

GREGG COUNTY, TEXAS
GREGG COUNTY BID NO. 2020-03
FOR
NORTH JAIL ROOF AND
NORTH WALL IMPROVEMENTS

NOVEMBER, 2019



HAYES ENGINEERING, INC.
Texas Registered Engineering Firm F-1465
2126 Alpine Rd.
Longview, TX 75601
(903) 758-2010

GREGG COUNTY, TEXAS
GREGG COUNTY BID NO. 2020-03
FOR
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BID DOCUMENTS

GREGG COUNTY INVITATION TO BID NO. 2020-03
for
NORTH JAIL ROOF AND
NORTH WALL IMPROVEMENTS

Sealed proposals addressed to Kelli Davis, Gregg County Purchasing Agent, 101 E. Methvin St., Ste. 205, Longview, TX 75601 will be received on or before 2:00 p.m., Tuesday, December 17, 2019, for furnishing all labor, materials, equipment, supplies, and supervision necessary for the construction of the Gregg County North Jail Roof and North Wall Improvements project. At the time stated, bids will be opened and publicly read aloud in the Purchasing Agent's Conference Room, located on the 2nd Floor of the Gregg County Courthouse.

The proposed work consists of replacing approximately 44,300 SF of Modified Bitumen Roofing, furnishing and installing 5,840 SF of Preformed Metal Wall Panel, and associated work and appurtenances.

A pre-bid meeting will be held at 2:00 p.m., Tuesday, December 10, 2019, at the Gregg County North Jail, Longview, TX 75603.

Plans and specifications will be available on November 26, 2019 and may be examined without charge, obtained electronically at no charge, or obtained hard copy for \$30 at the office of Hayes Engineering, Inc., 2126 Alpine Rd., Longview, TX 75601, (903) 758-2010.

Gregg County is wholly committed to developing, establishing, maintaining, and enhancing minority business involvement in the total procurement process.

EEO/M/F/V/H/D

The Honorable Bill Stoudt, County Judge
Gregg County, Texas

Advertising Dates: Tuesdays, November 26th and December 3rd, 2019



Gregg County Bid No. 2020-03
North Jail Roof and North Wall Improvements

INTENT

Gregg County, Texas is requesting sealed bids for the replacement of the North Jail Roof and installing metal wall panels on the north wall of the North Jail, located at 103 Whaley Street, Longview, Texas.

INSTRUCTIONS TO BIDDERS

Site Visit – *It is highly preferred* that contractors schedule a site visit to inspect the roof and wall of the facility. Site visits must be scheduled. A pre-bid site visit will be held at 2:00 p.m. on Tuesday, December 10, 2019 and is not mandatory. Contact information is Harry McMahan @ harry.mcmahan@co.gregg.tx.us, 903-237-2657 to schedule a site visit. Contractors should carefully examine the construction site to obtain first-hand knowledge of existing conditions. Contractors will not be given extra payments for conditions which can be determined by examining the site and bid documents.

Due Date - Sealed bids must be submitted to Kelli Davis, Gregg County Buyer, 101 E. Methvin St., Suite 205, Longview, Texas 75601, on or before **Tuesday, December 17, 2019 at 2:00 P.M.** Bids may be withdrawn any time prior to the official deadline. Bids may not be amended, altered or withdrawn after the official deadline.

Compliance - Successful vendor agrees to comply with any and all Federal, State and local laws, rules and regulations pertaining to wages, hours of employment and minority hiring practices.

Measurement Calculation - Measurement estimates are approximate and subject to error in computation. Each contractor must measure and calculate to his satisfaction.

Performance, Payment, and Maintenance Bonds – Within 15 days after the date of the award, the issuance of a purchase order and prior to commencement of the actual work the successful bidder shall furnish all bonds for the full amount of the contract if that contract exceeds \$50,000. If the contract is for \$50,000 or less, any payment will be made after the Purchasing Agent and/or the Auditor have been notified that services have been received in accordance with the award.

Award - Gregg County expressly reserves the right to accept or reject in whole or in part any bid submitted and to waive any technicalities or formalities, considered to be in the best interest of Gregg County. The contract will be awarded to the firm that is determined to be the best value to the County. The Commissioner's Court intends to award the contract on **December 30, 2019 at 10:00 a.m.** and the awarded contractor should plan on commencing work as soon as possible thereafter.

Completion Date – All work **MUST BE COMPLETED within 120 days of Notice to Proceed.**

Conflict of Interest - No public official shall have interest in this contract, in accordance with Vernon's Texas Codes Annotated, Local Government Code Title 5, Subtitle C, and Chapter 171.

Ethics - The bidder shall not offer or accept gifts or anything of value nor enter into any business arrangement with any employee, official or agent of Gregg County.

Gregg County Standard Terms & Conditions – By submitting and signing this bid documents Contractor agrees to all terms and conditions as set forth in the Gregg County Standard Terms & Conditions and that they have carefully read and will follow all instructions, requirements and specifications. Fill out all required forms properly and completely. Submit all appropriate supplements and or samples with your bid. Sign your bid. ***Unsigned bids will be disqualified.***

Questions - Questions regarding the Work should be addressed in writing to Stanley R. Hayes, P.E., Hayes Engineering, Inc., 2126 Alpine St., Longview, TX, 75601, (903) 758-2010, Ext. 22 or by e-mail to stan@hayesengineering.net

To: Vendors of Gregg County, Texas
From: Kelli L. Davis, CPPB, Purchasing Agent
Re: ***Conflict of Interest Form (CIQ)***

Vendor:

Attached, please find link below to a Conflict of Interest Questionnaire. Please complete this form if you have a conflict of interest with any Gregg County Official, Employee, or Department. The questionnaire should reflect the name of the individual with whom the conflict of interest occurs. If you have any questions regarding compliance with Chapter 176 of the Texas Local Government Code, please consult your legal representative. Compliance is the responsibility of each individual, business, agent or representative who is subject to the law's filing requirements.

<http://www.ethics.state.tx.us/forms/CIQ.pdf>

Original completed forms should be filed with the County Clerk's Office and a copy sent to the Gregg County Purchasing Department either through bid return, fax, or email. Please see contact information below.

Gregg County Clerk

Gregg County Courthouse
101 East Methvin, Ste. 200
Longview, Texas 75601
Ph: 903-236-8430

Gregg County Purchasing Department

Email: purchasing@co.gregg.tx.us
Ph: 903-237-2684
Fx: 903-237-2682

Applicable Law

Chapter 176 of the Texas Local Government Code requires that any vendor or person considering doing business with a local government entity disclose in the Questionnaire Form CIQ, the vendor or person's affiliation or business relationship that might cause a conflict of interest with a local government entity. By law, this questionnaire must be filed with the records administrator of Gregg County (County Clerk) no later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Texas Local Government Code.

STATEMENT OF QUALIFICATIONS

CONTRACTOR: _____

ADDRESS: _____

1. Name of Project: _____

Owner: _____

Address: _____

Phone: _____

Value of Contract: \$ _____

Date Started: _____

Date Completed: _____

Approximate Quantities of Major Items: _____

2. Name of Project: _____

Owner: _____

Address: _____

Phone: _____

Value of Contract: \$ _____

Date Started: _____

Date Completed: _____

Approximate Quantities of Major Items: _____

3. Name of Project: _____

Owner: _____

Address: _____

Phone: _____

Value of Contract: \$ _____

Date Started: _____

Date Completed: _____

Approximate Quantities of Major Items: _____

4. Other Project References: _____

CERTIFICATION OF ELIGIBILITY

By submitting a bid or Bid in response to this solicitation, the bidder/proposer certifies that at the time of submission, he/she is ***not*** on the Federal Government's list of suspended, ineligible, or debarred contractors.

In the event of placement on the list between the time of bid/Bid submission and time of award, the bidder/proposer will notify the Gregg County Purchasing Agent. Failure to do so may result in terminating this contract for default.

Signature: _____ **Date:** _____

Printed Name _____

PROPOSAL

TO: Kelli Davis, Gregg County Buyer

**FOR: Gregg County Bid No. 2020-03
North Jail Roof and North Wall Improvements**

The undersigned, as bidder, declares that the only person or parties interested in this proposal as principals are those named herein; that this proposal is made without collusion with any other person, firm, or corporation; that he has carefully examined the form of Contract, Notice to Bidders, and Specifications herein referred to, and has carefully examined the locations, conditions and classes of materials of the proposed work; and agrees that he will provide all the necessary labor, machinery, tools, apparatus, and other items incidental to construction, and will do all the work and furnish all the materials called for in the Contract and Specifications in the manner prescribed therein and according to the requirements of the Engineer as therein set forth.

It is further agreed that the quantities of work to be done at unit prices and materials to be furnished may be increased or diminished as may be considered necessary, in the opinion of the Engineer, to complete the work fully as planned and contemplated, and that all quantities of work, whether increased or decreased, are to be performed at the unit prices set forth below except as provided for in the Specifications.

It is further agreed that lump sum prices may be increased to cover additional work ordered by the Engineer and agreed to by Owner, but not required by the Specifications, in accordance with the provisions of the General Conditions. Similarly, they may be decreased to cover deletion of work so ordered.

It is understood and agreed that the work is to be completed in full within **one hundred twenty (120)** calendar days beginning on the date stated in the work order on which work is to be commenced. Bidder further agrees to pay as liquidated damages, the sum of **\$200.00** for each consecutive calendar day thereafter as provided in the General Conditions.

Accompanying this proposal is a certified or cashier's check or bid bond (5% of largest amount bid), payable to Gregg County, Texas for:

Dollars

_____ Dollars
(\$ _____).

The bid security accompanying this proposal shall be returned to the bidder, unless in case of the acceptance of the proposal the bidder shall fail to execute a Contract and to file a Performance, Payment, and Maintenance Bond within fifteen (15) days after its acceptance, in which case the bid security shall become the property of the Gregg County and shall be considered as payment for damages due to delay and other inconveniences suffered by the Owner on account of such failure of the bidder. It is understood that the Gregg County reserves the right to reject any and all bids and to waive any informalities in the bidding.

In the event of the award of a Contract to the undersigned, the undersigned will furnish a Performance and Payment Bond and Maintenance Bond for the full amount of the Contract to secure proper compliance with the terms and provisions of the contract, to insure and guarantee the work until final completion and acceptance, and to guarantee Payment of all lawful claims for labor performed and materials furnished in the fulfillment of the Contract.

**GREGG COUNTY BID NO. 2020-03
NORTH JAIL ROOF & NORTH WALL IMPROVEMENTS
BID PROPOSAL**

<u>ITEM DESCRIPTION BASE BID</u>	<u>QTY</u>	<u>U/M</u>	<u>UNIT PRICE</u>	<u>TOTAL PRICE</u>
1 Mobilization.	1	LS	\$ XXXXXXXX	\$
2 Bonds and insurance.	1	LS	\$ XXXXXXXX	\$
3 Remove all existing roofing, expansion joints, flashing, and all other roof related components down to the insulation.	1	LS	\$ XXXXXXXX	\$
4 Disconnect and reconnect roof top A/C units, plumbing, and electrical as required using licensed contractors from the appropriate trade. Replace all blocking and wood runners with new treated wood.	1	LS	\$ XXXXXXXX	\$
5 Replace defective areas of tapered insulation.	1,000	SF	\$	\$
6 Install 1/4" coverboard in low rise adhesive, installing one layer of self-adhered base sheet, followed by installation of one layer of fiberglass reinforced SBS modified bitumen cap sheet using torch welding techniques.	44,300	SF	\$	\$
7 Replace all flashings including curbs, perimeter flashings, wall flashings, and install two plies of flashing membrane per manufacturer's recommendations.	1	LS	\$ XXXXXXXX	\$
8 Remove and replace wolmanized 2x4s as needed.	200	LF	\$	\$
9 Construct 24 gauge R-Panel wall system with support structures per the plans and specifications but not limited to metal siding, brackets, treated nailer, gutter, flashing, sag rods, caulking sealer, epoxy.	1	LS	\$ XXXXXXXX	\$
10 Miscellaneous Allowance.	1	LS	\$ XXXXXXXX	\$ 10,000.00
TOTAL AMOUNT BASE BID				\$
ADDITIVE ALTERNATE NO. 1				
1 Remove & replace existing skylights and hardware.	8	EA	\$	\$
TOTAL AMOUNT ADDITIVE ALTERNATE NO. 1				\$
TOTAL AMOUNT BASE BID PLUS ADDITIVE ALTERNATE NO. 1				\$

The undersigned certifies that the bid prices contained in this proposal have been carefully checked and are submitted as correct and final.

NOTE: Should bid prices on any items be omitted, the right is reserved to apply the lowest prices submitted by any other bidders for the omitted items in payment for work done under this Proposal. In the event of discrepancies, the Owner reserves the right to accept or reject informalities.

Receipt is hereby acknowledged of the following addenda to the contract Documents:

Addendum No. 1 dated _____	Rec. _____
Addendum No. 2 dated _____	Rec. _____
Addendum No. 3 dated _____	Rec. _____
Addendum No. 4 dated _____	Rec. _____
Addendum No. 5 dated _____	Rec. _____

CONTRACTOR: _____

BY: _____
(Authorized Signature)

PRINT NAME: _____

TITLE: _____

ADDRESS: _____

COUNTY: _____

CITY, STATE, ZIP: _____

TELEPHONE: _____

DATE: _____

BID SIGNATURE FORM

The undersigned agrees this bid becomes the property of Gregg County after the official opening.

The undersigned affirms he has familiarized himself with the local conditions under which the work is to be performed; satisfied himself/herself of the conditions of delivery, handling and storage of equipment and all other matters which may be incidental to the work, before submitting a bid.

The undersigned agrees if this bid is accepted, to furnish any and all items/services upon which prices are offered, at the price(s) and upon the terms and conditions contained in the Specifications. The period for acceptance of this Bid will be ninety (90) calendar days unless a different period is noted by the bidder.

The undersigned affirms that they are duly authorized to execute this contract, that this bid has not been prepared in collusion with any other Bidder, nor any employee of Gregg County, and that the contents of this bid have not been communicated to any other bidder or to any employee of Gregg County prior to the official opening of this bid.

Vendor hereby assigns to purchase any and all claims for overcharges associated with this contract which arise under the antitrust laws of the United States, 15 USCA Section 1 et seq., and which arise under the antitrust laws of the State of Texas, Tex. Bus. & Com. Code, Section 15.01, et seq.

The undersigned affirms that they have read and do understand the specifications and any attachments contained in this bid package. ***Failure to sign and return this form will result in the rejection of the entire bid.***

Signature _____ X

Company Name		
Address		
City/State/Zip Code		
Phone:	Office: Cell:	Fax: Email:
Print Name		
Job Title		

Bid Bond

(INSERT)

CONTRACT DOCUMENTS

Certificate of Interested Parties (Form 1295)

In 2015, the Texas Legislature adopted House Bill 1295, which added Section 2252.908 of the Government Code. The law states that a government entity may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the government entity. The disclosure of interested parties Form 1295 will be completed online and must be submitted to the governmental entity prior to any signed contract and/or vote by the governing authority.

The Filing Process:

1. Prior to award by Commissioners Court, your firm will be required to log in to the Texas Ethics Commission, https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm and fill out the Electronic Filing Application.
2. Once submitted, the system will generate an electronic Form 1295 displaying a "Certificate Number." Your firm must print and sign Form 1295.
3. **Within ten (10) business days** from notification of pending award by the Gregg County Purchasing Agent, the completed Form 1295 **must** be submitted to Gregg County.
4. Your firm will need to repeat this process and obtain a separate Form 1295 each time you enter into a new contract, renew a contract or make modification and/or amendments to a Gregg County contract.

Instructions and information are available at <https://www.ethics.state.tx.us/tec/1295-Info.htm> or you may call the Texas Ethics Commission at (512) 463-5800.

STANDARD FORM OF AGREEMENT

Approved as to Legal Form by
Legal Counsel

STATE OF TEXAS }
COUNTY OF GREGG }

THIS AGREEMENT, made and entered into this ____ day of _____, A.D. 2020, by and between the County of Gregg, and State of Texas, acting through its County Judge, thereunto duly authorized so to do, Party of the First Part, hereinafter termed OWNER, and _____ of the City of _____, County of _____, and State of Texas, Party of the Second Part, hereinafter termed CONTRACTOR.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Party of the First Part (OWNER), and under the conditions expressed in the bond bearing even date herewith, the said Party of the Second Part (CONTRACTOR), hereby agrees with the said Party of the First Part (OWNER) to commence and complete the construction of certain improvements described as follows:

**Gregg County Bid No. 2020-03
North Jail Roof and North Wall Improvements**

and all extra work in connection therewith, under the terms as stated in this Standard Form of Agreement; all of the documents attached to this Standard Form of Agreement; all Plans, Specifications and drawings for the project as prepared by the OWNER's engineer Hayes Engineering, Inc. (herein entitled "ENGINEER"); and all printed or written explanatory materials of said Plans, Specifications and drawings. The CONTRACTOR hereby agrees with the OWNER that the CONTRACTOR shall commence and complete all such construction and work at the CONTRACTOR's own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said construction and work.

The documents that are attached to and for all purposes made part of this Standard Form of Agreement include the Notice to Bidders, Instructions to Bidders, Bid Bond, Statement of Qualifications, CONTRACTOR's Bid Proposal, Construction Performance Bond, Construction Payment Bond, Maintenance Bond, Certificate of Insurance, General Conditions, Special Conditions, Gregg County, Texas Standard Terms and Conditions, and Technical Specifications. This agreement shall also include all Plans, Specifications and drawings for the project, as prepared by the ENGINEER, and all printed or written explanatory materials of said Plans, Specifications and drawings. This Standard Form of Agreement and the documents listed herein shall collectively evidence and constitute the entire contract between the parties hereto regarding the subject matter hereof.

The CONTRACTOR hereby agrees to commence work within ten (10) days after the date written notice to do so shall have been given to him, and to complete the same within **one hundred twenty (120)** calendar days after the date of the written notice to commence work, subject to such extensions of time as are provided by the General and Special Conditions.

CONTRACTOR's failure to timely commence work or diligently pursue completion of the work within the time limitations set out herein shall constitute a material breach of this contract. **TIME IS OF THE ESSENCE IN THE PERFORMANCE OF THIS CONTRACT.**

The OWNER agrees to pay the CONTRACTOR in current funds the price or prices shown in the Proposal, which forms a part of this contract, such payments to be subject to the terms and conditions of this contract, including without limitation the General and Special Conditions of Agreement.

Without regard to and notwithstanding any rules on conflicts of law, this contract shall be subject to and interpreted in conformance with the laws of the State of Texas, unless expressly required otherwise by federal law or regulations.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in the year and day first above written.

GREGG COUNTY, TEXAS

Party of the First Part (OWNER)

Party of the Second Part (CONTRACTOR)

By: _____
The Hon. Bill Stoudt, County Judge

By: _____

ATTEST:

ATTEST:

(Seal)

(Seal)

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____ (Name of Contractor or Company)

_____ (Address)

a _____ hereinafter called Principal, and
(Corporation / Partnership)

_____ (Name of Surety Company)

_____ (Address)

hereinafter called Surety, are held and firmly bound unto

_____ (Name of Recipient)

_____ (Recipient's Address)

hereinafter called OWNER, in the penal sum of _____ Dollars (\$ _____) 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 in 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 _____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties in 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.

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 WORK to be performed thereunder or

the SPECIFICATIONS accompanying the same shall in any way 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 instrument is executed in _____ counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST: _____
(Principal)
By _____
(Principal Secretary)

(SEAL)

(Witness as to Principal) _____
(Address) _____

ATTEST: _____
(Surety)
By _____
(Witness as to Surety) _____
(Address) _____

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

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor or Company)

(Address)

a _____, hereinafter called Principal,
(Corporation / Partnership)

and _____
(Name of Surety Company)

(Address)

hereinafter called Surety, are held and firmly bound unto

(Name of Recipient)

(Recipient's Address)

hereinafter called OWNER, in the penal sum of _____ Dollars, (\$ _____) in lawful money of the United States, for this 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 _____, 20____ a copy of which is hereto attached and made a part hereof for the construction of:

(Project Name)

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUB-CONTRACTORS, 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 SUB-CONTRACTOR 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 WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way 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 instrument is executed in _____ counter-parts, each on of (Number) which shall be deemed an original, this the _____ day of _____, 20__.

ATTEST: _____ (Principal)

_____ By _____ (Principal Secretary)

(SEAL)

_____ (Witness as to Principal) _____ (Address)

_____ (Address) _____

ATTEST: _____ (Surety)

_____ By _____ (Witness as to Surety) (Attorney in Fact)

_____ (Address) _____ (Address)

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

MAINTENANCE BOND

STATE OF TEXAS §
COUNTY OF GREGG §

KNOW ALL MEN BY THESE PRESENTS:

That _____
as principal, and the other subscriber hereto authorized under the laws of the State of Texas to act as surety on
bonds for principals, do hereby acknowledge ourselves to be held and firmly bound unto
_____, "Owner", in the penal sum of
_____ DOLLARS (\$ _____) for the
payment whereof the said principal and surety do bind themselves and their heirs, administrators, executors,
successors and assigns, jointly and severally. The conditions of this obligation are such that:

WHEREAS, the said principal has entered into a certain written contract with
_____, dated the ____ day of _____, 20__, for the
completion of:

all of such work to be done as set out in full in said contract and the plans and specifications therein referred to
and made a part hereof as fully and to the same extent as if copied at length herein.

