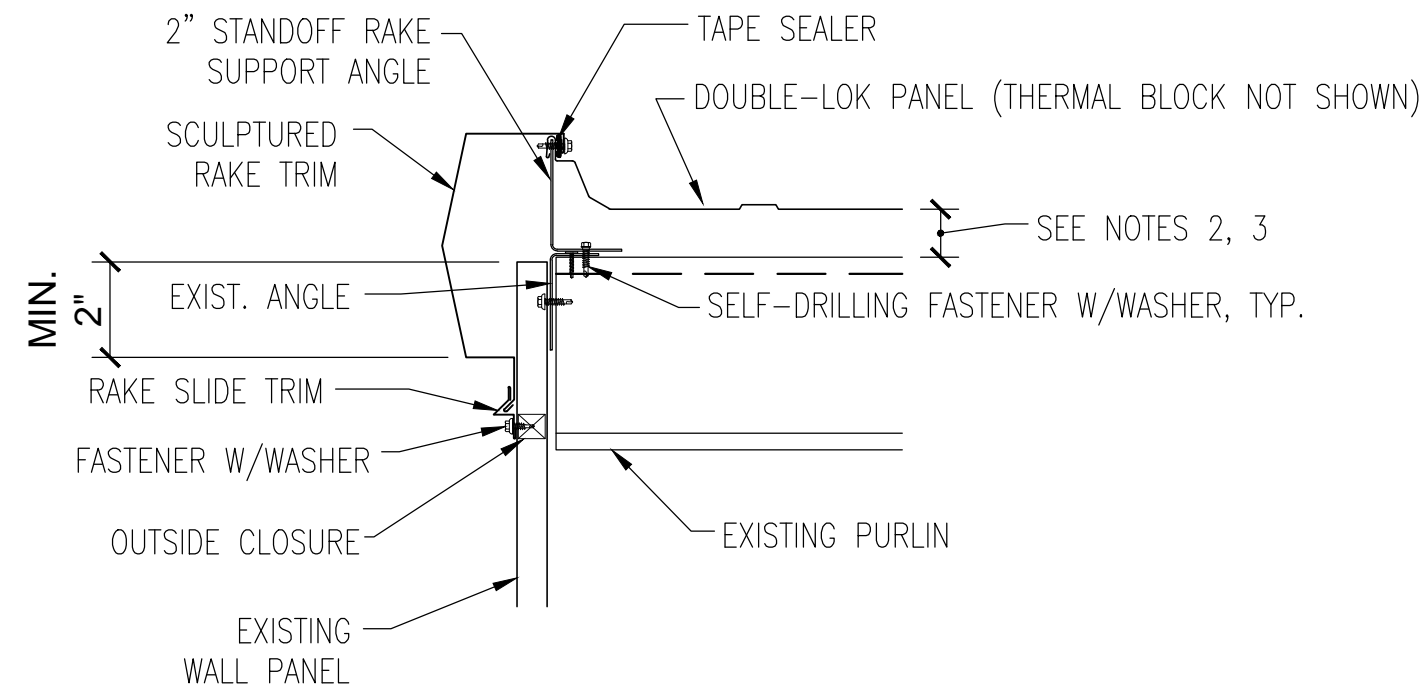
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EMR-1