WHEREAS, under the plans, specifications and contract, it is provided that the Contractor shall
maintain and keep in good repair the work herein contracted to be done for a period of one (1) year from the
date of written acceptance of said work and to do all necessary repairing and/or reconstructing in whole or in
part of said improvements that should be occasioned by settlement of foundation, defective workmanship or
materials furnished in the construction of any part thereof, or any of the accessories thereof constructed by the
Contractor; be it understood that the purpose of this section is to cover all defective conditions arising by reason
of defective material or workmanship and charge the same against that said Contractor and Surety on this
obligation, and the said Contractor and Surety shall be subject to the liquidation damages mentioned in said
contract for each day's failure on its part to comply with the terms of said provisions of said contract;

NOW, THEREFORE, if the said Contractor shall keep and perform its said agreement to maintain said
work and keep the same in repair for the said maintenance period of one (1) year, as provided, then these
presents shall be null and void and have no further effect. If default shall be made by the said Contractor in the
performance of its contract to so maintain and repair said work, then these presents shall have full force and
effect and said Owner shall have and recover damages from said Contractor and its Principal and Surety. It is
further agreed that this obligation shall be continuing, one against the Principal and Surety herein, and that
successive recoveries may be hereon for successive breaches until the full amount shall have been exhausted. It

is further understood that the obligation herein to maintain said work shall continue throughout said maintenance period and the same shall not be changed, diminished or in any manner affected from any cause during said time.

PROVIDED, the aggregate liability of Surety hereunder is limited to the penal sum of this bond.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on the respective dates written below their signatures.

ATTEST/SEAL: (if a corporation)

WITNESS: (if not a corporation)

(Full Name of Principal)

By _____
Name _____
Title _____

By _____
Name _____
Title _____
Date _____

Address _____

ATTEST/SEAL: (if a corporation)

(if not a corporation)

(Full Name of Surety) WITNESS:

By _____
Name _____
Title _____

By _____
Name _____
Title _____
Date _____

The name and address of the resident agent of Surety is:

NOTE: Date of Maintenance Bond must not be prior to date of contract.

CERTIFICATE OF INSURANCE

(INSERT)

SEPARATION OF MATERIALS FORM

STATE SALES TAX. The Contractor's attention is directed to paragraph No. 3 of Ruling No. 9 by obtaining the necessary permit or permits from the State Comptroller allowing the purchase of materials for incorporation in this project without having to pay the Limited Sales, Excise and Use Tax at the time of purchase. Such bidders must submit segregated prices for the total cost of materials and total cost of services, and the successful bidder must require his sub-contractors to obtain such permits and to sign written sub-contracts in which the prices are segregated for the total cost of materials and the total cost of services. Total materials cost should not include materials which are used or consumed in performing the work, but do not become a part of the completed installation.

After the bid opening and prior to execution of contract, the low bidder will be required to provide a separation of materials costs and labor costs for the amounts of the base bid and any alternatives. The following form shall be used to provide this information. This form shall be submitted with the executed contract and such statement will become a part of the contract:

STATEMENT OF MATERIALS AND SERVICES

Gregg County, Texas Bid No. 2020-03

Project Name: North Jail Roof and North Wall Improvements

Total Materials Cost: \$ _____

Total Service Cost: \$ _____

TOTAL CONTRACT PRICE: \$ _____

Note: The total materials cost plus the total services cost must equal the amount shown of the total contract price.

CERTIFICATE OF FINAL COMPLETION
OF
Gregg County Bid No. 2020-03 for
North Jail Roof and North Wall Improvements

CONTRACT DATED: _____

STATE OF TEXAS }
COUNTY OF _____}

Before me, the undersigned authority, a Notary Public in and for _____ County, Texas, on this day personally appeared _____ who, being by me duly sworn on his oath, says that he is/represents _____, the contractor who has performed a contract with Gregg County for the construction of the work described above, and is duly authorized to make this affidavit; that he has personally examined the work described above as required by the specifications of Gregg County attached to the contract; that said work and all items thereof have been completed and all known defects made good; that thereof have been completed and all known defects made good; that all surplus material, refuse, dirt and rubbish have been cleaned up, removed and disposed of; that all parts of the work are in a neat, tidy, finished condition and ready in all respects for acceptance by the County; that all the required work has been performed in accordance with the specifications, that rates of pay for all labor employed on said work have not been below the minimum set out in Labor Classification and Minimum Wage Scale in said Specifications and that within the knowledge of affiant all just bills for labor and material and for the rental or use of any equipment or apparatus used in, on, or in connection with the work have been paid in full by the Contractor.

CERTIFIED TRUE AND CORRECT

Contractor Signature

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

Notary Public in and for
_____ County, Texas

GREGG COUNTY, TEXAS STANDARD TERMS AND CONDITIONS

Bids are solicited for furnishing the merchandise, supplies, services and or equipment set forth in this document. **By returning this bid with the price(s) submitted, Vendors certify and agree to the following:**

1. All delivery and freight charges are to be included, on the basis of deliveries being FOB destination, inside delivery, unless otherwise specified elsewhere in bid document.
2. If applicable, a packing list or other suitable documents shall accompany each shipment and shall show:
 - a. Name and address of Vendor
 - b. Name and address of receiving department
 - c. Gregg County purchase order number
 - d. Description of material shipped, including item numbers, quantity, number of containers and package number (if any)
3. Samples may be requested for testing by Gregg County. Any sample that fails testing shall be considered sufficient reason to reject bid.
4. Non-performance of the bid requirements regarding specifications or non-compliance with terms of this contract shall be basis for termination of the contract by the County. Termination in whole or in part, by the County may be made at its option, without prejudice to any other remedy to which it may be entitled by law or in equity, or elsewhere under this contract, by giving thirty (30) days written notice to the Vendor with the understanding that all work being performed under this Contract shall cease upon the date specified in such notice. The County shall not pay for work, equipment, services or supplies, which are unsatisfactory. The Vendor may be given reasonable opportunity prior to termination to correct any deficiency. This however shall in no way be construed as negating the basis for termination for non-performance.
5. Quantities indicated in the bid are estimates based upon the best available information. The County reserves the right to increase or decrease the quantities by any amount deemed necessary to meet its needs without any adjustments in the bid price.
6. The bid award shall be based on, but not necessarily limited to, the following factors:
 - a. Unit price
 - b. Total bid price
 - c. Delivery date
 - d. Results of testing samples
 - e. Any special needs and requirements
 - f. Gregg County's experience with the products bids were submitted on
 - g. Vendor's past performance record with Gregg County
 - h. Vendor's safety record
 - i. Gregg County's evaluation of Vendor's ability
 - j. Estimated costs for supplies, services, maintenance, etc.
 - k. Estimated surplus value
7. Invoices shall be sent directly to the Departments placing order. Invoices must detail the materials/equipment delivered and must reference the Gregg County purchase order number. Payments are processed after the Auditor's Department has been notified that the material or equipment has been delivered in good condition and that no unauthorized substitutions have been made according to specifications.
8. Whenever an article or material is defined by describing a proprietary product or by using the name of the manufacturer, the term "OR EQUAL" if not inserted shall be implied unless otherwise indicated by "NO SUBSTITUTIONS". The specified article or material shall be understood as descriptive, not

restrictive. In case the unit price of an item differs from the extended price for the quantity quoted, the unit price shall govern.

9. The Vendor shall be considered an independent contractor and not an agent, servant, employee, or representative of the County in the performance of the work. No term or provision, hereof, or act of the Vendor shall be construed as changing that status.
10. The Vendor shall defend, indemnify, and save whole and harmless the County and all its officers, agents and employees from and against all suits, actions, or claims of the character, name and description brought for or on account of any injuries or damages (including but not restricted to death) received or sustained by any person(s) or property on account of, arising out of, or in connection with the performance of the work, including without limiting the generality of the foregoing, any negligent act or omission of the Vendor in the execution or performance of the Contract.
11. The Vendor agrees, during the performance of the work, to comply with all applicable codes and ordinances of the appropriate City, County or State, as they may apply, and as these laws may now read or as they may hereafter be changed or amended.
12. The Vendor shall obtain from the appropriate City, County or State, the necessary permit(s) required by the ordinances of the City, County or State, for performance of the work.
13. The Vendor shall not sell, assign, transfer or convey this Contract in whole or in part, without the prior written consent of the County.
14. In case, any one or more, of the provisions, contained in this Contract, shall, for any reason, be held to be invalid, illegal, or unenforceable, in any respect, such invalidity, illegality or unenforceability shall not affect, any other provision, thereof and this Contract shall be considered as if such had never been contained herein.
15. The parties herein agree that this Contract shall be enforceable in Gregg County, Texas and if legal action is necessary to enforce it, exclusive venue shall lie in Gregg County, Texas.
16. This Contract shall be governed by and construed in accordance with the laws of the State of Texas and all applicable Federal Laws.
17. Bids may be withdrawn any time prior to the official opening. Alterations made before opening time must be initialed by Vendor guaranteeing authenticity. Bids may not be amended, altered or withdrawn after the official opening, except upon the explicit recommendation of the Purchasing Agent and the formal approval of the Commissioners Court.
18. This Contract embodies the complete agreement of the parties hereto, superseding all oral or written previous and contemporary agreements between the parties and relating to matters herein, and except as otherwise provided herein cannot be modified without written agreement of the parties.
19. Funding Clause - Gregg County intends to make all payments required to be made under this Agreement. However, in the event, through no action initiated by the End User, its legislative body does not appropriate funds for the continuation of this agreement for any fiscal year after the current fiscal year and it has no funds to continue this Agreement from other sources, this Agreement may be terminated. To effect the termination of this Agreement, Gregg County shall, thirty days prior to the beginning of the fiscal year for which its legislative body does not appropriate funds, send written notice stating that funds have not been appropriated for the next fiscal year. The Vendor will submit a final invoice and coordinate with the Purchasing Agent to remove all property belonging to said Vendor as soon as possible. The final invoice will be verified and approved by the Purchasing Agent. Thereupon, Gregg County will be released from its obligation to make all further payments.
20. Insurance Requirements – Gregg County requires the following insurance coverages for Vendors doing business with Gregg County, Texas.
 - a. Workers' Compensation insurance with \$500,000.00 Employer Liability limits under Coverage B (no deductible)
 - b. General Liability insurance with limits of \$1,000,000.00 per occurrence/aggregate, including products and completed operations coverage
 - c. Auto liability limits \$1,000,000.00

d. County named as “*additional insured*” not “*additional named insured*”

e. Deductible shall be \$5,000.00 or less on each of the above listed coverage

The Vendor must provide a certificate of insurance conforming to the above listed requirements or a statement from their insurance carrier certifying that the required coverages shall be obtained by the Vendor within ten (10) days of formal award of a contract. In cases where a certification letter from an insurance carrier is attached to the bid in lieu of an insurance certificate, any formal award of a contract shall be contingent upon required coverages being put into force prior to any performance of any duties outlined in the contract.

21. Gregg County is exempt from federal excise and state sales taxes, ad valorem taxes and personal property taxes; therefore, tax must not be included in bids tendered. Bid prices offered must be complete and all-inclusive. Gregg County will not pay additional taxes, surcharges or other fees not included in bid prices.
22. Disclosure of Private Health Information (“PHI”) - Any contractor doing business with Gregg County that may have any potential of disclosing PHI will be required to submit an executed Business Associate Agreement guaranteeing in writing to provide *security* for PHI at the time the contract is approved and/or awarded. The executed Business Associate Agreement submitted shall also require the contractor to disclose unauthorized releases of PHI to the Gregg County Co-HIPAA Security Compliance Officers.
23. BUY AMERICA- The Contractor acknowledges to and for the benefit of the HUD Grantee (Gregg County) that it understands that any goods and services under this Agreement are being funded or could be funded with monies made available by the American Reinvestment and Recovery Act of 2009 (Recovery Act) (or are being made available for a project being funded with monies made available by the Recovery Act) and Section 1605 of such law contains provisions commonly known as “Buy American.” The Buy American requirement prohibits the use of Recovery Act funds for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States (“Buy American requirement”) including iron, steel and manufactured goods provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the HUD Grantee that (a) the Contractor has reviewed and understands the Buy American requirement, (b) all of the iron, steel, and manufactured goods used in the project will be and/or have been produced in the United States in a manner that complies with the Buy American requirement, unless exception to the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support and exception to the Buy American requirement, as may be requested by the HUD Grantee or HUD. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the HUD Grantee to recover as damages against the Contractor any loss, expense or cost (including without limitation attorney’s fees) incurred by the HUD Grantee resulting from any such failure (including without any limitation any impairment or loss of funding, whether in whole or in part from HUD). Neither this paragraph (nor any provision of the Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the HUD Grantee.
24. DEBARMENT-by signing this agreement, Vendor certifies that it will not award any funds provided under this agreement to any party which is debarred, suspended, or otherwise excluded from or ineligible for participation in federal assistance programs under Executive Order No. 12549 and 24 CFR Part 24.
25. Gregg County expressly reserves the right to accept or reject in part or in whole any bids submitted, and to waive any technicalities or formalities, considered to be in the best interest of Gregg County.
26. Bonds may be required in accordance with State Statutes if outlined in the specifications.
27. **Minority Businesses** - Gregg County is wholly committed to developing, establishing, maintaining, and enhancing minority business involvement in the total procurement process.

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SPECIAL CONDITIONS

1. OWNER. Whenever the term "Owner" appears in these specifications, it shall be understood to mean **Gregg County, Texas.**
2. ENGINEER. The word "Engineer" in these specifications shall be understood as referring to Hayes Engineering, Inc., 2126 Alpine St., Longview, Texas 75601, Engineer of the Owner, or such other Engineer, Supervisor or Inspector as may be authorized by said Owner to act in any particular position.
3. EXAMINATION OF SITE OF PROJECT. Prospective bidders shall make a careful examination of the site of the project, soil and water conditions to be encountered, improvements to be protected, disposal sites for surplus materials not designated to be salvaged materials, and methods of providing ingress and egress to private properties and of handling traffic during construction of the entire project.
4. QUALIFICATION OF LOW BIDDER. Before being awarded a contract, the low bidder shall submit such evidence as the Engineer may require to establish his financial responsibility, experience, and possession of such equipment as may be needed to prosecute the work in an expeditious, safe, and satisfactory manner.

Should the low bidder fail to produce evidence satisfactory to the Engineer on any of the foregoing points, he may be disqualified and the work awarded to the next low bidder so qualifying.
5. AWARD OF THE CONTRACT. The Owner, acting through its authorized representatives, will notify the successful bidder, in writing, within ninety (90) days after the date of receiving bids of its acceptance of this proposal. The Contractor shall complete the execution of the required Bond and Contract within fifteen (15) days of such notice.
6. ADDENDA. Bidders desiring further information or interpretation of the Plans or Specifications must make request for such information to the Engineer, prior to 48 hours before the bid opening. Answers to all such requests will be given in writing to all bidders in Addendum form, and all Addenda will be bound with, and made a part of, the Contract Documents. No other explanation or interpretation will be considered official or binding. Should a bidder find discrepancies in, or omission from the Plans, Specifications, or other Contract Documents, or should he be in doubt as to their meaning, he should at once notify the Engineer in order that a written Addendum may be sent to all bidders. Any addenda issued prior to 24 hours of the opening of bids will be mailed or delivered to each Contractor contemplating the submission of a proposal on this work. The proposal as submitted by the Contractor will be so constructed as to include any addenda if such are issued by the Engineer prior to 24 hours of the opening of bids.
7. BASIS FOR BID AWARD. If no alternates are specified in the bid proposal, award will be made to the lowest responsible, responsive bidder. However, the Owner reserves the right to reject any and all bids and to waive any irregularities as may be deemed best and in the Owner's interest.
8. TIME FOR COMPLETION. The time allowed for completion of all items of work shall be **one hundred twenty (120)** consecutive calendar days, which time shall begin the tenth (10th) day after issuance of the Work Order. The Work Order shall consist of a written request by the Engineer for the Contractor to proceed with the construction of the project.
9. LIQUIDATED DAMAGES FOR DELAY. The Contractor agrees that time is the essence of this Contract, and that for each day of delay beyond the number of calendar days herein agreed upon for the completion of the work herein specified and contracted for (after due allowance for such extension of time as is provided for in the General Conditions of Agreement) the Owner may withhold, permanently from the

Contractor's total compensation, the sum of Two Hundred Dollars (\$200.00) per calendar day or an amount equal to actual damages incurred by the Owner, whichever is greater, as stipulated damages for such delay.

10. RIGHTS OF VARIOUS INTERESTS. Wherever work being done by the Owner's employees or by other Contractors is contiguous to work covered by this contract, the respective rights of the various interests involved shall be established by the Engineer to secure the completion of the various portions of the work in general harmony.

11. CORPORATE CONTRACTS. Corporate contractors to be eligible to enter into contract with the Owner shall be qualified to do business in the State or States where the work is to be performed. All licensing requirements shall be complied with. Foreign corporations which have not domesticated or otherwise become licensed in the State or States where work will be performed shall obtain a permit to do business in such State or States pursuant to the State's requirements.

12. PROPOSALS. Proposals must be submitted on forms furnished by the Owner or the Owner's Engineer, Hayes Engineering, and endorsed as provided in the Contract Documents.

Proposals must be submitted filled out with ink or typewriter and without erasure, interlineation or changes, and if not made in accordance with the General Conditions and other contract documents, will be subject to rejection as irregular, yet the Owner reserves the right to waive any irregularities.

Proposals will be made in the name of the principal and, in a co-partnership, the names of all partners shall be given. Exact post office address shall be given in all cases. If proposals are submitted by an agent, satisfactory evidence of agency authority must accompany the proposal.

13. IRREGULAR PROPOSALS. Proposals shall be considered irregular and may be rejected for the following reasons unless otherwise provided by law:

- a. If the proposal form furnished to the Contractor by the Owner or the Owner's Engineer is not used or is altered;
- b. If there are unauthorized additions or conditional bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning;
- c. If the bidder adds any provisions reserving the right to accept or reject any award, or to enter into a contract pursuant to an award;
- d. If the unit or lump sum prices contained in the bid schedule are obviously unbalanced either in excess or below the reasonable cost analysis values;
- e. If the bidder fails to insert a unit price for every pay item indicated except in the case of authorized alternate pay items;
- f. If the bidder fails to complete the proposal in any other particulars where information is requested so bidder's proposal may be properly evaluated.

The Owner reserves the right to reject any or all bids and to waive irregularities as may be deemed best and in the Owner's interest.

14. RETURN OF BID SECURITY. Bid security of the lowest two or more bidders may be retained until a contract is executed or rejection made by the Owner. Other bid security will be returned only after the canvass and tabulation of bids is completed.

15. FAILURE TO EXECUTE CONTRACT. Should the successful bidder fail to execute the contract and furnish bonds satisfactory to the Owner to validate the same within ten (10) days after award of contract, his bid security shall be forfeited to the Owner as liquidated damages.

16. RIGHT-OF-ENTRY. Contractor shall provide the Owner, the Owner's Architect or Engineer, or representative of the Federal, State, County, District and Municipal governmental services proper facilities for access to the work wherever it is in preparation or progress.

17. PERMITS AND RIGHT-OF-WAY. The Owner will provide rights-of-way for the purpose of construction without cost to the Contractor by securing permits in areas of public dedication or by obtaining easements across privately owned property. It shall be the responsibility of the Contractor, forty-eight (48) hours prior to the initiation of construction on easements through private property, to inform the property owner of his intent to begin construction. Before beginning construction in areas of public dedication, the Contractor shall inform the agency having jurisdiction in the areas forty-eight (48) hours prior to initiation of the work.

18. CONSTRUCTION IN PUBLIC ROADWAYS AND PRIVATE DRIVEWAYS. No public road shall be entirely closed overnight. It shall be the responsibility of the Contractor to build and maintain all weather by-passes and detours, if necessary, and to properly light, barricade and mark all by-passes and detours that might be required on and across the road involved in the work included in this contract.

The Contractor shall make every effort to complete construction and allow immediate access to adjacent property at all driveway entrances located along the roads. Owners or tenants of improvements where access and/or entrance drives are located shall be notified at least eight (8) hours prior to the time the construction will be started at their drive-ins or entrances and informed as to the length of time driveways will be closed, which period shall not exceed six (6) hours.

The Contractor shall be responsible for all road and entrance reconstruction, and repairs and maintenance of same for a period of one year from the date of such reconstruction. In the event the repairs and maintenance are not made immediately to the satisfaction of the Engineer, and it becomes necessary for the Owner to make such repairs, the Contractor shall reimburse the Owner for the cost of such repairs.

The Contractor shall at all times keep a sufficient width of the roadway clear of dirt and other material to allow the free flow of traffic. The Contractor shall assume any and all responsibility for damage, personal or otherwise, that may be caused by the construction along public roadways or private driveways.

19. REFERENCE SPECIFICATIONS. Where reference is made in these specifications to specifications compiled by other agencies, organizations or departments, such reference is made for expediency and standardization from the material supplier's point of view, and such specifications referred to are hereby made a part of these specifications. Any reference to standard specifications in any of the Contract Documents shall always imply the latest edition of said standard specification or specifications available at time notice inviting Contractors to bid is published unless otherwise stated.

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

Where materials or equipment are specified by a trade or brand name, it is not the intention of the Owner to discriminate against an equal product of another manufacturer, but rather to set a definite standard of quality of performance, and to establish an equal basis for the evaluation of bids. Where the words "equivalent", "proper", or "equal to" are used, they shall be understood to mean that the thing referred to

shall be proper, the equivalent of, or equal to some other thing, in the opinion or judgment of the Engineer. Unless otherwise specified, all materials shall be the best of their respective kinds and shall be in all cases fully equal to approved samples. Notwithstanding that the words "or equal to" or other such expressions may be used in the specifications in connection with a material, manufactured article or process, the materials, article or process specifically designated shall be used, unless a substitute shall be approved in writing by the Engineer, and the Engineer shall have the right to require the use of such specifically designated material, article or process.

21. **QUALITY OF MATERIALS.** In the absence of detailed specifications in other sections, all materials shall conform to the latest standards of the American Society for Testing Materials.

22. **MATERIALS, SERVICES, AND FACILITIES.** It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, equipment rental, water, heat, light, fuel, power, transportation, superintendence, temporary construction of every nature and all other services and facilities of every nature whatsoever necessary to execute, complete and deliver the work within the specified time.

23. **WORKMANSHIP, MATERIALS, EQUIPMENT, AND STORAGE.** All work done and all materials and equipment furnished by the Contractor shall strictly conform to the plans, drawings, and specifications. Competent labor, mechanics, and tradesmen shall be used to supervise the installation of equipment as may be required by the Engineer. Any special tools or equipment which may be required for first class work shall be provided by the Contractor.

The acceptance at any time of materials by or in behalf of the Owner shall not be a bar to future rejection if they are subsequently found to be defective or inferior in quality or uniformity to the material specified, or are not as represented to the Engineer or Owner.

Contractor shall be responsible for the care and storage of materials delivered on the work site or purchased for use thereon. Stored materials shall be carefully and continuously protected from damage or deterioration and so located as to facilitate inspection by the Owner and Engineer. This responsibility for the care and storage of materials shall be with the Contractor whether such materials are furnished by the Contractor or by the Owner.

24. **INSPECTION AND TESTING OF MATERIALS.**

- a. During the progress of the work, it shall be subject to the inspection and observance of the Engineer, and the contractor shall afford every reasonable facility and assistance to the Engineer to make such inspection thorough and intelligent. If any work is covered up without approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination at the Contractor's expense.
- b. The fact that the Engineer is on the job site shall not be taken as an acceptance of the Contractor's work or any part of it. contractor shall notify the Engineer upon completion of his contract and the work shall be given final inspection by the Engineer and any tests shall be witnessed by the Engineer. If all parts of the work are acceptable and substantially comply with the intent of the plans, drawings, and specifications, a recommendation of final acceptance will be made by the Engineer to the Owner. If parts of the work are not acceptable and require additional work by the Contractor to complete the project, necessitating additional inspection by the Engineer, the cost of such additional inspections including time, travel, and lodging, shall be paid for by the Contractor to the Owner who will reimburse the Engineer.

- c. Contractor shall submit to the Engineer seven (7) days in advance of construction, and without charge, samples or specifications of materials he proposes to use and shall not use these materials until he has received approval from the Engineer.
- d. The Owner shall direct and furnish all items necessary for the testing of all materials called for in the specifications. The Owner shall pay the cost of the tests, including all transportation charges unless otherwise noted in the specifications. The cost of re-testing any failed specimens shall be paid by the Contractor.
- e. All tests, unless otherwise provided, shall be in accordance with the pertinent sections of the latest edition of the standards applicable to the material or devices to be tested. A partial list of the principal societies referred to and their abbreviations follows:

ASTM	American Society for Testing Materials
AISC	American Institute of Steel Construction
ACI	American Concrete Institute
FS	Federal Specifications
AASHTO	American Association of State Highway Officials
AWWA	American Water Works Association

- f. All parts of the improvements shall conform to the standard of construction as given in detail under the various items, and in general to the intent thereof, and if they do not conform, shall be made to do so by rebuilding or replacing or otherwise as directed by the Engineer or Owner before acceptance shall be made.

25. **BARRICADES, LIGHTS, AND WATCHMEN.** Where the work is carried on in or adjacent to any street, alley or public place, the Contractor shall at his own cost and expense furnish and erect such barricades, fences, lights, and danger signals, shall provide such watchmen, and shall provide such other precautionary measures for the protection of persons or property and of the work as are necessary. Barricades shall be painted in a color that will be visible at night. From sunset to sunrise the Contractor shall furnish and maintain at least one light at each barricade and sufficient number of barricades shall be erected to keep vehicles from being driven on or into any work under construction. The Contractor shall furnish watchmen in sufficient numbers to protect the work.

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

The Contractor shall use only battery powered lights, enclosed lanterns or other lights satisfactory to the Engineer. Smudge pots or other lights which have an open flame will not be permitted.

26. **DISPOSAL OF WASTE AND SURPLUS EXCAVATION.** All trees, stumps, slashings, brush or other debris removed from the job site as a preliminary to the construction of the work or its appurtenances shall be removed from the property and disposed of in a manner approved by the Engineer.

All excavated earth in excess of that required for backfilling shall be removed from the job site and disposed of in a satisfactory manner except in locations where, in the judgment of the Engineer, it can be neatly spread over and along the right-of-way.

27. **GUARANTY AGAINST DEFECTIVE WORK.** The Contractor shall indemnify the Owner against any repairs which may become necessary to any part of the work performed under the contract, arising from defective workmanship or materials used therein, for a period of one (1) year from the date of final acceptance of the work.

28. **RESTORATION OF SITE & CLEANUP.** Upon completion of the project (or major portions thereof) the Contractor shall restore the site to its original condition or better. Driveways and streets shall be compacted and resurfaced as originally found. All private property disrupted during construction including fences, patios, retaining walls, sidewalks, wooden decks, etc. shall be mended or repaired to their original condition. At the conclusion of the work, all tools, temporary structures and materials belonging to the Contractor shall be promptly removed, and all dirt, rubbish and other foreign substances shall be disposed of.

The Contractor shall thoroughly clean all equipment and materials installed by him and shall deliver over such materials and equipment in an undamaged, clean condition.

29. **CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE.** The Contractor shall not commence work under this contract until he has obtained at his expense all insurance required under this section of the General Conditions and by the Contract Documents, and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on any subcontract until all similar insurance required of the subcontractor has been so obtained and approved. Such insurance shall remain in full force and effect on all phases of the work, whether or not the work is occupied or utilized by the Owner, until all work under the Contract is completed and has been accepted by the Owner.

Nothing contained in the insurance requirements shall be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from his operations under the Contract.

Any insurance bearing an adequacy of performance will be maintained after completion of the project for the full guarantee period.

The Contractor shall obtain and maintain for the full period of the Contract the following types of insurance in the form, minimum limits and amounts herein specified or as may be otherwise required in the Contract Documents. The Contractor shall automatically renew any policy which expires during the performance of his Contract and notify the Owner and Engineer of such a renewal prior to expiration date.

A. **Workmen's Compensation including Occupational Disease, and Employer's Liability Insurance.** Before commencement of the work, the Contractor shall take out and maintain during the life of this contract Statutory Workmen's Compensation Insurance and Occupational Disease Disability Insurance for all of his employees to be engaged in work under this Contract, and in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation and occupational Disease Disability Insurance for the latter's employees engaged in such work unless such employees are covered by the protection afforded by the Contractor's insurance. In case any class of employees engaged in hazardous work under the Contractor is not protected under the Workmen's Compensation statute, or in case there is no applicable Workmen's Compensation Statute, the Contractor shall provide, and shall cause each subcontractor to provide adequate insurance for the protection of his employees not otherwise protected.

B. **Public Liability and Property Damage Insurance:** (Note "Indemnity" clause hereinafter). Before commencement of the work, the Contractor shall submit written evidence that he and all his subcontractors have obtained for the period of the Contract full Comprehensive General Liability and Property Damage Insurance coverage. This coverage shall protect the Contractor; the Owner; the Engineer, its architects and engineers; and each of their officers, agents and employees; from claims for damages for bodily or personal

injury, sickness or disease, including death, and from claims for damages to property, which may arise directly or indirectly out of, or in connection with the performance of work under this Contract by the Contractor, by any of his Subcontractors, or by anyone directly or indirectly employed of either of them, or under the control of either of them, and the minimum amount of such insurance shall be as follows unless higher minimum amounts are otherwise required in the Contract Documents:

Public Liability Insurance in an amount not less than One Million Dollars (\$1,000,000) for damages arising out of bodily or personal injury, sickness or disease, or death of one person and subject to the same limit for each person and in an amount not less than One Million Dollars (\$1,000,000) in any one occurrence; and Property Damage Insurance in an amount not less than Five Hundred Thousand Dollars (\$500,000) for all damages arising out of injury to or destruction of property of others in any one occurrence with an aggregate limit in the same amount.

The Property Damage portion of this coverage shall include where applicable explosion, collapse and underground exposure coverage. In addition, where Completed Operation Insurance coverage is applicable, such coverage will be maintained after completion and acceptance of the project for the full guarantee period.

C. Automobile Liability and Property Damage Insurance: Before commencement of the work, the Contractor shall submit written evidence that he and all his subcontractors have obtained Automobile Liability and Property Damage Insurance coverage on all self-propelled vehicles used in connection with the Contract, whether owned, non-owned, or hired. The liability limits shall be not less than One Million Dollars (\$1,000,000) for injury or death of one person and in an amount not less than One Million Dollars (\$1,000,000) in any one occurrence; and Property Damage limits of not less than Five Hundred Thousand Dollars (\$500,000) in any one occurrence.

D. Contractual Liability Coverage: Each and every policy for Liability Insurance carried by each Contractor and Subcontractor will include a "Contractual Liability Coverage" endorsement sufficiently broad to insure the provision titled "Indemnity" hereinafter set forth.

E. Indemnity: The Contractor shall defend, indemnify and hold harmless the Owner; the Engineer, its Engineers; and each of their officers, agents, servants and employees; from any and all suits, actions, claims, losses or damage of any character and from all expenses incidental to the defense of such suits, actions or claims, based upon or arising out of or alleged to be based upon or arising out of (1) any injury, disease, sickness or death of any person or persons, (2) any damages to any property including in part loss of use thereof, caused by any act or omission of the Contractor, of any Subcontractor of the Contractor, or by their officers, agents, servants, employees, or anyone else under the Contractor's direction and control, and arising out of, occurring in connection with, resulting from, or caused by the performance or failure of performance of any work or services called for by the Contract or from conditions created by the performance or non-performance of said work or services, but not including the sole negligence of any party herein indemnified.

F. Builder's Risk "All-Risk" Insurance: In addition to such Fire and extended Insurance coverage which the Contractor or his Subcontractors elect to carry for their own protection, the Contractor, before commencement of the work, shall effect and maintain for the life of his Contract Builder's Risk "All-Risk" Completed Value Insurance coverage upon the full insurable value of all portions of the project which is the subject of this Contract and subject to a loss for which Builder's Risk "All-Risk" Insurance coverage gives protection, and shall include completed work and work in progress. This coverage shall be with an insurance company or companies acceptable to the Owner.

Such insurance shall include as Additional Named Insureds: the Owner; The Engineer, its architects and engineers; and each of their officers, agents, and employees; and any other persons with an insurable interest designated by the Owner as an Additional Named Insured.

Duplicate originals of the policy of insurance required herein shall be furnished to the Engineer as provided under "Evidence of Insurance Coverage" hereinafter.

G. Evidence of Insurance Coverage: Before commencement of any work, the Contractor shall submit written evidence that he and all his Subcontractors have obtained the minimum insurance required by the Contract Documents. Such written evidence shall be in the form of a Certificate of Insurance (see attached form) executed by the Contractor's insurance carrier showing such policies in force for the specified period or by furnishing a copy of the actual policy or policies. Each policy or certificate will bear an endorsement or statement waiving right of cancellation or reduction in coverage without minimum ten (10) days notice in writing to be delivered by registered mail to the owner.

The Contractor shall furnish duplicate originals of Builders' Risk "All-Risk" Completed Value Insurance coverage to the Engineer, one copy of which shall be for the Owner and one copy for the Engineer.

30. SAFETY.

- a. In accordance with generally accepted construction practices, the Contractor alone will be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours.
- b. The duty of the Engineer or Architect to conduct construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.

31. EXISTING UTILITIES AND SERVICE LINES. The Contractor shall be responsible for the protection of all existing utilities or service lines crossed or exposed by his construction operations. Where existing utilities or service lines are cut, broken or damaged, the Contractor shall replace or repair the utilities or service lines with the same type of original material and construction, or better, at his own cost and expense.

32. DURING CONSTRUCTION. During construction of the work, the Contractor shall, at all times, keep the site of the work and adjacent premises as free from material, debris, and rubbish as is practicable and shall remove same from any portion of the site, if in the opinion of the Engineer, such material, debris, or rubbish constitutes a nuisance or is objectionable.

The Contractor shall remove from the site all of his surplus materials and temporary structures when no further need therefore develops.

33. COPIES OF PLANS AND SPECIFICATIONS FURNISHED. Three (3) sets of plans and specifications shall be furnished to the Contractor, at no charge, for construction purposes. Additional copies may be obtained at cost of reproduction upon request.

34. LIGHT AND POWER. The Contractor shall provide, at his own expense, temporary lighting and facilities required for the proper prosecution and inspection of the work.

35. EXISTING STRUCTURES. The plans show the locations of all known surface and subsurface structures. However, the Owner assumes no responsibility for failure to show any or all of these structures

on the plans, or to show them in their exact location. It is mutually agreed that such failure shall not be considered sufficient basis for claims for additional compensation for extra work or for increasing the pay quantities in any manner whatsoever, unless the obstruction encountered is such as to necessitate changes in the lines or grades, or requires the building of special work, provisions for which are not made in the plans and proposal, in which case the provisions in these specifications for extra work shall apply.

36. USE OF EXPLOSIVES. Use of explosives will be allowed only upon written approval of their use by the Engineer.

Should the Contractor elect to use explosives in the prosecution of the work, the utmost care shall be exercised so as not to endanger life or property. The Owner shall not be held liable for damages done by the Contractor in the use of explosives. The Contractor shall notify the proper representatives of any public service corporation, any company, or any individual, not less than eight (8) hours in advance of the use of explosives which might endanger or damage their or his property along or adjacent to the work. Whenever explosives are stored or kept, they shall be stored in a safe and secure manner and all storage places be plainly marked "DANGER EXPLOSIVES", and shall be under the care of a competent watchman at all times.

37. SUNDAYS, HOLIDAYS, AND OVERTIME. Any work necessary to be performed after regular working hours, on Sundays, or legal holidays, shall be performed without additional expense to the Owner. The Contractor shall notify the Engineer if any work is to be performed on Sundays or holidays.

38. PAYMENTS NO EVIDENCE OF PERFORMANCE. No progress or final estimate certificate given or payment made under this contract shall be evidence of the performance of this contract or construed to be acceptance of defective work or improper materials, either wholly or in part.

39. TEMPORARY SUSPENSION OF THE WORK. The Engineer shall have authority to suspend the work wholly or in part for such period or periods of time as he may deem necessary due to unsuitable weather or other conditions considered unfavorable for the suitable prosecution of the work; or for the failure of the Contractor to carry out instructions or to perform any provisions of the contract. During periods of suspension, the Contractor shall properly protect the work from possible injury.

40. OWNER'S RIGHT TO DO WORK. If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this contract, the Owner, after seven (7) days written notice to the Contractor, may, without prejudice to any other remedy the Owner may have, make good such deficiency and may deduct the cost thereof from the payment then or thereafter due the Contractor. Any money due the Owner after such deduction shall be paid by the Contractor or his sureties who hereby agree to these provisions.

41. RIGHT OF OWNER TO TERMINATE CONTRACT. Should it appear at any time that the work is not being prosecuted with sufficient competence or rapidity to insure the proper completion of the work within the stipulated time, and, if upon seven (7) days written notice to the Contractor, he fails to increase the quality or the quantity of his work, or both, the Owner reserves the right to annul and cancel this contract and relet the work or any part thereof, or at the Owner's option to complete it by day labor. The Contractor shall not be entitled to any claims for damages on account of such annulment, and he will be held liable for costs and expenses incurred in reletting or completing the work under this contract. All money due the Contractor will be retained until the work is completed and all expenses and costs have been deducted and any money due the Owner, after such deductions have been made, shall be paid by the Contractor or his Sureties who hereby agree to these provisions.

42. TERMINOLOGY. Throughout these specifications, the word "shall" denotes mandatory. The word "may" implies only permission. All other "terms" or "word phrases" shall be interpreted as having the meaning customarily ascribed to them by the several building trades of the United States.

43. CERTIFICATES AND GUARANTEES. Four (4) copies of any manufacturer's guaranty or certificate as may be required by the Contract Documents shall be submitted to the Owner prior to the acceptance of the work by the Owner.

44. STATE SALES TAX. This Contract is issued by an organization which qualifies for exemption pursuant to the provisions of Article 20.04 (F) of the Texas Limited Sales, Excise and Use Tax Act. The Contractor performing this contract may purchase, rent or lease all materials, supplies, equipment used or consumed in the performance of this contract by issuing to his suppliers an exemption certificate.

45. COORDINATION WITH OTHERS. In the event other contractors are doing work in the same area simultaneously with this project, the Contractor shall coordinate his proposed construction with that of the other contractors.

46. DEWATERING EXCAVATION. The prospective bidders shall make sufficient subsurface explorations to determine the location of groundwater which might be encountered. The Contractor shall, at his own expense, utilize a pumping system in order to place materials in dewatered excavations.

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

Any time the Contractor intends to expose, cross, or otherwise work in the area of the existing petroleum pipelines, telephone lines, water lines, etc., the Contractor shall notify the Owner(s) of the respective facilities forty-eight (48) hours in advance.

48. PAY ITEMS. Pay items are listed in the Proposal. All other items necessary to complete the work as shown and specified shall be considered subsidiary obligations of the Contractor.

49. MUTUAL RESPONSIBILITY OF CONTRACTORS. If, through acts or neglect on the part of the Contractor, any other Contractor or Subcontractor shall suffer loss or damage to his work, the Contractor agrees to settle with such other Contractor or Subcontractor by agreement or arbitration, if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor asserts been so sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against such claims and for any costs in connection with such claims.

50. PROTECTION OF PROPERTY. The Contractor shall, at no additional expense to the Owner, protect by false work, braces, shoring or other property along his line of work or affected directly by his work, against damage and shall repair the damages or repay the injured Owners if such damage occurs.

The Contractor shall exercise care to protect from injury all water pipes, sanitary sewer pipes, gas mains, telephone cables, electric cables, service pipes, and other utilities or fixtures which may be encountered during the progress of the work. All utilities and other service facilities or fixtures if damaged, shall be repaired by the Contractor without additional compensation.

The Contractor shall personally check and verify utility information on the plans. Where existing utilities or structures are shown on the plans or drawings, they are believed to be accurate but are not guaranteed to

such or that these are the only utilities or structures in the construction area. Protection is Contractor's responsibility and he must satisfy himself as to the existence and location of all utilities and structures.

The Contractor shall give notice in writing at least 48 hours before breaking ground, to all persons, superintendents, inspectors, or those otherwise in charge of property, streets, water pipes, gas pipes, sewer pipes, telephone cables, electric cables, railroads or otherwise, who may be affected by the Contractor's operation, in order that they may remove any obstruction for which they are responsible and have a representative on the ground to see that their property is properly protected.

51. EXTENSION OF CONTRACT PERIOD. The Contractor may be granted an extension of time due to Acts of God, Acts of War, Strikes, or non-delivery of materials provided he submits a request in writing to the Engineer not later than ten (10) days from the date of such occurrence. A separate request must be made for each occurrence.

52. FAILURE TO COMPLETE WORK WITHIN CONTRACT PERIOD. If the Contractor fails to complete his work within the contract period, or any extension thereof, as provided in the "Extension of Contract Period" said contract shall upon written notice to the Contractor and Surety be in default.

The Owner may, at its (his) option, permit the Contractor or his surety to complete the work included in the contract, or may proceed to complete the work in accordance with "Completion of Contract in Default". In either event, the Contractor or his Surety shall be responsible for all costs incidental to the completion of the work and also for the liquidated damages stipulated in the proposal form. The Owner may waive such portion of the liquidated damages as may occur after the work is in condition for the safe and convenient use by the Owner.