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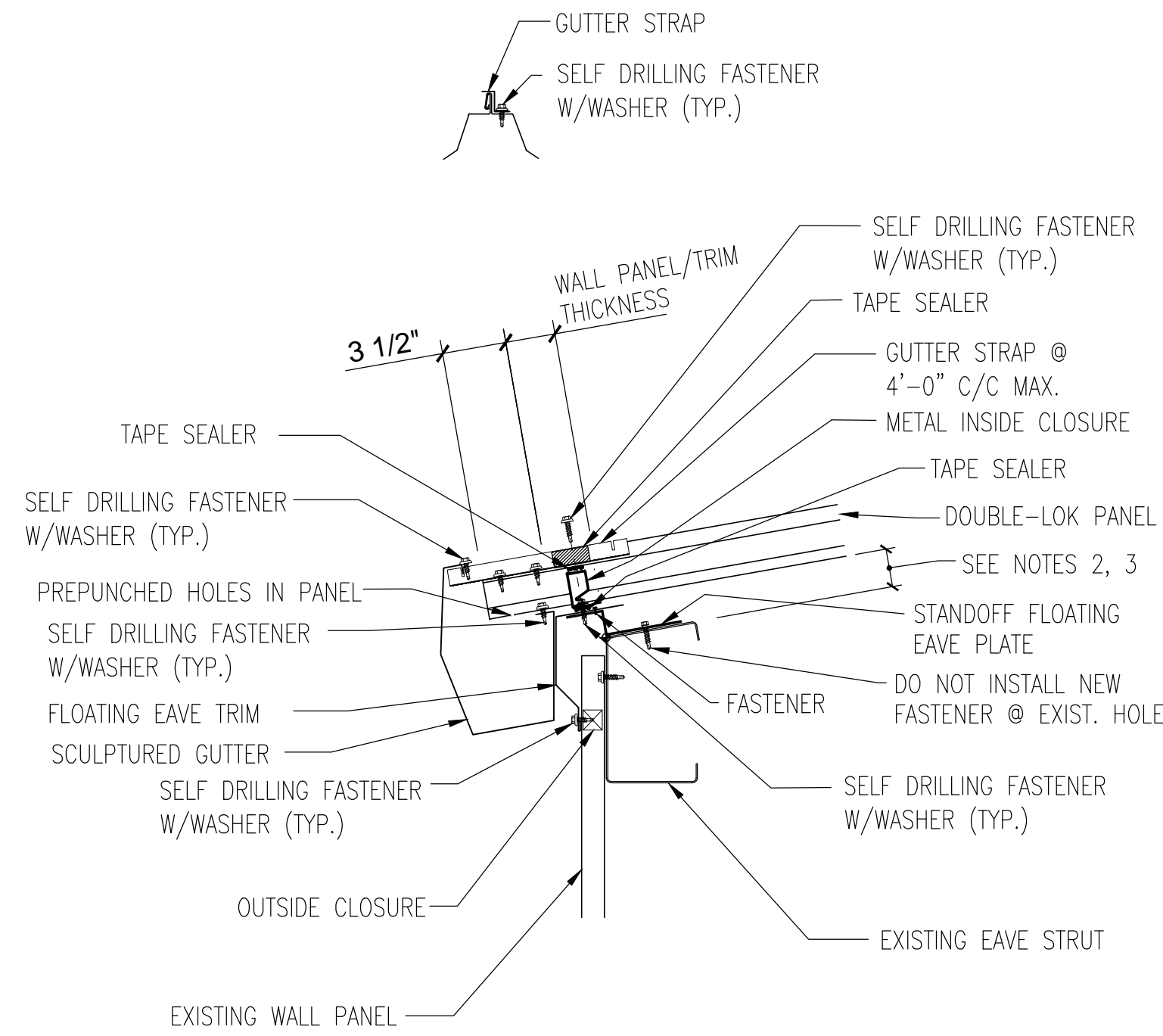
- NOTES:
1. REFERENCE TYPICAL TRIM LAP SECTION.
 2. THERMAL BLOCK AND BLANKET INSULATION NOT SHOWN.
 3. DIMENSION AS REQUIRED BY METAL ROOF SYSTEM MFR.
 4. INSTALL LARGER DIA. FASTENERS WHEN AT EXISTING FASTENER HOLES.

A DETAIL
EMR-2 N.T.S.