53. CONTRACTS IN DEFAULT. The Owner may declare a contract in default for any one or more of the following reasons:

- a. Failure to complete the work within the contract period or any extension thereof.
- b. Failure or refusal to comply with an order of the Engineer or Architect within a reasonable time.
- c. Failure or refusal to remove rejected materials.
- d. Failure or refusal to perform anew any defective or unacceptable work.
- e. Bankruptcy or insolvency, or the making of an assignment for the benefit of creditors.
- f. Failure to provide a qualified superintendent, competent workmen or subcontractors to carry on the work in an acceptable manner or failure to prosecute the work according to the agreed schedule of completion.
- g. Disregard or violation of any other important provisions of the Contract Documents as determined by the Engineer.

54. COMPLETION OF CONTRACTS IN DEFAULT. If for any reason, a contract is declared in default, the Owner shall have the right, without process or action at law to take over all or any portion of the work and complete it at its (his) option, either by day labor or by reletting same. Written notice shall be given the Contractor by the Owner that his contract has been declared in default and upon receiving such notice, the Contractor shall peaceably relinquish possession of said work or the parts thereof specified in the notice.

The Owner may, at its (his) option and at a rental which it considers reasonable, retain all materials, equipment, and tools on the work until the work is complete.

Neither the Owner nor the Owner's officers, agents, or employees shall be in any way liable or accountable to the Contractor or his Surety for the method by which the completion of the said work, or any portion thereof, may be accomplished, or for the price paid therefor. Should the cost of completing the work be in excess of the original contract price, the Contractor and his Surety shall be held responsible for such excess cost. Should the cost of such completion including all proper charges, be less than the original contract price, the amount so saved shall be paid to the Contractor. Neither by taking over the work nor by declaring the contract in default shall the Owner forfeit the right to recover damages from the Contractor or his Surety for failure to complete the entire contract. Maintenance of the work shall continue to be the Contractor's and Surety responsibilities as provided for in the Bond and Guaranty of the Contractor.

55. EXCAVATION IN HIGHWAY RIGHTS-OF-WAY. No trench excavation within a highway right-of-way shall be carried closer than 10 feet of all pavement edges. No dirt from trench excavation shall be piled on roadway shoulders, slopes, ditches, and berms shall be restored to their original condition.

The Contractor shall notify the Highway Department of his construction schedule not less than five (5) days prior to commencing the work within the right-of-way. The Contractor shall conform to the requirements of the Texas Highway Department as to details of construction methods and time of construction.

56. PROVISIONS FOR REROUTING AND DETOUR OF TRAFFIC. The Contractor will be required to furnish all barricades, lights, signs, and flagmen where it becomes necessary to reroute traffic during the time construction is in progress in the City streets or highways. The detour will be determined by the Engineer and approved by the Owner and the Texas Highway Department.

57. REMOVAL AND REPLACEMENT OF EXISTING PIPE CULVERTS. Existing pipe culverts in conflict with the proposed construction shall be unearthed carefully, disjointed, and stockpiled adjacent to the right-of-way. The pipe culverts shall be cleaned and replaced immediately after the sewer line construction is clear so as to cause no serious inconveniences to the property owners and to allow access to their property as quickly as possible. Pipe culverts shall be laid to grade on a firm bedding and shall be backfilled and mechanically tamped to a density such that settlement will not occur. Where existing rubble or concrete headwalls are cut, damaged, or removed, they shall be replaced in an equal or better condition as determined by the Engineer.

Removal and replacement of existing pipe culverts will not be measured and paid for each. No separate payments will be made for removing and replacing headwalls on culverts and all costs in connection therewith shall be included in other items listed in the Proposal.

58. SCHEDULE OF WORK SEQUENCE. Upon award and prior to any construction, it shall be the responsibility of the Contractor to present, to the Owner and Engineer for approval, a tentative schedule of the sequence in which the work will be performed. The schedule should include the following information:

- a. The sequence of work in which the construction will be done.
- b. The approximate period of time in constructing and testing of the facilities.
- c. Coordination of work using two (2) or more crews.
- d. Schedule of possible night work in making tie-ins and road crossings.

59. COST BREAKDOWN. Immediately after being awarded a contract for the work, the Contractor shall furnish the Engineer with a cost breakdown of each lump sum bid. Such a breakdown shall be in sufficient detail to permit its use in the preparation of progress estimates by the Engineer. Progress payments for materials and equipment on hand shall be based on invoice prices and invoice copies must be presented to the Engineer.

60. FINAL FIELD TESTS. Upon completion of the work and prior to final payment, all equipment and appliances installed under this Contract shall be subjected to acceptance tests as specified or required to prove compliance with the Contract Documents.

The Contractor shall furnish labor, fuel, energy, water and all other material, equipment, and instrument necessary for all acceptance tests, at no additional cost to the Owner.

61. WATER FOR CONSTRUCTION. Water used for testing and flushing of the pipe line or any other purpose incidental to this project will be furnished by the Contractor. The Contractor shall make the necessary arrangements for securing and/or transporting such water and shall take such water in a manner and at such times that will not produce a harmful drain on the source of water. The Contractor shall be fully responsible for the draining and disposal of all water used in flushing and testing. The Contractor shall obtain approval of the Owner and Engineer of the manner in which the water will be drained and disposed of.

62. ELECTRICITY FOR CONSTRUCTION. Except as provided elsewhere in these specifications, the Contractor shall provide all electricity required.

63. SPECIAL CONSTRUCTION REQUIREMENTS IN STATE HIGHWAY RIGHT-OF-WAY.

- a. All Highway signs removed or disturbed shall be restored to original condition.
- b. All surplus material shall be removed from right-of-way and the excavation finished flush with surrounding natural ground.
- c. Operation along highways shall be performed in such a manner that all excavated materials be kept off the pavements at all times as well as all operating equipment.
- d. Barricades, warning signs and flagmen shall be provided by the Contractor.

64. CONTRACT DOCUMENTS. The Contract Documents shall consist of all documents contained herein as stated in the Table of Contents including the Notice to Bidders (Advertisement), Special Conditions, Instructions to Bidders, Proposal, signed Agreement, Performance and Payment Bonds (when required), Special Bonds (when required), General Conditions of Agreement, Technical Specifications, Plans, and all modifications thereof incorporated in any of the documents before the execution of the Agreement.

65. POLES, SIGNS, GUY WIRES, ETC. All utility poles, guy wires, private sign posts, signs, and similar private obstructions which interfere with the construction of this project will be removed and replaced by the Contractor at his own expense.

The removal and replacement of City street sign posts and signs is the responsibility of the Contractor. The Contractor shall be responsible for all damage to street sign posts and signs within the limits of his operations that remain in place or are removed and replaced.

In event street sign posts and signs are injured or destroyed by the Contractor's operations, they shall be replaced by the Contractor. No separate compensation will be paid for this work, but the costs thereof shall be included in such contract pay items as are provided.

66. PROTECTION OF TREES, PLANTS AND SHRUBS. The Contractor shall make every effort to protect all trees, plants, and shrubs encountered during construction and shall notify property owners, as specified above, before removal of any such item. In all cases where questions arise, the Contractor shall request clarification from the Engineer.

67. PROPERTY LINES AND MONUMENTS. The Contractor shall protect all property lines, monuments and stakes encountered in his work. All monuments, and stakes for later use, that are disturbed or destroyed by the Contractor shall be replaced at his expense.

68. HORIZONTAL AND VERTICAL CONTROL POINTS. Location of the centerlines and grades will be determined and staked by the Contractor. The Contractor shall assume full responsibility for construction in accordance with the approved lines and grades.

69. CONFINED SPACE ENTRY. The Contractor shall be responsible for compliance with any and all Federal and State confined space entry and permitting requirements.

70. ALLOWANCE FOR MISCELLANEOUS EXTRA WORK. A discretionary allowance may have been established in the Bid Proposal for miscellaneous extra work which may arise during the construction phase of the project due to the discovery of unknown obstructions or other unexpected project conditions for which a method of payment, such as individual bid items, is not established. This allowance, if established in the Bid Proposal, is not intended to be used to procure payment for items specifically named as subsidiary to other bid items within the contract documents. Prior to initiating any item of extra work under this bid item, the Owner, Engineer, and Contractor will agree as to the scope of extra work to be performed and the amount of payment to be made for the particular item of extra work under consideration. A written field order for the extra work will be approved by all parties before commencing with extra work. Expenditure of the allowance funds is at the sole discretion of the Owner. The allowance may be used in full or in part as the Owner deems necessary. If no extra work is identified and approved by the Owner, the allowance funds will not be expended.

"General Decision Number: TX20190250 10/04/2019

Superseded General Decision Number: TX20180300

State: Texas

Construction Type: Building

County: Gregg County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available

at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	02/08/2019
2	10/04/2019

BOIL0074-003 01/01/2017

	Rates	Fringes
BOILERMAKER.....	\$ 28.00	22.35

ELEC1151-003 09/01/2015

	Rates	Fringes
ELECTRICIAN (Excludes Low Voltage Wiring and Installatin of Sound and Communication Systems).....	\$ 23.40	13%+5.20

ELEV0021-006 01/01/2019

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 41.24	33.705

FOOTNOTES:

A. 6% under 5 years based on regular hourly rate for all hours worked. 8% over 5 years based on regular hourly rate for all hours worked.

B. New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Veterans Day.

ENGI0178-005 06/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
(1) Tower Crane.....	\$ 29.00	10.60
(2) Cranes with Pile Driving or Caisson Attachment and Hydraulic Crane 60 tons and above.....	\$ 28.75	10.60
(3) Hydraulic cranes 59 Tons and under.....	\$ 27.50	10.60

* IRON0084-011 06/01/2019

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 24.42	7.12

PLUM0100-006 11/01/2017

	Rates	Fringes
PIPEFITTER.....	\$ 29.09	11.51

SUTX2014-026 07/21/2014

	Rates	Fringes
BRICKLAYER.....	\$ 18.33	2.50
CARPENTER (Form Work Only).....	\$ 13.63	0.00
CARPENTER, Excludes Form Work....	\$ 25.00	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 13.94	0.00
ELECTRICIAN (Communication Technician Only).....	\$ 14.00	2.90
ELECTRICIAN (Low Voltage Wiring Only).....	\$ 14.36	2.44

INSULATOR - MECHANICAL (Duct, Pipe & Mechanical System Insulation).....	\$ 19.77	7.13
IRONWORKER, REINFORCING.....	\$ 12.27	0.00
IRONWORKER, STRUCTURAL.....	\$ 20.00	0.00
LABORER: Common or General.....	\$ 11.02	0.00
LABORER: Mason Tender - Brick...	\$ 11.36	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 10.66	0.00
LABORER: Pipelayer.....	\$ 12.49	2.13
LABORER: Roof Tearoff.....	\$ 11.28	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 15.60	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 13.93	0.00
OPERATOR: Bulldozer.....	\$ 14.00	0.27
OPERATOR: Drill.....	\$ 16.22	0.34
OPERATOR: Forklift.....	\$ 14.83	0.00
OPERATOR: Grader/Blade.....	\$ 15.10	1.94
OPERATOR: Loader.....	\$ 12.62	2.42
OPERATOR: Mechanic.....	\$ 17.52	3.33
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.03	0.00
OPERATOR: Roller.....	\$ 12.70	0.00

PAINTER (Brush, Roller, and Spray).....	\$ 14.45	0.00
PLUMBER.....	\$ 21.35	4.55
ROOFER.....	\$ 13.75	0.00
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 22.73	7.52
SHEET METAL WORKER, Excludes HVAC Duct Installation.....	\$ 15.44	1.46
TILE FINISHER.....	\$ 11.22	0.00
TILE SETTER.....	\$ 14.74	0.00
TRUCK DRIVER: Dump Truck.....	\$ 12.39	1.18
TRUCK DRIVER: Flatbed Truck.....	\$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer Truck.....	\$ 12.50	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.00	4.11

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

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for their

own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

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

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

Union Rate Identifiers

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

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

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

Survey Rate Identifiers

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

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

Union Average Rate Identifiers

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

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current

negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

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

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION"

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

SECTION G1 - GENERAL INFORMATION

TECHNICAL SPECIFICATIONS

SECTION G1 - GENERAL INFORMATION

G1.1. PERMITS AND RIGHT-OF-WAY: The Owner will provide rights-of-way for the purpose of construction without cost to the Contractor by securing permits in areas of public dedication or by obtaining easements across privately owned property. It shall be the responsibility of the Contractor, five (5) days prior to the initiation of construction to inform the Owner's Representative of his intent to begin construction. Before beginning construction in secure areas, the Contractor shall inform the agency having jurisdiction in the area forty-eight (48) hours prior to initiation of the work or needing access.

G1.2. CONSTRUCTION IN SECURE AREAS: Construction access will be limited in secure areas of the jail facility. All access in secure areas shall be pre-approved by the Gregg County Sheriff's Office. It shall be the responsibility of the Contractor to maintain secure access to the work areas. Temporary access, if necessary, shall be properly lighted, barricaded and clearly marked for the work included in this contract.

The Contractor is responsible for security and safety in the construction area during the construction period. Signs, barricades and other necessary devices shall be furnished and maintained by the Contractor in compliance with the agencies having jurisdiction for such facilities.

G1.3. PUBLIC UTILITIES AND OTHER PROPERTY TO BE CHANGED: In case it is necessary to change or move the property of any owner or of a public utility, such property shall not be moved or interfered with until approved by the owner. The right is reserved to the owner of public utilities to enter upon the limits of the project for the purpose of making such changes or repairs of their property that may be made necessary by performance of this Contract.

Any time the Contractor intends to expose, cross, or otherwise work in the area of the existing pipelines, telephone lines, water lines, etc. the Contractor shall notify the utility owner five (5) days in advance.

G1.4. POLES, GUY WIRES, ETC.: All utility poles, guy wires, private sign posts, signs and similar private obstructions which interfere with the construction of this project will be removed and replaced by the Contractor at his own expense.

TECHNICAL SPECIFICATIONS

SECTION G1A - GENERAL CONSTRUCTION INFORMATION AND REQUIREMENTS

G1A.1. RELATIONSHIP WITH EXISTING FACILITIES: The Contractor is advised that, unless otherwise indicated, existing utilities must be available at all times for use. The Contractor, therefore, shall at all times take particular care to avoid needless confusion, clutter and debris at the site of the work. At no time shall the Contractor's personnel, equipment, or material prevent the normal operations of the facility. If it is necessary to request the Contractor to move his equipment, materials, or any material included in the work, he shall do so promptly and place said equipment or material in an area which does not interfere with proper service. The Contractor is further cautioned against adjusting or altering any private property without the written consent of the Owner.

G1A.2. PROTECTION OF EXISTING INSTALLATIONS: The Contractor shall correct or replace, without delay any and all damage to existing structures, surfaces, equipment, controls or systems resulting from his operations.

The Contractor's attention is particularly directed to the dust, abrasive particles, debris and dirt generated by the placement, chipping, cutting, finishing and grinding of new or existing concrete, and the dust debris and dirt generated by excavation and backfill operations; and the filters, protective shieldings, and other dust suppression methods at all times to adequately protect private property.

G1A.3. PERMANENT UTILITIES: The existing site is presently served with utilities. The utilities to be modified by the Contractor are as shown on the plans.

G1A.4. CLEANING UP: The Contractor shall not allow the site of the work to become littered with trash and waste material but shall maintain the site of the work in a neat and orderly condition throughout the construction period. On or before the completion of the work, the Contractor shall carefully clean out all pits, drain lines and drains, chambers or conduits and shall remove all temporary structures built by him and rubbish of all kinds from any of the grounds which he has occupied and leave them in first-class condition to the satisfaction of the Engineer.

A500-84	Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
A563-84	Carbon and Alloy Steel Nuts
C827-84	Early Volume Change of Cementitious Mixtures

H. American Welded Society, Inc. (AWS) Publication:

D1.1-88	Structural Welding Code - Steel
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I. Steel Structures Painting Council (SSPC) Publications:

PS8.01-82	One-Coat Rust Preventive Painting System with Thick-Film Compounds
SP-3-82	Power Tool Cleaning SP-6-82 Commercial Blast Cleaning

1.02 DESCRIPTION OF WORK

The work includes the fabrication, erection, and shop painting of structural steel. Provide in accordance with AISC "Manual of Steel Construction" except as specified herein. In the AISC "Manual of Steel Construction" referred to herein, the "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings," the "Code of Standard Practice for Steel Buildings and Bridges," and Structural Joints Using ASTM A325 or A490 Bolts" shall be considered a part thereto.

1.03 SUBMITTALS

A. Shop Drawings: Submit for approval by the Architect/Engineer prior to fabrication. Prepare in accordance with the AISC "Detailing for Steel Construction" and AISC "Engineering for Steel Construction." Shop drawings shall not be reproductions of contract drawings. Include complete information for the fabrication and erection of the structure's components, including the location, type, and size of bolts, welds, member sizes and lengths, connection details, blocks, copes, and cuts. Use AWS standard welding symbols.

B. Manufacturer's Certificates of Compliance

- 1.3.2.1 Steel-Mill Test Reports
- 1.3.2.2 Bolts, nuts and washers
- 1.3.2.3 Shop painting materials
- 1.3.2.4 Welding electrodes and rods
- 1.3.2.5 Nonshrink grout
- 1.3.2.6 Galvanizing

C. Welder, Welding Operation and Tacker

Qualification: Prior to welding, submit certification for each stating the type of welding and positions qualified for, the code and procedure qualified under, date qualified, and the firm and individual certifying the qualification tests.

D. Certified Field Test Reports:

- 1.3.4.1 Field Bolting
- 1.3.4.2 Field Welding and Full Penetration Welds

1.04 Delivery and Storage: Handle, store, and protect materials in accordance with the manufacturer's

recommendations. Replace damaged items with new items, or repair as approved by the Contracting Officer.

1.05 QUALIFICATIONS

Fabricator and/or erector shall be a company specializing in the fabrication and/or erection of structural steel with a minimum of 10 years of documented experience.

PART 2 - PRODUCTS

2.01 STEEL

A. Structural Steel: ASTM A36

1. Structural Steel Tubing: ASTM A500, Grade B.
2. See 1.1.7.

2.02 BOLTS NUTS AND WASHERS

Provide the following unless indicated otherwise.

1. Structural Steel:

- a. Bolts: ASTM A307, Grade A; ASTM A325, Type 1 or 2.
- b. Nuts: ASTM A563, Grade A, heavy hex style, except nuts under 1-1/2 inch may be provided in hex style.
- c. Washers: ANSI B18.22.1, Type B.

2.03 Shop Painting:

- A. Pretreatment: Mil. Spec. DOD-P-15328 or Fed. Spec. TT-C-490, Type I, II, or IV.
- B. Primer: Sherwin Williams Alkyd Red Oxide or equal.
- C. Rust Preventive: SSPC PS-8.01, suitable for temporary protection.

2.04 GALVANIZING

A. ASTM A123 or A153, as applicable, unless specified otherwise.

1. Galvanizing Repair Paint: Z.R.C. Cold Galvanizing Compound or equal.

2.05 Structural Steel Accessories:

- A. Welding Electrodes and Rods: AWS D1.1.
- B. Nonshrink Grout: COE CRD-C-621, with no ASTM C827 shrinkage. Grout shall be nonmetallic.

PART 3 - EXECUTION

3.01 FABRICATION

- A. Marking: Prior to erection, members shall be provided with a painted erection mark. In addition, connecting parts assembled in the shop for reaming holes in field connections shall be match marked with scratch and notch marks. Do not locate erection markings on areas to be welded. Do not locate match markings in areas that will decrease member strength or cause stress concentrations.

- B. Shop Painting: Shop paint structural steel, except as modified herein. Do not paint steel surfaces embedded in concrete, galvanized surfaces, bearing surfaces, or surfaces within 1/2 inch of the toe of the welds prior to welding (except surfaces on which metal decking or shear studs are to be welded). Prior to assembly, paint surfaces which will be concealed or inaccessible after assembly. Do not apply paint in foggy or rainy weather; when the ambient temperature is below 45 degrees F or over 95 degrees F; or when paint may be exposed to temperatures below 40 degrees F within 48 hours after application, unless approved otherwise.
1. Cleaning: SSPC SP 6, except as modified herein. SSPC SP 3 or SP 6 for steel surfaces exposed in spaces above ceilings, attic spaces, crawl spaces, furred spaces, and chases. In addition, maintain steel surfaces free from rust, dirt, oil, grease, and other contaminants through final assembly.
 2. Pretreatment: Immediately after cleaning, provide the metal surfaces with one coat of Mil. Spec. DOD-P-15328 pretreatment to a dry film thickness of 0.3 to 0.5 mil. Fed. Spec. TT-C-490.
 3. Priming: Immediately after the pretreatment coating has dried, apply primer to a minimum dry film thickness of 2.0 mil. Repair damaged primed surfaces with an additional coat of primer.
- C. Galvanizing: Provide as indicated or specified. Galvanize after fabrication where possible.
1. Galvanizing Repair: ASTM A780, using galvanizing repair paint for galvanizing damaged by handling, transporting, cutting, welding, or bolting. Do not heat surfaces to which repair paint has been applied.
- D. Bearing Surfaces and Friction Type Joints: In the shop, coat with a temporary rust preventative. Remove coating, as recommended by the coating manufacturer, immediately prior to field erection.

3.02 ERECTION

- A. Calibration wrenches shall be calibrated every two working days on a minimum of three typical bolts of each diameter. Provide for drainage in structural steel.
- B. Base Plates and Bearing Plates: After final positioning of steel members, provide full bearing under plates using nonshrink grout. Place nonshrink grout in accordance with the manufacturer's instructions.

3.03 Connections: Connections not detailed shall be selected and detailed in accordance with AISC "Manual of Steel Construction." Build connections into existing work. Do not tighten anchor bolts set in concrete with impact torque wrenches. Punch, subpunch and ream, or drill bolt holes.

3.04 Welding: AWS D1.1 Grind exposed welds smooth. Provide AWS D1.1 qualified welders, welding operators, and tackers.

3.05 Tests and Inspections: Perform field tests, and provide labor, equipment, and incidentals required for testing, except that electric power for field tests will be furnished as set forth in Division 1.

- A. Welds:
1. Visual and Nondestructive Inspection: AWS D1.1. Provide AWS certified welding inspectors for fabrication/erection inspection and testing and verification inspections. Welding inspectors shall visually inspect and mark welds, including fillet weld end returns. Welding inspectors shall perform radiographic or ultrasonic inspections on all welds required to be full penetration welds.

END OF SECTION

SECTION 07412
BUILDING PREFORMED METAL WALL

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included

1. Metal wall panel system installation.
2. Flashings, perimeter flashings, facias, closures, roof curbs, and other accessories for complete installation.

1.02 QUALITY ASSURANCE

A. Installers Qualifications

1. Installation of the metal roofing and wall panels and related accessories shall be performed by the following:
 - a. Authorized Builder Contractor of the Manufacturer shall be certified as an approved applicator of the wall system, and trained to erect the wall system by the manufacturer

B. Design Criteria

1. The Manufacturer of the Wall Covering shall have been regularly engaged in the design & manufacture of the approved metal system for at least ten (10) years. All materials shall be new, unused and free from defects and certified of being manufactured with American made steel.
2. The following standards and criteria shall be used where applicable in the structural design of the roof and wall system covered by this specification:
 - a. "Manual OF STEEL CONSTRUCTION" American Institute of Steel Construction - 8th Edition.
 - b. "COLD FORMED STEEL DESIGN MANUAL" American Iron and Steel Institute 1980.
 - c. "BUILDING MATERIALS DIRECTORY - 1990" Underwriters Laboratories
 - d. MBMA 1986 EDITION
 - e. Local Building Codes
 - f. American Welding Society
3. Design Loads (See plan sheet 9 for additional loads) :
 - a. Design loads shall include live, snow and wind in addition to dead loads.

b. Vertical Live Loads:

Wall Covering shall be designed for either 20 PSF uniformly distributed or a 200 pound concentrated (point load over a 1' x 1' area) load located at the center of maximum (Panel) span. The most severe condition shall govern. All of the above loads to be in addition to the applicable dead loads and shall be applied to the horizontal projection of the roof.

c. Wind Loads:

Wall panels, clips and fasteners shall have been tested and passed an Underwriters Construction (uplift) rating of not less than UL Class 90 for the specified support spacing. Support framing shall be a minimum thickness of .056".

d. Auxiliary (additional collateral) load:

1. Other superimposed dynamic and/or static loads shall be considered as part of the design requirements and combined with the normal design (live and wind) loads.
2. Magnitude and location of all such auxiliary loads are as indicated on architectural drawings.

e. Combination of normal loads and auxiliary loads for design purposes shall be as prescribed and recommended in the local building code manuals.

1.03 SUBMITTALS

- A. Submit Manufacturer of Wall Panels System.
- B. Submit applicable sample warranties of products.
- C. Contractor shall submit shop drawings, clearly indicating scope of work, substructural system, including fastener type and spacing for attachment to existing structure, roof panels, wall panels, insulation and ventilation, typical flashing details, doors, windows, and typical accessory details. The manufacturer shall approve shop drawing details for weathertightness prior to final submittal to architect.
- D. Submit Manufacturer's specification on all sealants.
- E. After awarding of contract, structural analysis of the subframing system shall be submitted upon request, by Contractor.
- F. Submit for approval descriptive data on all material to be provided. Data shall be sufficient to indicate conformance to specified requirements.
- G. Submit Manufacturer's recommended installation method showing all requirements for panel installation, sealant application and substructural connections.
- H. Submit Manufacturer's suggested material handling and material protection requirements.

1.04 WARRANTY

A. Wall Panel

1. Durability Warranty

Durability of the metallic coated and unpainted panels due to rupture, structural failure or perforation shall be warranted for a period of twenty (20) years by the manufacturer.

2. The exterior color finish for painted panels shall be warranted by the Manufacturer for twenty (20) years against blistering, peeling, cracking, flaking, checking and chipping. Warranty shall be non-prorated.

3. Excessive color change and chalking shall be warranted for twenty (20) years. Color change shall not exceed 9 NBS units (for Antique White), 5 NBS units (all other standard colors) per ASTM D2244.68T. Chalking shall not be less than a rating of 6 (white) or 8 (other colors) per ASTM D-659.

B. Weathertightness

The Manufacturer along with the approved applicator and general Contractor shall furnish a twenty (20) year non-prorated weather tightness warranty for the approved Wall System. The warranty shall cover the amount of the wall system cost plus labor to install.

The warranty shall cover curbs, penetrations, openings (windows and doors), flashings and all termination points of the roof and wall panel system.

PART 2 - PRODUCTS

2.01 WALL PANELS

A. Panels shall be equal to Buttlrib II wall system as manufactured by Buttl Manufacturing Company or approved equal. Wall system is to be a standard R-Panel, color to be selected by Owner.

Other acceptable manufacturer's include:

a. American Buildings Company

b. ARMCO Building Systems (BTC)

1. Wall panels shall be formed in the Manufacturer's plant to control quality. On-site roll forged panels are not acceptable.

B. Materials

1. Unpainted

The roof and wall covering shall be 26 gage (minimum) commercially pure aluminum coated steel (Aluminized Type II) meeting Military Specification MIL-C-4174A type II or zinc aluminum alloy coated as described in ASTM Specification A792.

2. Painted

Exterior painted finish for 26 gage wall panels shall be applied to Aluminized type II or zinc aluminum alloy coated steel as described above.

C. Finish

1. The exterior finish including but not limited to roof and wall panels, gutters, downspouts, gable trim, eave trim, etc.) shall be a standard color as selected by the Engineer.
 - a. A fluropolymer coating 1.0 mil dry film thickness, shall be Duranar (full kynar 500 - 70% resins).
2. The interior finish shall be .20 mil thick wash coat (coated panels).
3. Colors shall be selected from Manufacturer's standard offering of a minimum of six colors.

D. System

Shall be equal to Buttlrib II system as manufactured by Buttl Manufacturing Company.

1. Panels shall have flush horizontal and vertical surfaces, to facilitate sealing at terminations. Panel configurations which create voids at ribs or panel flat requiring supplemental closure devices will not be considered acceptable. Panel width shall be 36" minimum. Panel rib height shall be 1-1/2" minimum.
2. The panel to structural clip shall be of two piece construction designed to provide + 1 inch of thermal movement. It shall incorporate a self centering feature to assure 1" of movement in both directions. One piece clips are not acceptable.
3. Through-penetration of the wall surface by exposed fasteners shall occur only for non-structural connections at panel termination and perimeter flashing locations. Such fastener shall be stainless steel screws, with weather seal washers.
4. Panel termination and perimeter flashings (attached to panels) shall be sealed with sealants recommended and furnished by the Manufacturer.
5. Required closures shall be metal. Non-metal closures will not be acceptable.
6. Panels should be maximum possible length within shipping and handling constraints. Endlaps are allowed provided the panels lap 6", the lap joint is factory swaged, and manufacturer recommended sealants and fasteners are used. The endlap must be in a straight line, not staggered.
7. Provide thermal spacers which allow venting to dissipate condensation under the metal wall system.

2.02 TRIM

- A. Trim shall be designed to provide for expected movement of panels due to thermal expansion and contraction. Details shall conform to the suggested details provided by the manufacturer.

- B. Color shall be selected from Manufacturer's standards. Finish on Manufacturer's standard trim items and flat sheets used for on-site fabrication shall conform to specifications for panels.
- C. Trim components formed by the contractor shall conform to details submitted and approved by the Engineer, and the panel manufacturer. Where panel weathertightness is affected, trims and flashings not approved by the panel manufacturer in writing, in advance of installation may cause rejection by the Engineer and/or manufacturer.
- D. Provide manufacturers standard facia, trim, gutters, gutter hangars, flashings.

2.03 WALL ACCESSORIES

A. Wall Jacks

Openings 8 inches in diameter or smaller may be flashed and sealed to the wall panel by jacks.

1. Material shall be an EPDM material with an aluminum sealing ring base.
2. Jacks are acceptable providing attachment in flat of panel and no standing seam rib has been altered. If rib must be cut, a curb must be used.
3. Installation of wall jacks must comply with Manufacturer's instructions.

B. Wall Curbs

1. Scope and Quality

- a. The wall (vent) Curb units covered by this specification shall be fabricated to the specifications of the Manufacturer; thus, assuring its compatibility with the wall construction's framing and covering.
- b. The wall curb shall be of size and design shown on the drawings or as noted in the proposal. It shall support the specific ventilating device in a nominally vertical position outside of the weather surface of the wall and adequately deflect storm drainage around its periphery.
- c. All sealants, closures, and fasteners, etc. shall be included for proper installation and performance. Wall Subframing and/or headers between structural members shall be provided for additional rigidity and support of the curb and its ventilating device.
- d. Wall Curb and supporting framing shall provide for expected expansion and contraction of panels.

2. Materials and Construction

- a. Metal Curb shall be provided with a horizontal flanged top projecting a minimum of 12" beyond the weather surface plane. The base shall fit the wall and shall be compatible with the panels to which it is flashed and/or sealed and fastened.

- b. The curb shall be fabricated of mill finish sheet aluminum (minimum of .08" thickness). The aluminum material shall conform to Federal Specification QQ-A-250/Id, Alloy #1100 Temper H-14 (ASTM B-209) as designated by the Aluminum Association. All exterior seams to be continuously welded.
 - c. Miscellaneous Materials
- 1. Sealing Compounds shall be as specified and supplied by the roofing Manufacturer.
 - 2. Closures and Fasteners - Shall conform to the roofing Manufacturer's standards compatible with the roof covering finished.

2.04 INSTALLATION

Installation shall conform to the Manufacturer's details and instructions as shown on the assembly drawings together with accepted trade practices. The Architect/Engineer and manufacturer will inspect the erection of the system, when required by the Architect/Engineer, to insure compliance with the Manufacturers approved shop drawings and warranty requirements. Unapproved variations from the Manufacturers approved installation procedures will cause construction to stop until the project is brought into compliance. Do not install products or components which are damaged, defective or out of tolerance without written approval of Engineer. Tolerance of substructural shall be plus or minus 1/8" in 20 feet and plus or minus 1/4" overall.

2.05 WALL COVERING SUPPORT MEMBERS

- A. The support members shall be 16 gage (minimum) galvanized steel coated with G90 weight of Zinc in accordance with ASTM Designation A525. Bracing shall be accomplished with 24 gage high strength galvanized strapping, if required.
- B. The configuration and spacing of supports shall be the Manufacturer's standard.
 - 1. Spacing of supports other than standard must be reflected in structural calculations. Calculations shall be in accordance with the 1980 AISI Specification of the design of cold formed steel structural members.
- C. Deflection of support members shall not exceed L/180 of its span when supporting the design vertical live and applicable collateral loads and supported on spacing required on this project.
- D. The support members shall be designed to transfer dead and live loads as well as wind uplift loads directly into framing in a manner compatible with the capacity of the structure.

PART 3 - EXECUTION

3.01 EXISTING SURFACE CONDITIONS

- A. Inspection
 - 1. Contractor shall inspect installed work of other trades and verify in writing to the architect that such work is plumb, square, and complete to a point where this work may commence.

2. Verify that installation may be made in accordance with approved Shop Drawings and Manufacturer's instructions.

B. Discrepancies

1. In the event of discrepancy, notify engineer in writing.
2. Do not proceed with installation until discrepancies have been resolved.

3.02 INSTALLATION

- A. Install all components within this section where indicated on shop drawings, anchoring all components firmly in place in complete accordance with approved shop drawings and the Manufacturer's recommendations.
- B. Replace all panels or components damaged as a result of installer's failure to comply with Manufacturer's instructions. Do not install products or components which are damaged, defective, or out of tolerance without written approval of the Engineer.

END OF SECTION

SECTION 07536
SBS MODIFIED BITUMEN ROOFING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The project consists of the following:
1. Installing ¼" coverboard in low rise foam adhesive over the existing tapered insulation deck, installing one layer of self-adhered base sheet, followed by installation of one layer of fiberglass reinforced SBS modified bitumen cap sheet using torch welding techniques.
 2. Remove all existing roofing and flashing materials.
 3. Inspect the tapered insulation to make sure it is clean, structurally sound and free of defects. Replace any defective areas.
 4. Install ¼" coverboard, base sheet and cap sheet.
 5. Replace all flashings including curbs, vent pipes, perimeter flashings, wall flashings, roof drains and install two plies of flashing membrane per manufacturer's recommendations. All flashing shall be a minimum 24 gauge galvanized sheet metal following NRCA and SMACNA details and requirements.
 6. All exposed perimeter metal shall be pre-painted Kynar finished sheet metal.
 7. Contractor shall maintain the property in a watertight condition at all times.
 8. Disconnect and reconnect roof top A/C units, plumbing, and electrical as required using licensed contractors from the appropriate trade. Replace all blocking and wood runners with new treated wood.

1.02 EXTENT OF WORK

- A. Provide all labor, material, tools, equipment, and supervision necessary to complete the installation of a U.S. Ply, Inc. DuraFlex® SBS LWC-3B-RB-DFG4FRTG SBS modified bitumen roofing system, including flashings and insulation as specified herein and as indicated on the drawings in accordance with the manufacturer's most current specifications and details.
- B. The roofing contractor shall be fully knowledgeable of all requirements of the contract documents and shall make themselves aware of all job site conditions that will affect their work. When the job starts it will be assumed that the contractor approves the existing conditions and the specifications.
- C. The roofing contractor shall confirm all given information and advise the building owner, prior to bid, of any conflicts that will affect their cost proposal.
- D. Any contractor who intends to submit a bid using a roofing system other than the approved manufacturer must submit for pre-qualification in writing ten (10) days prior to the bid date. Any contractor who fails to submit all information as requested will be subject to rejection. Bids stating "as per plans and specs" will be unacceptable.

1.03 SUBMITTALS

- A. Prior to starting work, the roofing contractor must submit the following:
1. Shop drawings showing layout, details of construction and identification of materials.
 2. A sample of the manufacturer's 20 Year Ply Platinum Premier System Guarantee.
 3. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system.
- B. Upon completion of the installed work, submit copies of the manufacturer's final inspection to the specifier prior to the issuance of the manufacturer's warranty.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the job site on pallets, in the manufacturer's original wrappings with the seals and labels intact, legible, dry and undamaged.
- B. Seals and labels shall indicate material name.
- C. Comply with the manufacturer's written instructions for proper material storage.
 - 1. Deliver in sufficient quantity to permit work to continue without interruption. No more material should be stored on roof than what can be used in five (5) days. When inclement weather threatens, no more roofing materials stored on the roof top than can be used within two (2) days.
 - 2. Store materials in a dry place, protected in an upright position on pallets, off the ground and clear of moisture. Protect materials from freezing.
 - 3. Material not stored on roof should be properly warehoused in a dry place on pallets.
 - 4. Insulation must be on pallets, off the ground and tightly covered with waterproof materials.
 - 5. Materials shall be stored above 55°F (12.6°C), a minimum of 24 hours prior to use.
- D. Any materials which are found to be damaged shall be removed and replaced at the applicator's expense.

1.05 WORK SEQUENCE

- A. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.
- B. Do not disrupt activities in occupied spaces.

1.06 USE OF THE PREMISES

- A. Before beginning work, the roofing contractor must secure approval from the building owner's representative for the following:
 - 1. Areas permitted for personnel parking.
 - 2. Access to the site.
 - 3. Areas permitted for storage of materials and debris.
 - 4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.
- B. The building interior may not be used for removing debris or delivering materials, except as authorized by the building superintendent.

1.07 EXISTING CONDITIONS

If discrepancies are discovered between the existing conditions and those noted on the drawings, immediately notify the owner's representative by phone and solicit the manufacturer's approval prior to commencing with the work. Necessary steps shall be taken to make the building watertight until the discrepancies are resolved.

1.08 TEMPORARY FACILITIES AND CONTROLS

- A. Temporary Utilities:

1. Water, power for construction purposes and lighting are available at the site and will be made available to the roofing contractor.
2. Provide all hoses, valves and connections for water from a source designated by the owner when made available.
3. When available, electrical power should be extended as required from the source. Provide all trailers, connections and fused disconnects.

B. Temporary, Sanitary Facilities

Sanitary facilities will not be available at the job site. The roofing contractor shall be responsible for the provision and maintenance of portable toilets or their equal.

C. Building Site:

1. The roofing contractor shall use reasonable care and responsibility to protect the building and site against damages. The contractor shall be responsible for the correction of any damage incurred as a result of the performance of the contract.
2. The roofing contractor shall remove all debris from the job site in a timely and legally acceptable manner so as to not detract from the aesthetics or the functions of the building.

D. Security:

Obey the owner's requirements for personnel identification, inspection and other security measures.

1.09 JOB SITE PROTECTION

- A. The roofing contractor shall adequately protect building, paved areas, service drives, lawn, shrubs, trees, etc. from damage while performing the required work. Provide canvas, boards and sheet metal (properly secured) as necessary for protection and remove protection material at completion. The contractor shall repair or be responsible for costs to repair all property damaged during the roofing application.
- B. During the roofing contractor's performance of the work, the building owner will continue to occupy the existing building. The contractor shall take precautions to prevent the spread of dust and debris, particularly where such material may sift into the building. The roofing contractor shall provide labor and materials to construct, maintain and remove necessary, temporary enclosures to prevent dust or debris in the construction area(s) from entering the remainder of the building.
- C. Do not overload any portion of the building, by either use of or placement of equipment, storage of debris, or storage of materials.
- D. Protect against fire and flame spread. Maintain proper and adequate fire extinguishers.
- E. Take precautions to prevent drains from clogging during the roofing application. Remove debris at the completion of each day's work and clean drains, if required. At completion, test drains to ensure the system is free running and drains are watertight. Remove strainers and plug drains in areas **where work is in progress**. Install flags or other telltales on plugs. Remove plugs each night and screen drain.
- F. Store moisture susceptible materials above ground and protect with waterproof coverings.
- G. Remove all traces of piled bulk material and return the job site to its original condition upon completion of the work.

1.10 SAFETY

The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all

applicable local, state and federal requirements that are safety related. **Safety shall be the responsibility of the roofing contractor.** All related personnel shall be instructed daily to be mindful of the full time requirement to maintain a safe environment for the facility's occupants including staff, visitors, customers and the occurrence of the general public on or near the site.

1.11 WORKMANSHIP

- A. Applicators installing new roof, flashing and related work shall be approved by the membrane manufacturer they are representing.
- B. All work shall be of highest quality and in strict accordance with the manufacturer's published specifications and to the building owner's satisfaction. Any and all substandard work shall be rejected.
- C. There shall be a supervisor on the job site at all times while work is in progress.

1.12 QUALITY ASSURANCE

- A. Unless otherwise noted in this specification, the roofing contractor must strictly comply with the manufacturer's current specifications and details.
- B. The roofing system must be installed by an applicator authorized and approved by the manufacturer in compliance with shop drawings as approved by the manufacturer. The roofing applicator shall be thoroughly experienced and upon request be able to provide evidence of having at least two (2) years successful experience installing modified bitumen roofing systems and having installed at least one (1) roofing application or several similar systems of equal or greater size within one year.
- C. Provide adequate number of experienced workmen regularly engaged in this type of work who are skilled in the application techniques of the materials specified. Provide at least one thoroughly trained and an experienced superintendent on the job at all times roofing work is in progress.
- D. 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 written certification on manufacturer's letterhead and presented for the specifier's consideration.
- E. Upon completion of the installation, the applicator shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to determine whether or not corrective work will be required before the warranty will be issued. Notify the building owner seventy-two (72) hours prior to the manufacturer's final inspection.

1.13 JOB CONDITIONS, CAUTIONS AND WARNINGS

- A. Material Safety Data Sheets (MSDS) must be on location at all times during the transportation, storage and application of materials.
- B. Work shall only begin when the roofing contractor has decided to his satisfaction, that all specifications are workable as specified, and that the contractor can meet project and applicable code requirements.
- C. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.
- D. The roofing contractor shall be responsible for verifying the existing and forecasted weather conditions to determine when the conditions are acceptable for roof work.
- E. Roof applications shall not proceed when there is moisture present in any form on the deck including but not limited to rain, dew, ice, frost and/or snow.
- F. Do not apply roofing materials to a frozen deck.