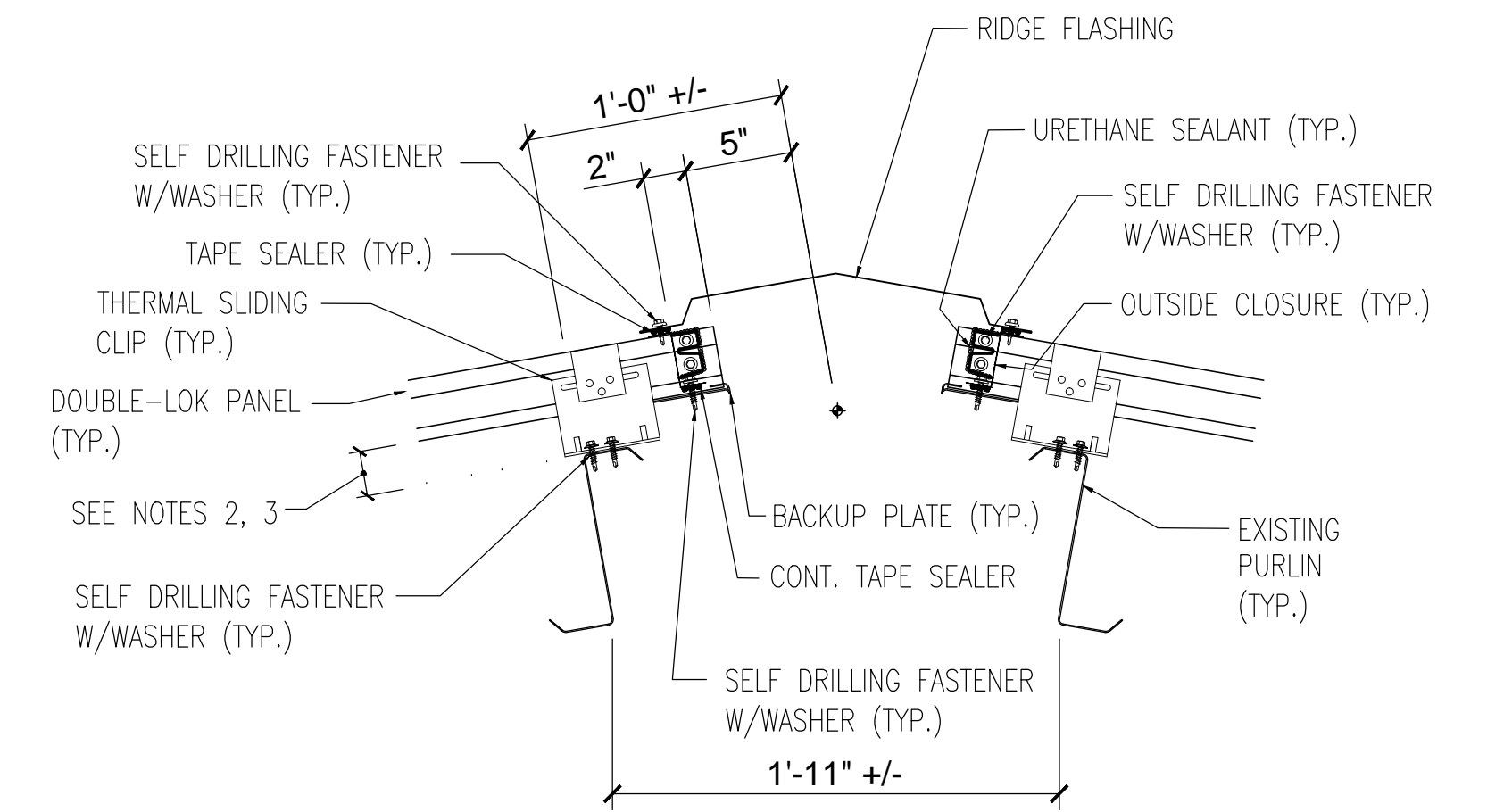
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1 SECTION
EMR-2 N.T.S.