- G. The contractor shall be prepared at all times to protect any uncompleted roof work from the rapid changes in the weather. If work continues during sudden rains to protect the interior of the building, these areas shall be subsequently removed and replaced.
- H. When loading materials onto the roof, the roofing contractor must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.
- I. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage. If construction traffic over completed areas is necessary, provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
- J. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
- K. Areas of the substrate where ponding water occurs shall be built-up prior to the installation of the roof system.
- L. New roofing shall be complete and weather tight at the end of the work day.

1.14 WARRANTY

- A. Provide manufacturer's 20 Year Ply Platinum Premier System Guarantee covering both labor and material with no dollar limitation.
- B. Pro-rated Warranties shall not be accepted.

PART 2 - PRODUCTS

2.01 GENERAL

- A. All components of the specified roofing system shall be products of U.S. Ply, Inc. or accepted by U.S. Ply as compatible.
- B. Unless otherwise approved by the specifier and accepted by the membrane manufacturer, all products (including insulation, fasteners, fastening plates, adhesives and other accessories) must be **supplied** by the roofing system manufacturer.

2.02 MANUFACTURER

- A. **U.S. Ply, Inc.**- P. O. Box 11740, Ft. Worth, TX, 76110, other acceptable manufacturers include Firestone, GAF and Johns Manville.

2.03 MEMBRANE

- A. **SBS Modified Bitumen Membrane – DuraFlex® G4FRTG** – Fire-retardant, granule surfaced modified bitumen membrane with a fiberglass reinforcing mat coated with flexible, SBS polymer-modified asphalt. Specifically designed for heat weld application. Conforms to or exceeds the requirements of ASTM D 6163 Type I Grade G. Each roll contains one (1) square of material, approximately 39.4 inches by 32.9 feet (1 m by 10 m), 110 lb (48.8)
 - Approved Product: DuraFlex® G4FRTG SBS
 - Thickness 3.5 mm (150 mils)
 - Weight 90 lbs/roll (40 kg/roll)
 - Roll Dimension 39.28" x 32' 9" (1m x 10m)

2.04 SHEET MATERIALS

- A. **RapidGRIP™ Readi-Base** – sand surfaced, SBS (Styrene-Butadiene-Styrene) self-adhering membrane.

Manufactured with a strong fiberglass mat that is saturated and coated with a premium quality, "high tack" asphaltic bitumen that is combined with durable SBS elastomers and protected by a poly release film for easy installation. Meets or exceeds the physical requirements of ASTM D1970 and the following:

- Thickness: 1.4 mm (55 mils)
- Weight: 72 lbs/roll (36 kg)
- Roll Dimensions: 36" x 66' 8" (200 sq. ft.).

- B. USP® Base Sheet-** manufactured with a heavyweight, select fiberglass mat designed and constructed to be strong, while remaining wrinkle resistant. The strong glass mat is saturated with a high quality, non-filled asphaltic bitumen for a strong, durable yet uniformly consistent in roll out for ease of application.

2.05 Miscellaneous

- A. Edge Strip:** FS-HH-I-529b, ANSI/ASTM C728, expanded perlite mineral aggregate board tapered to provide a smooth transition from horizontal to vertical surfaces or for transitions from lower to higher elevations.
- B. Cant Strip:** FS-HH-I-529b, ANSI/ASTM C728, expanded perlite mineral aggregate board tapered to provide a smooth transition from horizontal to vertical surfaces. Cant strips shall be flame retardant.
- C. Asphalt Primer:** ASTM D41 asphalt primer - USP® #41 Asbestos Free Asphalt Primer, by U.S. Ply, Inc.
- D. Roof Cement:** ASTM D 4586, USP® #643 Standard Flashing Cement

2.06 BASE FLASHING MEMBRANE

- A. Backer Sheet: SBS Modified Bitumen Membrane – Smooth Surfaced –** is a smooth surfaced, premium SBS (Styrene-Butadiene-Styrene) torch applied membrane. Manufactured with a fiberglass mat that is saturated and coated with high quality, asphaltic bitumen and SBS elastomers for a durable, flexible and easily maintainable membrane. One and one-half square roll and meets or exceeds the physical requirements of ASTM D6163 Type I, Grade S and the following:
1. Approved Product: DuraFlex® 60TG SBS or DuraFlex® 90TG SBS
- B. Base Flashing: SBS Modified Bitumen Membrane -** Fire-retardant, granule surfaced modified bitumen membrane with a fiberglass reinforcing mat coated with flexible, SBS polymer-modified asphalt. Specifically designed for heat weld application. Conforms to or exceeds the requirements of ASTM D 6163 Type I Grade G. Each roll contains one (1) square of material, approximately 39.4 inches by 32.9 feet (1 m by 10 m), 110 lb (48.8)
1. Approved Product: DuraFlex® G4FRTG SBS

2.07 FASTENERS AND PLATES

- A. PlyFast® 90 Base Ply Fastener:** Precision formed from corrosion resistant Galvanized (G-90) steel and protected with a special elastomeric polymer coating to prevent corrosion. Legs: Rectangular dual gripping legs, integrally locked to fastener. Precision formed from corrosion resistant Galvalume (AZ-55) steel to prevent corrosion. Rib reinforced cap, 2.7" diameter. PlyFast® 90 Base Ply Fastener is also Factory Mutual approved.

2.08 METAL EDGING AND MEMBRANE TERMINATIONS

- A. Gravel Stop:**
1. 24 gauge galvanized
 2. Metal fascia color shall be as designated by the Owner's Representative.
- B. Coping:**
1. 24 gauge galvanized

2. Metal coping cap color shall be as designated by the Owner's Representative.
- C. **Termination Bar:** Metal termination bars shall be a minimum of 1/10" (3 mm) thick x 1" (2.5 cm) wide with preformed sealant edge lap. Bar should have 1/4" (6 mm) x 3/8" (10 mm) slotted holes on 4" (10.2 cm) centers to facilitate mechanical anchorage. Must incorporate a sealant ledge to support caulk and provide increased stability for membrane terminations.
- D. **Surface Mounted Counter Flashing/Reglet Counter Flashing:**
 1. 24 gauge galvanized
 2. Metal flashing color shall be as designated by the Owner's Representative.

2.09 WALKWAYS

- A. **USP® SBS Walkboards 32" x 32"** (as indicated on drawings)

2.10 OTHER MATERIALS

- A. **Chem-Curb™ System** – composed of a structural urethane outer shell, bonded to the roof surface, filled with a 2" thick urethane rubber sealant as specified by Chem-Link.
- B. **Expansion Joint Covers** – Factory fabricated assemblies used to accommodate three-dimensional joints in a roof structure. Heavy reinforced flexible cover with a flexible flame retardant foam bellows for support.
- C. **Metal Vents, Accessories** – as approved by membrane manufacturer.
- D. **Metal work** – gauge must be approved by membrane manufacturer.

PART 3 - EXECUTION

3.01 GENERAL

- A. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, job site considerations and weather restrictions.
- B. Before proceeding, verify that all roof openings, curbs, pipes, sleeves, ducts, vents or other penetrations through the roof are solidly set and that all flashings, tapered edges and cant strips, reglets and wood nailers are secure and tight to the building as per this specification.
- C. Commencement of installation of the roof system signifies that the contractor accepts the existing conditions as being in compliance with the requirements of this specification.

3.02 SURFACE PREPARATION

- A. General
 1. The roof manufacturer does not design or manufacture structural roof decks and is not responsible for their selection, design, and performance. Acceptance of the deck for application of the roof system is the responsibility of the architect and/or designer.
 2. The minimum roof deck construction and deck surface preparation requirements which follow are provided as a supplementary guide for the roof deck designer and erector.
 3. Acceptance of a roof deck by the manufacturer as satisfactory to receive roof materials only refers to the deck surface.

4. Decks must be adequately smooth and level to provide support and maximum contact surface for roofing materials. The surface of the roof deck must be dry (free of moisture in any form), firm, smooth, clean, free of debris, sharp projections and depressions.
5. Remove electrical conduits, bolts, and other small items from the surface of the roof deck as these areas cannot be properly insulated and roofed.
6. All depressions, holes, deformations, etc. shall be made smooth prior to the roofing application.
7. All decks must be properly designed and constructed in accordance with the deck manufacturer's requirements and specifications, must be installed by applicators approved by deck manufacturer, must be able to support and secure the roof system, and must be properly related to the rest of the building.
8. Complete all openings or projections (all pipes, vents, ducts, stacks and openings, etc.) through the deck prior to roof system installation. No projections shall be constructed through the flashing cant and projections shall be located a minimum 18" (45.7 cm) from the intersection of the cant and roof deck.
9. Do not install electrical conduit or piping immediately above the roof deck. Roof systems cannot be properly installed and adhered around and/or over conduit.
10. All roof decks shall be designed and constructed:
 - a. To support maximum loads which may be imposed during and after construction without excessive deflection (1/240 of the span at midspan is the rule for maximum allowable deflection);
 - b. To provide a minimum ¼" (6 mm) per-foot slope and/or designed so that ponding water dissipates within a 48 hour period. Interior drains should be sumped below roof level to allow immediate water runoff.
 - c. Provisions to prevent asphalt drippings must be given consideration where joints, cracks, or holes occur.
 - d. On slopes ¾" per foot (6 cm per meter) or greater, provisions must be made for insulation stops and/or back nailing of built-up felts. Insulation stops and/or backing nailing must be used on slopes greater than ½" (4 cm per meter) when SBS membranes are used;
 - e. with suitable expansion joints to accommodate structural expansion and contraction. Expansion joints must extend through the structural system to be acceptable, and must separate adjoining units, or additions.
 - f. Deck materials must be fastened to supporting members by clips, welding or other mechanical devices to prevent lateral and vertical movement of the elements;
 - g. To be consistent with applicable trade associations, as well as any code or insurance requirements.

B. Lightweight Concrete Deck

1. Lightweight insulating concrete decks contain a large percentage of moisture. All necessary precautions must be taken to avoid entrapment of moisture under the roofing system; including but not limited to venting at the bottom and top side of the deck, as well as at the perimeter and all penetrations.
2. Lightweight insulating concrete decks are poured in place in slurry comprised of Portland cement, perlite or vermiculite aggregate and water. Cellular concrete decks are comprised of Portland cement, water and preformed foaming agent which produces a closed cell network throughout the concrete.

3. The deck construction incorporates a slotted or non-slotted metal deck onto which the lightweight slurry is pumped. Galvanized steel mesh is required when perlite insulating concrete is applied over formboards.
4. Individual concrete deck manufacturers may incorporate polystyrene insulation board into the deck design to provide additional slope and/or insulating value to the completed deck system. Individual deck manufacturer's requirements must be followed when constructing lightweight or cellular concrete decks using polystyrene insulation boards.
5. Lightweight and cellular concrete decks are required to have a minimum compressive strength of 125 psi (8.79 kg/m²) and density of 22 pcf (352 kg/m²) to meet U.S. Ply roof guarantee requirements. Individual lightweight and cellular concrete manufacturer's standards apply when their specifications exceed the referenced U.S. Ply minimum compressive strength and density requirements.
6. Do not attach insulation directly to newly poured lightweight or cellular concrete decks. Do not solid mop the base ply of the roofing system to a lightweight or cellular concrete deck.
7. The following minimum guidelines are recommended by U.S. Ply when installing a roof system over Lightweight or Cellular Concrete Decks:
8. Lightweight or cellular concrete decks must be installed in strict accordance with the deck manufacturer's recommendations and specifications. Decks must be installed by an applicator approved by the deck manufacturer. Minimum thickness is 2" (5 cm);
9. Lightweight or cellular concrete decks must not be poured during rain or at temperatures that are below 40°F (4.4°C);
10. Drying time for decks vary. Follow the deck manufacturer's recommended drying time.
11. Aggregate based lightweight concrete decks require bottom side venting as provided by slotted galvanized steel decks. Solid steel decking and structural concrete decks are not acceptable to receive an aggregate based lightweight insulating concrete mix. Cellular lightweight insulating concrete decks can be installed over non slotted, galvanized steel decking or structural concrete; it does not require a venting substrate.
12. Lightweight or cellular concrete decks that have been frozen before they are cured are not acceptable to receive a roof system and must be removed and replaced prior to the installation of the roof system;
13. Lightweight or cellular concrete decks must be smooth, and be free from deflections and ridges. Fill depressions with a material approved by the deck manufacturer;
14. Mechanically fasten venting base or inverted cap sheet to newly pour aggregated based lightweight insulating concrete decks prior to installing insulation or roofing membrane. On cellular lightweight concrete decks, a glass base sheet can be used in lieu of a venting base or an inverted cap sheet.
15. On existing lightweight or cellular concrete decks, insulation or a base sheet may be mechanically attached to the deck provided it is dry.
16. Roof vents (one for each 10 squares or 92.9m²) are required. If roof insulation is used, vent openings should extend through the entire roof system and insulation to the deck or fill surface.
17. An average fastener withdrawal resistance as recommended by the fastener manufacturer must be obtained (40 lbs minimum). Decks which cannot provide the minimum average withdrawal resistance as recommended by the fastener manufacturer are not suitable to receive a roof system.

C. The following minimum guidelines are recommended for the metal subdeck;

1. Slotted steel decks must be a minimum 22 gauge (0.8 mm) of configurations specified by the current Steel Deck Institute Manual.
2. Steel deck sections must be securely fastened in accordance with local code requirements;
3. Wood nailers of equivalent thickness to the roof insulation must be provided at perimeters and projection openings to act as an insulation stop and to provide nail holding capability for the nailing flanges of metal flashing.

D. Complete Tearoff

1. The existing roof system down to the insulation including flashings shall be removed and a ¼" coverboard in low rise foam adhesive installed. Coverboard shall be Densdeck Prime, Securock, or equal.
2. All existing flashing must be removed and stripped from all walls, curbs, etc.
3. All existing composition and metal flashing must be removed and replaced.
4. All metal counter flashing, metal coping and other metal work above the roof system must be inspected and replaced or repaired as necessary to provide a watertight flashing system.
5. Prime all masonry, metal and existing asphalt surfaces and substrates with USP™ #41 Standard Asphalt Primer where roofing materials are to be adhered.
6. Inspect all roof drains and outlets. Remove existing drain flashings and replace broken or stripped bolts, clamping rings. Plastic drains are not acceptable. All drains, including retrofit or insert drains, must be sumped to properly remove water from the roof surface and meet applicable code requirements.
7. All rooftop equipment shall be carefully removed, stored as directed, and reinstalled after completion of the work. If rooftop equipment cannot be removed, it must be lifted sufficiently to allow for installation of the new roof system.
8. Nailers and curbs shall be removed and replaced with new treated lumber if necessary.
9. All penetrations and expansion joints shall extend approximately 8" (20 cm) above the top of the finished roof surface.
10. Openings shall be covered temporarily with plywood and roof membrane while equipment is stored elsewhere. Air intake and exhaust openings shall be hooded to permit flow of air. Ducts and equipment on legs shall be reinstalled so that there is sufficient clearance for future roof maintenance.
11. Existing drains shall be completely cleaned or replaced. Broken or missing screens shall be replaced.
12. All work shall be coordinated so that all materials removed each day shall be replaced the same day with the complete roofing system.

3.03 ANCHOR SHEET INSTALLATION – LWIC DECKS

A. USP® Base Sheet

1. Install the base sheet over the deck. Lap the base sheet so that the flow of water is over or parallel to, but never against the laps.

2. Install full width base sheets, lapping 4" (10.2 cm) on the sides and 4" (10.2 cm) on ends. Stagger adjacent end laps a minimum of 12" (30 cm) apart.
3. Secure base sheet with appropriate fasteners for deck type. The recommended fastening pattern is as follows:
 - a. Field Pattern: Secured with PlyFast® 90 Base Ply Fasteners installed 9 in. on center in the side laps and 18 in. on center, staggered in 2 rows, equally spaced, between the base ply side laps.
 - b. Perimeter Pattern: Secured with PlyFast® 90 Base Ply Fasteners installed 8 in. on center in the side laps and 8 in. on center, staggered in 2 rows, equally spaced, between the base ply side laps.
 - c. Corner Pattern: Secured with PlyFast® 90 Base Ply Fasteners installed 7 in. on center in the side laps and 7 in. on center, staggered in 3 rows, equally spaced, between the base ply side laps.
4. Turn the base sheet up to the top of the cant.

3.04 BASE SHEET APPLICATION

A. RapidGRIP™ Readi-Base

1. RapidGRIP™ READI-BASE is applied by removing the poly release film and adhering the membrane by direct pressure contact to the desired substrate.
2. Unroll and set aside to allow sheets to relax and activate tack by setting in the sun.
3. **Note: Warm weather conditions and exposure to direct sunlight are essential for good adhesion. Application should be made when ambient temperatures are 50°F (10°C) or higher and sun exposure is available. During temperatures where the nighttime temperatures are below 70F, supplemental heat on the underside of the membrane is necessary.**
4. Prime concrete/masonry and other absorbent type surfaces.
5. Cut RapidGRIP™ into manageable lengths before installation. Peel back 1 to 2 feet of the release film and stick the membrane directly over the insulation, unroll membrane and realign at opposite end.
6. Firmly adhere the membrane by direct contact pressure to the desired substrate. Use a weighted field roller to ensure maximum contact with the substrate working out all voids and unadhered areas.
7. Continue installing the membrane upslope lapping the side laps 4" (10.2 cm) and 6" (15.2 cm) on the end laps. Once set, the film can be removed. Press membrane into substrate to make full contact.
8. At end laps, cut the edges at a 45° degree angle to prevent wicking.
9. Turn the membrane up the wall or curb, above the cant, a minimum of 4" (10.2 cm). This will allow for proper securement of the membrane prior to the base flashing installation.
10. Hand rollers or "walking-in the seam" methods are also acceptable. Check all seams for full and uniform adhesion. Un-adhered seams must be lifted with a heated trowel and resealed by lightly torching the seam area.

11. All end laps must be staggered a minimum of 18" (45.7 cm) so that no adjacent end laps coincide.

3.05 MEMBRANE APPLICATION

A. SBS Modified Bitumen Membrane Installation

B. DuraFlex® G4FRTG SBS Modified Bitumen Membrane

1. The surface over which the membrane is to be installed must be clean, smooth, dry.
2. For slopes 3/4 " per foot (6.2 cm per meter) and over, membrane must be run parallel to the roof slope and back nailed in accordance with U.S. PLY steep slope application requirements. On slopes less than 3/4" per foot (6.2 cm per meter), install cap sheet perpendicular to the slope.
3. Never apply membrane by any method except welding with a propane torch or other equipment specifically designed for application of torchable modified bitumen.
4. The coiled membrane must be unrolled approximately 10 ft. (3 meters), and aligned. The propane torch flame is then applied uniformly across the exposed back surface of the membrane and lap areas until the compound reaches the proper application temperature and exhibits a slight sheen. A complete burn-off of release films where present on the underside of the rolls, membrane selvage edges or both surfaces is necessary. Avoid overheating which may result in damage to or improper adhesion of the membrane. (The flame should be moved from side to side in the shape of an "L", applying about 75% of the heat to the membrane and 25% to the substrate or underlying plies including the lap area of the previously installed courses.) The membrane is slowly unrolled as heat is applied to ensure proper adhesion. When complete, re-roll the opposite end of the membrane and install in the same manner.
5. A minimum 1/4" (6 mm) bitumen flow-out must be obtained at all seam areas. Dry laps are not acceptable. To ensure the proper 1/4" (6 mm) flow of bitumen at the seam areas, a roller may be used. Roller application should follow behind the torch no more than 4 ft. (1.2 m) nor less than 2 ft. (0.62 m) to be sure that the membrane will be at the proper temperature to produce proper flow. Hand rollers or "walking-in the seam" methods are also acceptable. Check all seams for full and uniform adhesion. Un-adhered seams must be lifted with a heated trowel and resealed by lightly torching the seam area.
6. All end laps must be staggered a minimum of 18" (45.7 cm) so that no adjacent end laps coincide. If end laps fall in line or are not staggered the proper distance, a full width of membrane must be installed over the end laps. End laps, flashing sheets and other seams formed over granule surfaces require pre-heating of the top surface of the underlying granule surface membrane to a point where the granules just begin to sink into, and the modified bitumen compound comes up through the granules to ensure proper seam construction and adhesion.
7. All laps must be parallel or perpendicular to the slope of the roof such that the flow of water is never against the lap.
8. Membranes must not be applied during adverse weather or without precautionary measures in temperatures below 45°F (7.2°C). Contact U.S. Ply Technical Services for details.

3.06 MEMBRANE FLASHING

- A. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.
- B. All wood walls, curbs, shall be reinforced with a layer of RapidGRIP SBS base sheet prior to the application of the SBS modified bitumen membrane.

- C. All walls curbs, penetrations and perimeter flashings shall be stripped in with an additional layer of DuraFlex® 60TG or 90TG SBS modified bitumen membrane over the smooth sheet, prior to the application of the DuraFlex® G4FRTG SBS sheet
- D. All walls curbs, penetrations and perimeter flashings shall be finished with an additional layer of DuraFlex® G4FRTG SBS modified bitumen membrane over the cap sheet.
- E. Basic wood blocking anchorage recommendations are found in Factory Mutual Data Sheet 1-49. These recommendations are required for Factory Mutual approved projects.
- F. All penetrations should be at least 18" (45.7 cm) from curbs, walls, and edges to provide for proper flashing.
- G. Install flashing sheets starting at low points.
- H. Prime all metal and masonry with asphalt primer and allow to dry before being fully adhered to with flashing sheets.
- I. Only use U.S. Ply membranes in construction of flashing details.
- J. Do not use metal base flashing. Damage to the roofing system caused by metal base flashing is not the responsibility of U.S. Ply.
- K. Base flashing should extend a minimum of 8" (20.3 cm), and a maximum of 24" (61 cm) above the roofline.
- L. Corner membrane flashings, such as "bow ties" for outside corners and "footballs" for inside corners or other membrane reinforcements are required to ensure that base flashing corners are sealed at cant areas. Note: Mastic and fabric coursing is not an acceptable alternate for proper flashing and counterflashing details.
- M. Wood curbs and walls must be covered with a layer of Redit-Base prior to application of the two-ply flashing system and fastened 8" (20.3 cm) o.c. in all directions with approved fasteners with minimum 1" diameter or square caps. All vertical laps shall be 4" (10.2 cm). Base sheet or backer ply must extend out onto field of roof as shown in applicable U.S. Ply construction detail.
- N. Backer plies installed over masonry or other non-nailable substrates in cold adhesive or hot asphalt must be cut into manageable lengths to ensure adequate adhesion to cant strip and vertical surfaces without excessive voids. All vertical laps shall be 4" (10.2 cm). Backer ply shall extend out onto field of roof as shown in applicable U.S. Ply construction detail.
- O. Finish ply of selected base flashing detail must be run vertically to maintain selvage edge at all vertical laps.
- P. All vertical laps shall be 4" (10.2 cm). Finish ply shall extend out onto field of roof as shown in applicable U.S. Ply construction detail, and must be extended a minimum of 4" (10.2 cm) beyond edge of prior flashing plies.

3.07 METAL FLASHING

- A. Metal should not be used as a component of base flashing. Because of the high coefficient of expansion of sheet metals and the large temperature changes that can be experienced on a roof, sheet metal or exposed metal components must be isolated from the waterproofing components of the roofing and flashing system as efficiently as possible to prevent the metal from splitting the membranes. U.S. Ply assumes no responsibility for damage to the roofing system caused by the movement of accessory metal.
- B. When it is unavoidable to use metal in the roofing system (i.e., lead flange at drains, gravel stops), treated wood nailers and insulation stops, 1" (0.5 mm) wider than the metal flange, should be provided for metal flange securement.
- C. Metal accessories (gravel stops, counter flashing, etc.) should be a minimum 24 gauge (0.71 mm) galvanized.
- D. Fabricate and install all sheet metal materials as shown in applicable construction in the Flashing Detail

Section. Refer to SMACNA (Sheet Metal and Air Conditioning Contractors National Association, Inc.) for guidance on sheet metal treatments not addressed in this Manual.

- E. Clean metal and apply asphalt primer to all sheet metal surfaces that will come into contact with asphalt or other bituminous materials; allow the primer adequate time to dry.
- F. Use fastener types compatible with the sheet metal type.
 - 1. galvanized steel: use galvanized or cadmium-plated sheet fasteners.
- G. Metal counter-flashing shall have a minimum 4" (10.2 cm) face with a drip lip. The bottom edge of the counterflashing shall cover the roofing membrane and/or base flashing by a minimum of 4" (10.2 cm). Metal counter-flashing used for masonry walls, wooden walls or through wall metal flashings should be two piece designs to allow for installation and later removal. Metal counter-flashings for stucco, EIFS, wood siding or similar materials should be designed to receive and set as a base for those materials, such as "Z" type flashing, while providing for securement of separate metal counter-flashing to cover base flashings. Metal end joints shall be lapped 3" (7.6 cm) or more. Adequate fasteners must be provided to secure against effect of wind forces. Skirt fasteners shall be watertight.
- H. Metal termination bars shall be a minimum of 1/10" (3 mm) thick x 1" (2.5 cm) wide with preformed sealant edge lap. Bar should have 1/4" (6 mm) x 3/8" (10 mm) slotted holes on 4" (10.2 cm) centers to facilitate mechanical anchorage.

Note: Termination bars are not suitable in all base flashing and wall flashing conditions. Termination bars may only be used in conjunction with an appropriate counter-flashing extending a minimum of 4" (10.2 cm) below the termination bar.
- I. Metal flanges for gravel stops, eave strips and pitch pockets to be used in conjunction with roofing shall be primed (both sides). For SBS roof systems set metal flanges in softened membranes (torch heated), and nail 4" (10.2 cm) o.c. to wood nailers or insulation stops. Flanges shall be a minimum of 3 1/2" (8.9 cm) wide for gravel stops or eave strips and 4" (10.2 cm) wide for projections and extensions through the roof. The gravel stop or eave strip riser shall be at least 3/8" (10 mm) high for modified bitumen or smooth surface built-up roofing. Total height of riser should be adjusted to extend just above the finished surface, including gravel surfacing if present. Provision must be made for securing the skirt to the face of the wall. This may be wood nailer strips for masonry and metal construction. In all cases, gravel stop and eave strip nailer should be fastened to the deck or deck system with adequate resistance against wind forces.
- J. Stacks shall have metal sleeve flashing a minimum 8" (20.3 cm) high. Pitch pockets for brackets, supports, pad-eyes, etc., shall have a 4" (10.2 cm) minimum height metal sleeve.
- K. On reroofing projects, provisions shall be made for reinstallation of existing sheet metal duct work, equipment, coping metal and counterflashings removed in conjunction with the new work. Also provide for cleaning and repairing of existing defective sheet metal, and replacement of missing and irreparable sheet metal to match existing types.
- L. Conduits and piping such as electrical and gas lines must be set on wood blocking or some other form of support. Wood blocking and supports must be set on doubler pads (an additional layer of the roof membrane).

3.08 WALKWAYS

- A. Install walkways at all traffic concentration points (such as roof hatches, access doors, rooftop ladders, etc.) and all locations as identified on the specifier's drawing.
- B. Walkway sections should be no longer than 10' (3 m), with a 6" (15.2 mm) minimum gap between each section to allow for drainage.

- C. Surface the roof around and between the pads if additional surfacing is added to the U.S. Ply membrane.
- D. DuraFlex SBS Walkways:
 - 1. Construct walkways by torch adhering a DuraFlex SBS Walkboard.

3.09 DAILY SEAL

- A. If daily seals or water cutoffs are needed at the end of the day's work, they must be made of waterproof membrane and applied with torch welding, hot asphalt or flashing cement. Before restarting the job, all stops and cutoffs shall be cut out and completely removed.

3.10 CLEAN UP

- A. 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.
- B. Prior to the manufacturer's inspection for warranty, the applicator 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 SPECIFICATION

SECTION 07920
SEALANTS AND CAULKING

PART 1 - GENERAL

1.01 SCOPE

- A. The work covered by this section includes the furnishing of all labor, materials, and equipment for all caulking of windows, doors, louvers, machinery and instrument installation, and for all joint sealants where required. All materials shall be delivered in original containers labeled with the quality, type, manufacturer, and application instructions.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Interior caulking compounds shall be "Sonolac" as manufactured by Sonneborn Building Products, Inc., Des Plaines, IL, or equal products by Dow-Corning, or Engineers approved equal. Caulking materials to be compatible with finish paints system and of an appropriate color.
- B. Exterior caulking and all vertical joint sealers shall be a polysulfide polymer base sealant. Sealant shall be "Sonolastic Two Part" as manufactured by Sonneborn Building Products, Inc., or Dow-Corning building Sealant 780, or equal. Color to be selected by the Engineer to match exterior surfaces.
- C. All horizontal joint sealants in traffic areas shall be a self-leveling polyurethane sealant. Color to be limestone.
- D. Back-up material for caulking and sealant shall be compressible in nature and compatible with the sealant such as: glass yarn, expanded polyethylene foam, PVC, urethane foam. Where butyl, neoprene, or similar rubber backing is used, these shall be compatible with the sealant used.
- E. Primer, where required, shall be as recommended by manufacturer of sealant.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. The Contractor shall install all caulking in conformance to manufacturer's written directions.
- B. Do not caulk during damp or inclement weather. Temperature of air and materials shall be above 40 deg. F.
- C. All joints shall be carefully cleaned of dust, oil, grease, water frost, or other materials which would impair or prevent sealing.
- D. Apply primer on all materials as directed or required by the sealant manufacturer.
- E. Joints and spaces deeper than 3/4" shall be filled with a backfilling material to within 3/4" of surface before caulking.
- F. Backing material shall be compressed to 50% of its original volume at time of installation to provide a positive contact between all surfaces. Thickness of backing shall be adjusted with size of joint.
- G. Apply caulking compound with pressure gun having the correct size nozzle to fit into the joint. Fill

solidly and smooth without voids and thin edges, and in a manner to prevent air entrapment. Finish joint shall show a neat clean bead.

- H. All caulking shall be done a minimum of 3 weeks in advance of painting.

3.02 COMPLETION

- A. Upon completion of the work, all caulking and sealing compounds shall be removed from surrounding areas and all joints checked for watertightness and touched up as required. It shall be the Contractor's responsibility to provide a weathertight building.

END OF SECTION

SECTION 09900
PAINTING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The work covered by this item of the specifications includes furnishing all paint, labor, and materials and performing all operations in accordance with this section of the Specifications and the applicable portion of the Plans.

The Contractor shall furnish all labor, material, equipment and services for cleaning and painting of surfaces as follows:

- A. All metal work, equipment, pumps, valves, fittings, hangers, supports and machinery; except stainless steel, galvanized steel, and aluminum.
- B. All exposed piping and hazardous concealed piping, where required, to be color coded.
- C. All structural steel not hot-dip galvanized, and miscellaneous steel work.
- D. All exposed conduit and electrical work (including galvanized steel).
- E. All doors and frames as required, except, aluminum or fiberglass frames.
- F. All exterior concrete wall surfaces. Exterior concrete roofs shall be sealed with an approved water sealer.
- G. All exterior block

1.02 SUBMITTALS

- A. Six (6) sets of submittals are required. Submittals shall include a list of each specific type of paint proposed along with the manufacturer's product data sheet for that product and color charts for color selection. Colors to be selected by Engineer or blended to match existing paint.

1.03 DELIVERY AND STORAGE

- A. Deliver all materials to the site in original containers, with labels intact and seals unbroken. With the exception of ready-mixed materials, do all mixing at site.

The Contractor shall use one convenient location at the site for keeping all materials and doing all mixing, etc. Floor of this space shall be properly protected with drop cloths. Oily rags and waste shall be frequently removed and under no circumstances shall they be allowed to accumulate. At the completion of the work, the Contractor shall clean off all paint spots, oil and stain from all surfaces and leave the entire project in a satisfactory condition.

PART 2 - PRODUCTS

2.01 DESCRIPTION

- A. Paint meeting these specifications shall be as manufactured by TNEMEC Company or prior-approved equal.

The paints and paint products listed below are as manufactured by TNEMEC Company, Inc. and are intended to establish standards of quality. Paint products for this project shall be equal in all respects to the product listed. No request for substitution will be considered which decreases the film thickness designated and/or the number of coats to be applied, the volume of solids, or which offers a change from the generic type of coating specified. Any request for substitution shall contain the full name of each product, descriptive literature, directions for use, generic type, non-volatile content by volume, and list of at least ten (10) tanks where each of the coatings has been used on new construction and has rendered satisfactory service for at least three (3) years.

2.02 PAINT SCHEDULE FOR SURFACES

- A. Paint surfaces for metal surfaces shall be as shown in the attached Table.

Surface	Metal	Metal	Metal	Lightweight Block	Wood	PVC Pipe
Exposure	Submerged (includes piping, valves)	Exposed Interior and Exterior Doors and Trim (includes piping, and valves)	Interior + Exterior	Interior	Interior	All above ground unsubmerged
Preparation	SSPC-SC5	SSPC-SC10	Clean and Dry	Clean and Dry	Clean and Dry	Clean and Dry
Type System (TNEMEC)	Epoxy Polyamide Series 20 Pota Pox, NSF Std 61	Epoxy/Urethane	Acrylic Block Filler/Acrylic	Epoxy Polyamide	Epoxy Polyamide	Epoxy/Urethane
Finish	Semi-Gloss	Gloss	Matte	Semi-Gloss	Semi-Gloss	Gloss
First Coat	20 Pota Pox Primer	66 Hibuild (1) Epoxoline	130-Envirofill	66 Hibuild Epoxoline	66 Hibuild Epoxoline	66 Hibuild Epoxoline
Dry Film	3.0 - 5.0	4.0 - 6.0	Fill Block	2.0 - 3.0	2.0 - 3.0	3.0 - 5.0
Second Coat	20 Pota Pox Finish	74 Endurashield	Series 6	66 Hibuild Epoxoline	66 Hibuild Epoxoline	74 Endurashield
Dry Film Mills	4.0 - 6.0	2.0 - 3.0	2.0 - 3.0 Mills	2.0 - 3.0	2.0 - 3.0	2.0 - 2.5
Third Coat	-----	-----		-----	-----	-----
Dry Film Mills	-----	-----		-----	-----	-----
Total Coats	2	2	2.0	2	2	2
Total Mills	8.0 - 11.0	6.0 - 9.0	Filled Block +2.0 - 3.0	4.0 - 6.0	4.0 - 6.0	5.0 - 7.5

- (1) Primer be factory applied.

Submerged metal surfaces include all surfaces of pipe, machinery, equipment, structural steel, etc. submerged totally or partially during normal plant operation and surfaces immediately above or adjacent to open water containing structures.

2.03 PAINT SYSTEMS FOR OTHER SURFACES

- A. Exposed surfaces not mentioned above shall receive at least two coats of an appropriate type of paint as recommended by the approved paint manufacturer.

2.04 COLOR CODING OF PROCESS PIPING

All piping shall be color coded or labeled as follows. Where labels are used, they shall be placed along the pipe at no greater than five foot intervals. Where colors are used they shall follow the color code prescribed below. Color coding must be by solid color or banding. If bands are used, they shall be placed along the pipe at no greater than five foot intervals. The color code is as follows:

<u>LETTERS</u>	<u>COLOR OF PIPE</u>
Potable Water	Light Blue
Compressed Air	Light Green
Instrument Air	Light Green with Dark Green Bands
Chlorine (gas, liquid, or vent)	Yellow
Chlorine (solution)	Yellow with Red Bands
Liquid Alum	Yellow with Orange Bands
Alum (solution)	Yellow with Green Bands
Ammonia	Yellow with Brown Bands
Liquid Caustic	White with Red Bands
Caustic (solution)	White with Orange Bands
Settled Water	Green
Filter Effluent	Light Blue
Backwash Supply	Light Blue
Backwash Waste	Dark Grey
Drain	Dark Grey
Raw Water	Tan

2.08 OTHER COLOR CODING

- A. OSHA Orange - Moving parts of equipment, protected by guards-shafts, couplings, pulleys, and sprockets (the guards themselves to be same color as equipment color).
- B. OSHA Yellow - Caution signs and all physical hazards, outside levers, weight on check valves, lower pulley sprockets and chains on valve operators, inside of openings adjacent to steps on ladder, platforms subject to being struck.
- C. Dark Green - "Safety" and location of first air equipment such as gas masks, first-aid kits, and safety deluxe showers.
- D. Black and White - Areas to remain clear

PART 3 - EXECUTION

3.01 GENERAL

- A. All finish coats are to be field applied. Shop applied primer is acceptable, when applied is specified. It is recognized that some equipment is furnished with a manufacturers finish coating system. The

Contractor shall be responsible for re-coating these items with paint systems as specified herein as required by the Engineer.

3.02 SURFACE PREPARATION

A. General

Surfaces to be painted shall be clean before applying paint or surface treatments. Oil, grease, dirt, rust, loose mill scale, old weathered paint, and other foreign substances shall be removed except as hereinafter specified. The removal of soil and grease shall, in general, be accomplished by blast cleaning, minor amounts of grease and oil contaminants will be tolerated on the surface, prior to blast cleaning, provided that abrasive is not reclaimed and reused.

Clean cloths and clean fluids shall be used in solvent cleaning to avoid leaving a thin film of greasy residue. Cleaning and painting shall be so programmed that dust or spray from the cleaning process will not fall on wet, newly painted surfaces. Hardware, electrical fixtures and similar accessories shall be removed or suitably masked during preparation and painting operations, or shall be disconnected and moved to permit cleaning and painting of equipment, and following painting shall be replaced and reconnected. Hangers, brackets and other metallic surfaces which are unaccessible after installation shall be painted, except for final coat, prior to installation. Specific surface preparation requirements are included in paint systems.

B. Metal Surfaces

Submerged metal surfaces shall be blasted to white metal in accordance with SSPC-SP5 prior to coating. Exposed metal surfaces, except non ferrous surfaces, are to be blasted to a near-white metal in accordance with SSPC-SP10 before priming. All metal surfaces are to be primed immediately following cleaning.

C. Concrete Block and Concrete Surfaces

Concrete and block masonry is to be thoroughly cured, washed with clear water or brush blasted as specified, and dry before application of any coating. Remove all loose mortar and projections, fill cracks and blemishes too large to be covered by coating with patching mortar.

- D. Wood surfaces to be painted shall be cleaned of dirt, oil, or other foreign substances with mineral spirits, scrapers, sandpaper, or wire brush. Finished surfaces exposed to view shall, if necessary, be made smooth by planing or sandpapering. Millwork shall be sandpapered where necessary, and given a coat of the specified exterior primer on all concealed sides before installation. Small, dry seasoned knots shall be surface scraped, sandpapered, and thoroughly cleaned, and shall be given a thin coat of an acceptable knot sealer before application of the priming coat. All beads or streaks of pitch shall be scraped off, or if the pitch is still soft, it shall be removed with mineral spirits or turpentine and the resinous area shall be thinly coated with knot sealer. After priming, all holes and imperfections shall be filled with putty or plastic wood colored to match the finish coat, allowed to dry and sandpapered smooth. Painting of exterior wood surfaces shall proceed insofar as practicable only after masonry work has dried.

3.03 APPLICATION

- A. Painting shall be accomplished by skilled painters in a workmanlike manner. The painting Contractor shall be wholly responsible for the quality of his work and shall not begin any work until the surfaces have been properly prepared. Do not paint any surface which has been damaged, or is in questionable condition, that normal finishing procedures will not conceal. Painter to inspect all surfaces and report any defects to be corrected to the Contractor prior to painting.

Work shall be accomplished under conditions which are suitable for the production of good results.

Interior painting shall not begin until all masonry and plaster surfaces are thoroughly cured and dry. Temperatures of spaces in building to be painted shall be maintained above 50 degrees F, and such spaces shall be kept dry. Exterior painting shall not be done in rainy, damp cold or dusty weather, or until surface is thoroughly dry.

Industrial paint systems shall be applied in strict observation of manufacturer's recommendations for temperature, humidity, curing time, mixing proportions, and surface preparations. All coats shall be applied using procedures and techniques that will assure adhesion to the bare surface and top intermediate coatings. Final finish coat shall be of a color selected by the Engineer or Owner.

3.04 RESPONSIBILITY

- A. The general intent of this specification is to provide direction for placement of protective painting on surfaces which may be corroded or damaged by the weather and to provide a finished project pleasing to the eye.
- B. It shall be the contractor's responsibility to repair any painting systems which fail either due to the failure of the field applied painting done by the Contractor or his subcontractors, or due to the failure of any shop perform sandblasting and shop applied prime coats.

3.05 TOUCH UP PAINT, PROTECTION AND CLEAN UP

- A. Provide 1 gallon of each color and type of primer and finish paint used for touch-up purposes. Place for storage in area designated by the Engineer. Provide touch up paint at conclusion of project and provide with a minimum of 6 months shelf life.
- B. Protect work against damage by painting and finishing work as required. Leave all work undamaged. Clean, repair or replace, and repaint any damaged areas as directed by Engineer.
- C. Remove any surplus materials, scaffolding and debris and leave area clean.