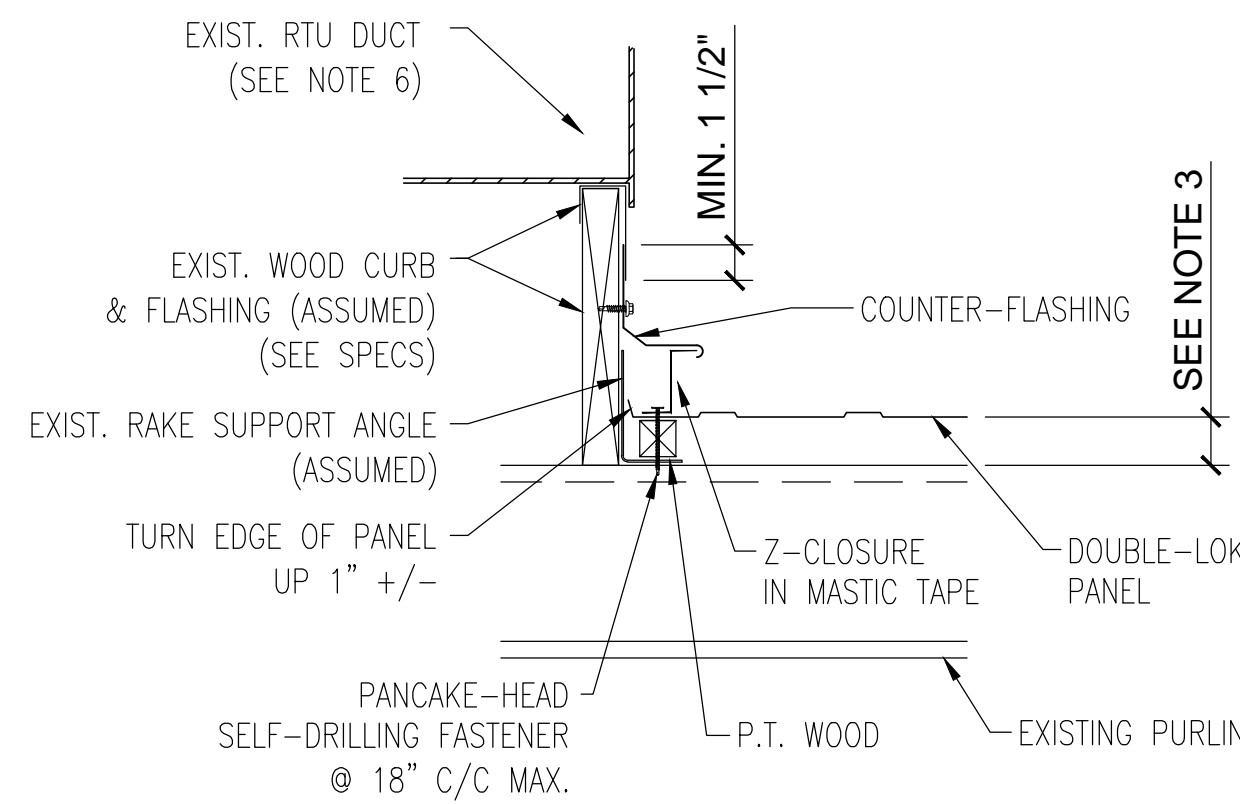
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2 SECTION
EMR-2 N.T.S.