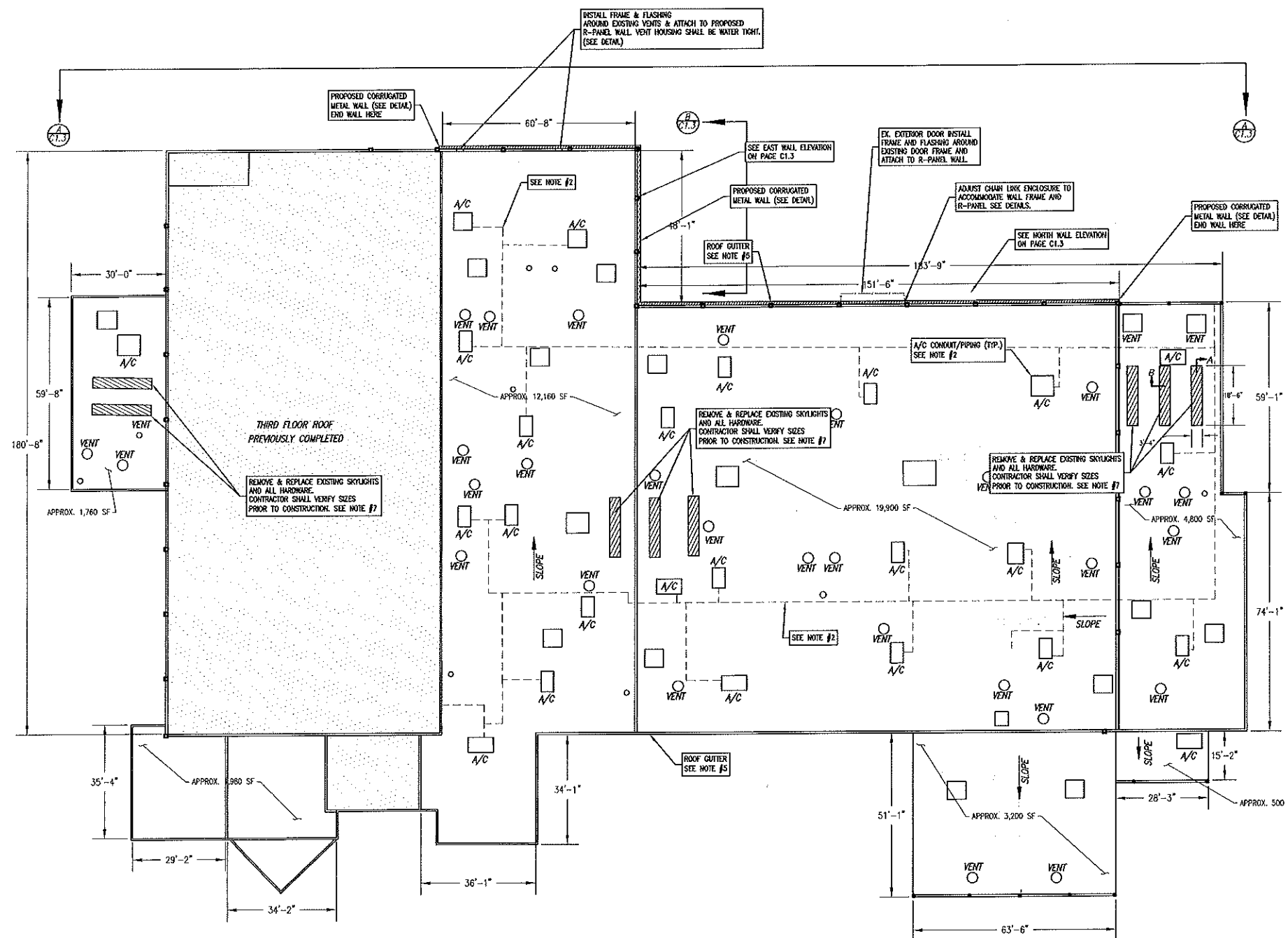
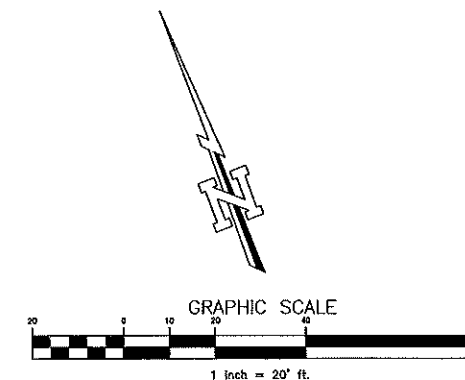
END OF SECTION

DRAWINGS



DRAWN BY: J.T.S.
CHECKED BY: S.R.H.
DATE: JULY 2019
SCALE: 1"=20'
JOB NO.: GREGG1901

NOTE:
DIMENSIONS AND FACILITIES ARE APPROXIMATE.
CONTRACTOR SHALL VERIFY ROOF PENETRATION,
FLASHINGS, AND OBSTACLES PRIOR TO BIDDING.

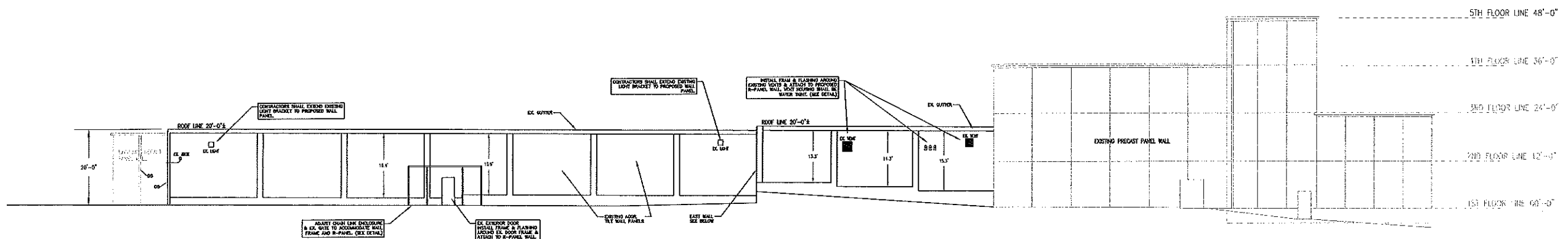


CONSTRUCTION NOTES:

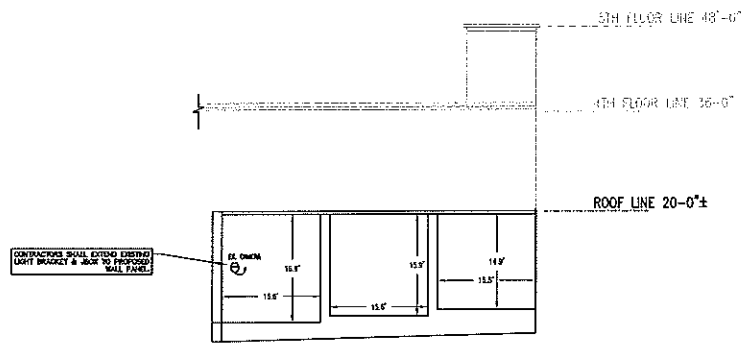
1. REMOVE ALL EXISTING ROOFING, EXPANSION JOINTS, FLASHING, AND ALL OTHER ROOF RELATED COMPONENTS DOWN TO THE TAPERED INSULATION.
2. DISCONNECT AND RECONNECT ROOF TOP A/C UNITS, PLUMBING, AND ELECTRICAL AS REQUIRED USING LICENSED CONTRACTORS FROM THE APPROPRIATE TRADE. REPLACE ALL BLOCKING AND WOOD RUNNERS WITH NEW TREATED WOOD.
3. REPLACE DEFECTIVE AREAS OF TAPERED INSULATION.
4. INSTALL COVERBOARD IN LOW RISE FOAM ADHESIVE, INSTALLING ONE LAYER OF SELF-ADHERED BASE SHEET, FOLLOWED BY INSTALLATION OF ONE LAYER OF FIBERGLASS REINFORCED SBS MODIFIED BITUMEN CAP SHEET USING TORCH WELDING TECHNIQUES.
5. REPLACE ALL FLASHINGS INCLUDING CURBS, PERIMETER FLASHINGS, WALL FLASHINGS, AND INSTALL TWO PLYS OF FLASHING MEMBRANE PER MANUFACTURER'S RECOMMENDATIONS.
6. REMOVE AND REPLACE WOLMANIZED 2x4s AS NEEDED.
7. PROPOSED SKYLIGHTS SHALL BE POLYCARBONATE GLAZING FOR THE INNER & OUTER MATERIAL DOME. OUTER GLAZING COLOR SHALL BE BRONZE, INNER GLAZING COLOR SHALL BE CLEAR. METAL FINISH SHALL BE CLEAR ANODIZED ALUMINUM. (WASCO-VELUX MODEL #TBY OR APPROVED EQUAL)
8. COORDINATE ALL CONSTRUCTION ACTIVITIES WITH JAIL ADMINISTRATION AND MAINTENANCE DEPARTMENTS.
9. ACCESS THRU JAIL FOR WALL IMPROVEMENTS, WILL BE LIMITED FOR SECURITY REASON. COORDINATE WITH JAIL ADMINISTRATION AND SECURITY FOR ACCESS.

**GREGG COUNTY NORTH JAIL
ROOF IMPROVEMENT**

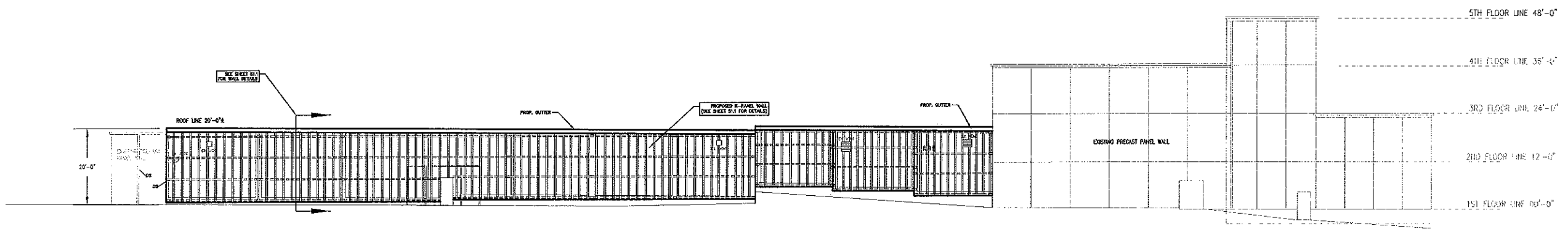
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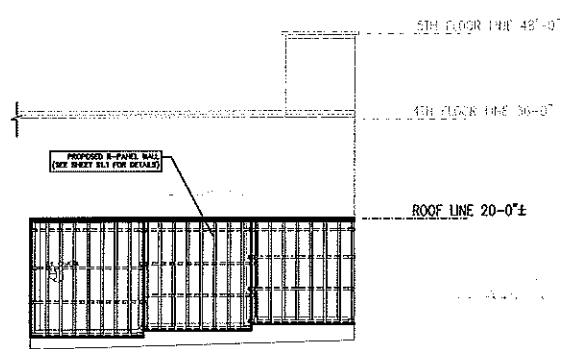
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N.T.S.



B-B EX. EAST WALL ELEVATION
N.T.S.



A-A NORTH WALL ELEVATION
N.T.S.

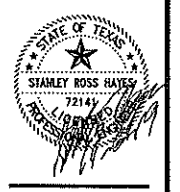


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N.T.S.

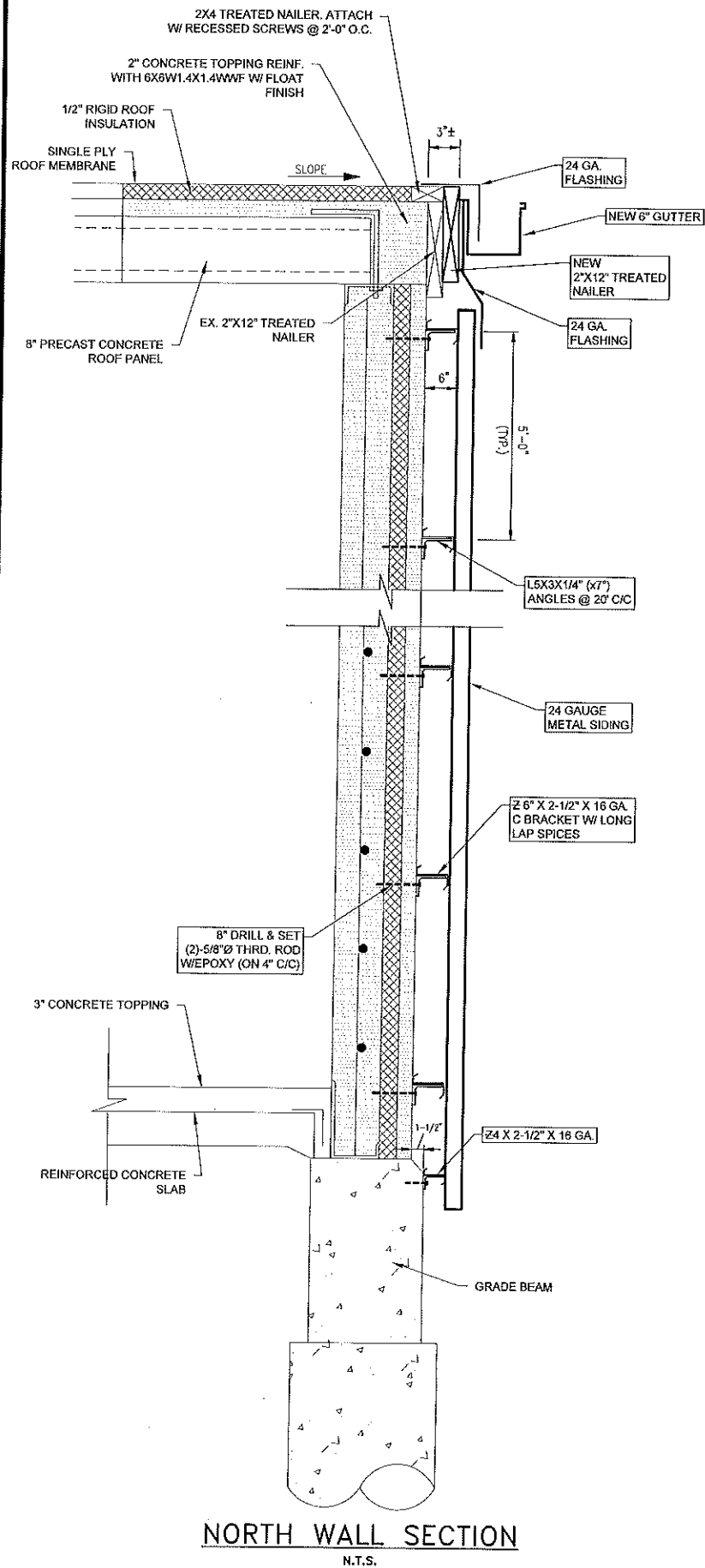
**NORTH WALL
ELEVATION**

**GREGG COUNTY
GREGG COUNTY NORTH JAIL
LONGVIEW, TEXAS**

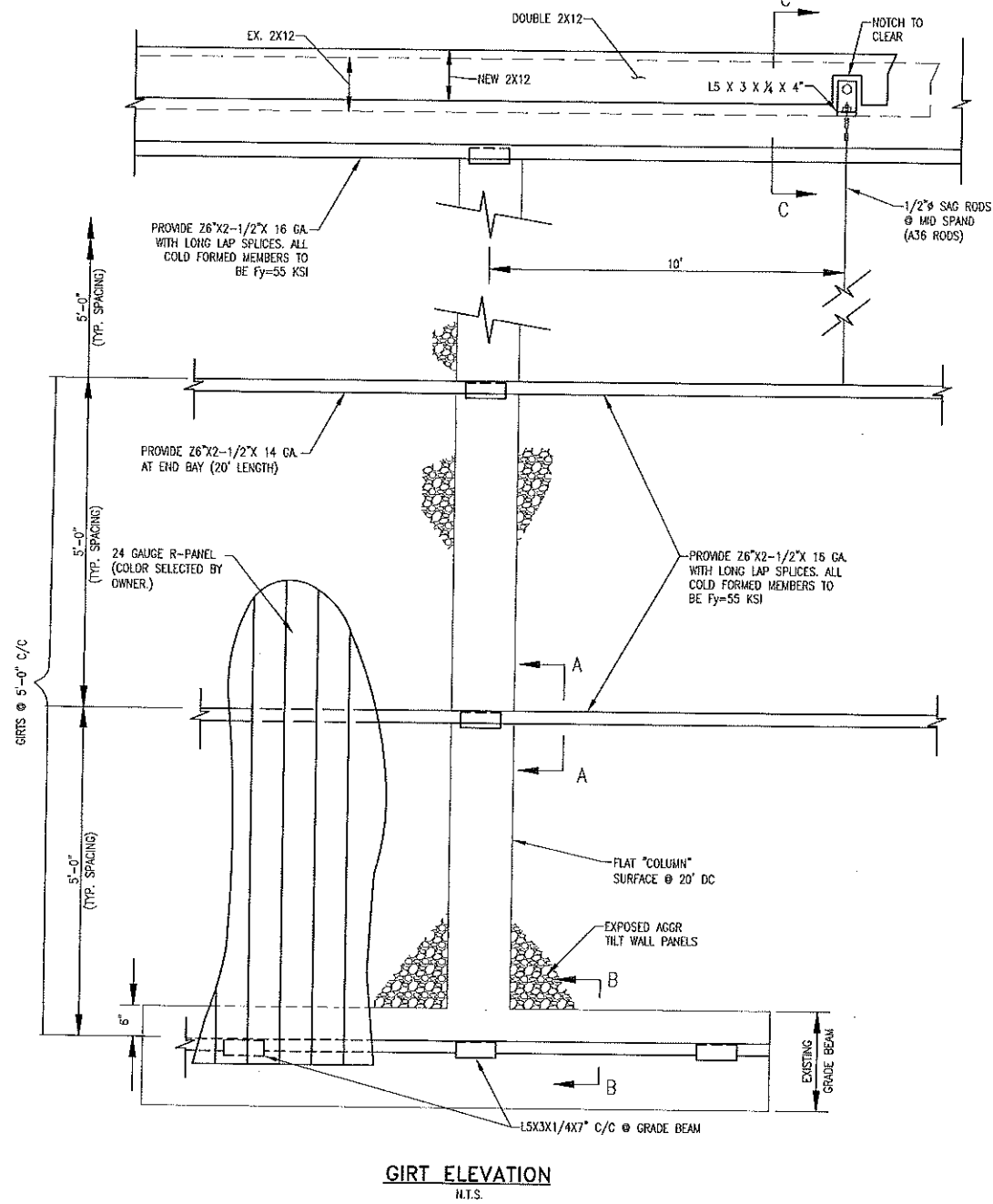
HAYES ENGINEERING, INC.
Texas Registered Engineering Firm F-1465
2126 Alpine St., Longview, TX 75601-3401
Tel.: (803) 758-2010 • Fax: (803) 756-2099



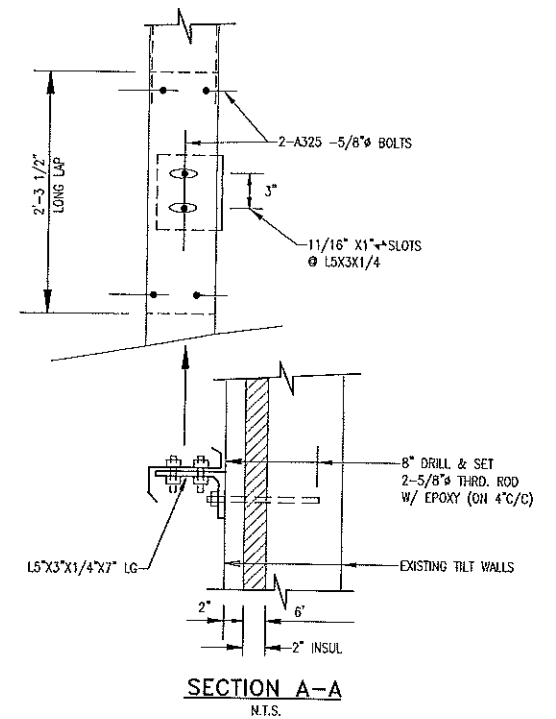
DRAWN BY : J.T.S.
CHECKED BY : S.R.H.
DATE : JULY 2019
SCALE : N.T.S.
JOB NO. : GREGG1901



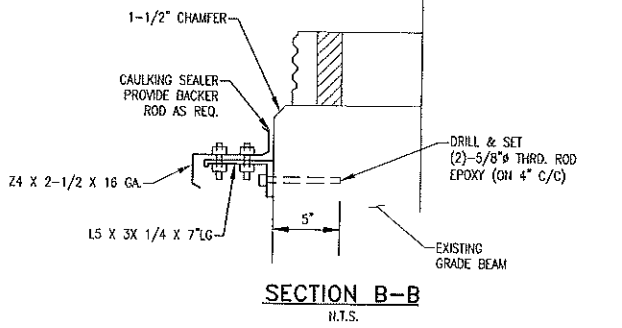
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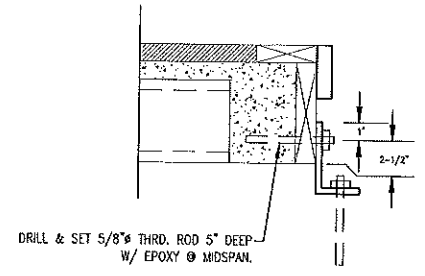
GIRT ELEVATION
N.T.S.



SECTION A-A
N.T.S.



SECTION B-B
N.T.S.



SECTION C-C
N.T.S.

STRUCTURAL
DETAILS

GREGG COUNTY
GREGG COUNTY NORTH JAIL
LONGVIEW, TEXAS

HAYES ENGINEERING, INC.
Texas Registered Engineering Firm F-1465
2126 Alpine St. Longview, TX 75801-3401
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CHECKED BY: G.R.V.
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SHEET