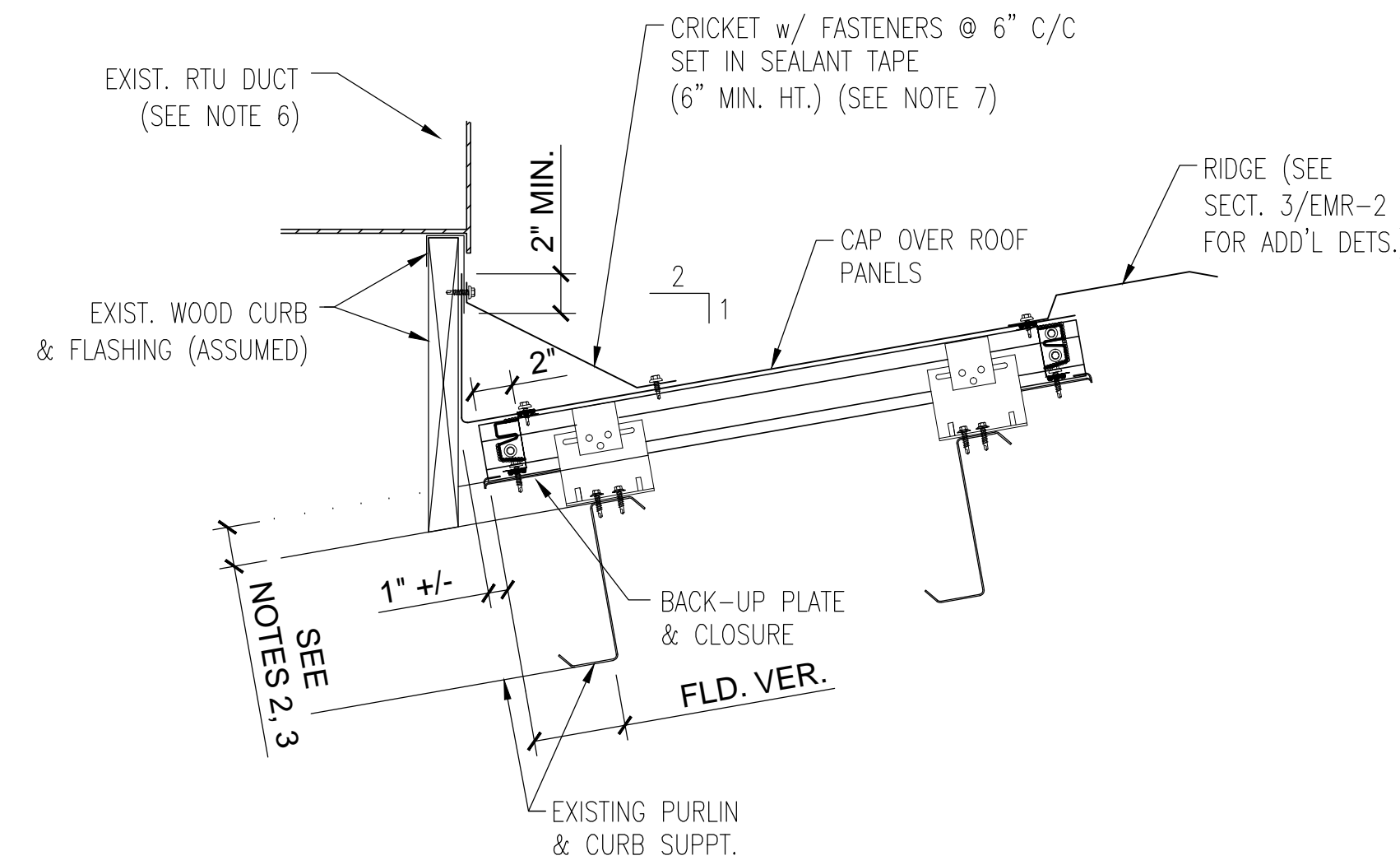
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3 SECTION
EMR-2 N.T.S.



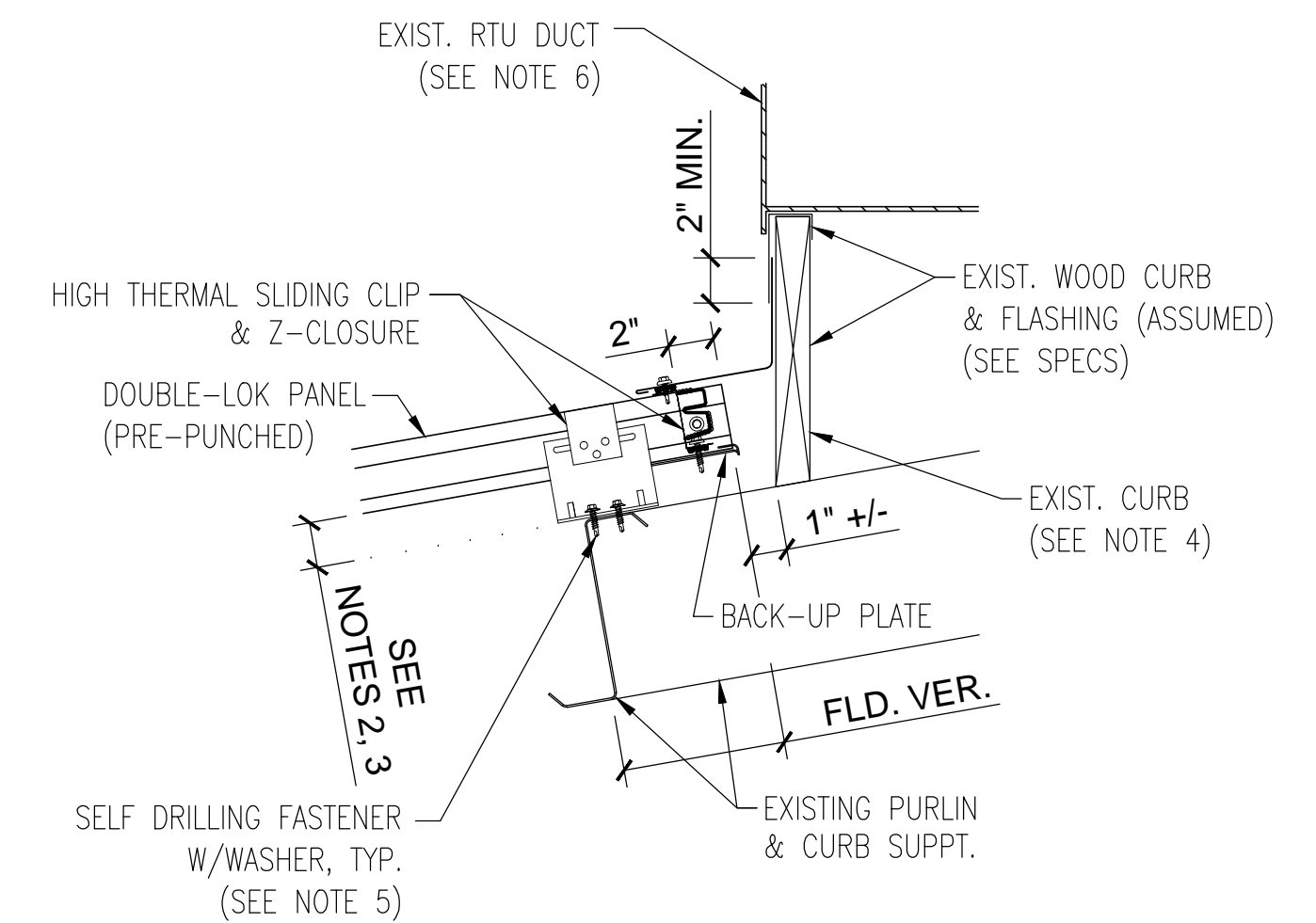
- NOTES:
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 3. DIMENSION AS REQUIRED BY METAL ROOF SYSTEM MFR.
 4. WOOD CURB ASSUMED. IF METAL CURB, SUBMIT CURB MODIFICATION DETAIL TO DPRC FOR APPROVAL.
 5. INSTALL LARGER DIA. FASTENERS WHEN AT EXISTING FASTENER HOLES.
 6. REMOVE & REINSTALL DUCT AS REQD.

B CURB RAKE DETAIL
EMR-2 N.T.S.



- NOTES:
1. REFERENCE TYPICAL TRIM LAP SECTION.
 2. THERMAL BLOCK AND BLANKET INSULATION NOT SHOWN.
 3. DIMENSION AS REQUIRED BY METAL ROOF SYSTEM MFR.
 4. WOOD CURB ASSUMED. IF METAL CURB, SUBMIT CURB MODIFICATION DETAIL TO DPRC FOR APPROVAL.
 5. INSTALL LARGER DIA. FASTENERS WHEN AT EXISTING FASTENER HOLES.
 6. REMOVE & REINSTALL DUCT AS REQD.
 7. GC OPTION: ONE CRICKET OR TWO CRICKETS AT EA. DUCT OPENING.

C CURB HIGH-SIDE DETAIL
EMR-2 N.T.S.



- NOTES:
1. REFERENCE TYPICAL TRIM LAP SECTION.
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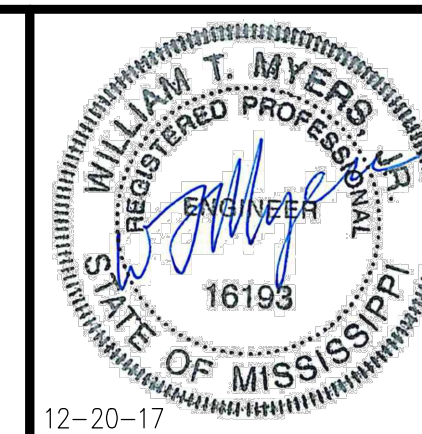
D CURB LOW-SIDE DETAIL
EMR-2 N.T.S.

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ROOF REPLACEMENT - 2017
MADISON COUNTY
EMERGENCY MANAGEMENT FACILITY
MADISON COUNTY, MISSISSIPPI



SECTIONS & DETAILS

WORKING NUMBER: DRAWING NUMBER:
EMR-2