

# PROJECT MANUAL

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## Roof Replacement

### Lago Vista Middle School

8039 Bar K Ranch Rd

Lago Vista, TX 78645



**LAGO VISTA**  
INDEPENDENT SCHOOL DISTRICT

100% CONSTRUCTION DOCUMENT SET

**Prepared by:**



**ENGINEERED EXTERIORS, LLC**

ARCHITECTURAL ENGINEERS & CONSULTANTS

[www.engexteriors.com](http://www.engexteriors.com)

TBPE Firm Registration No. F-12811

March 3, 2021

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**LAGO VISTA INDEPENDENT SCHOOL DISTRICT**  
**REQUEST FOR COMPETITIVE SEALED PROPOSALS FOR**  
**ROOF REPLACEMENT AT**  
**LAGO VISTA MIDDLE SCHOOL**

**RFCSP NO. 20210301**

DATE	EVENT
<b>Pre-Proposal Conference (Virtual):</b>	<b>March 9, 2021, 9:00 AM (CST)</b>
<b>Pre-Proposal Site Visit:</b>	<b>March 9, 2021, 1:00 PM (CST)</b>
Deadlines for Questions	March 16, 2021, 5:00 PM (CST)
Answers Posted	March 19, 2021, 2:00 PM (CST)
<b>Deadline for Proposals / CSP Opening</b>	<b>March 23, 2021, 2:00 PM (CST)</b>
Evaluation of Proposals	March 26, 2021
LVISD Board Meeting for review/approval	April 12, 2021

**Deliver Sealed Proposals to:**

Lago Vista ISD  
8039 Bar-K Ranch Road  
Lago Vista, TX 78645

**Contact:**

Jason Stoner, Director of Finance  
Business Office  
Phone: 512.267.8300 x1502  
Email: [jason\\_stoner@lagovista.txed.net](mailto:jason_stoner@lagovista.txed.net)

- Questions must be submitted via e-mail to the contact person listed above. In the **e-mail subject line**, reference: **Questions RFCSP No. 20210301**
- Q & A and Addenda will be posted on our website:  
[http://www.lagovistaisd.net/page/business.required\\_postings](http://www.lagovistaisd.net/page/business.required_postings)
- Proposals are due no later than the date and time indicated above. Proposals must be received by U.S. mail, or hand delivery in a **sealed envelope**. Proposals received after the specified time for submission shall not be considered.
- Submit the following:
  - one (1) hard copy stapled or bound together, marked “original” – include signed “required” forms
  - one (1) digital copy on a flash drive – include signed “required” forms
- FAX, e-mail or other electronic proposals **will not be accepted**.
- Proposals must be plainly marked on the cover with:
  - RFP Number and Title
  - Name of the Proposer (“Offeror”)
  - RFCSP number
  - Project name
  - Date and Time of deadline for submission

## **SECTION 00 20 00 - PROJECT DIRECTORY**

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Owner Representative    Jason Stoner  
LVISD Director of Finance  
Office: (512) 267-8300 x1502  
Email: [jason\\_stoner@lagovista.txed.net](mailto:jason_stoner@lagovista.txed.net)

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Engineer                      Engineered Exteriors, LLC  
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Office: (512) 571-3530 x1  
Email: [jen@engexteriors.com](mailto:jen@engexteriors.com)

## **SECTION 00 21 13 - INSTRUCTIONS TO OFFERORS**

(Chapter 2269, Subchapter D of the Texas Government Code)

Lago Vista Independent School District (“LVISD”) requests competitive sealed proposals for a Contractor to perform the construction of the Work described below in connection with the “Project” as described below.

### **1. PROJECT**

- 1.1. **Scope of Work.** The selected Offeror must furnish all labor, materials and equipment associated with roof replacement work described in the attached Drawings and Specifications, to be constructed at the following location (“Project Site”):

Lago Vista Middle School  
8039 Bar K Ranch Rd  
Lago Vista, TX 78645

- 1.2. **Minimum Qualifications.** Because of the nature of the Work, the selected Offeror must meet all qualifications and/or must have any licenses or certifications specified in the Project Manual.

- 1.3. **Texas Education Code §22.0834 (Criminal History Record Information Review of Certain Contract Employees).** For purposes of the Project, those workers who will be performing Work on the Project Site will be “covered employees” as defined in Section 3.15 of the General Conditions. Thus, Texas Education Code §22.0834 is applicable to such covered employees, and the selected Offeror must comply with the provisions of Section 3.15 of the General Conditions with regard to such covered employees.

### **2. REQUEST FOR PROPOSALS**

- 2.1. This Request for Competitive Sealed Proposals (“Request for Proposals”) consists of the following documents:

- Advertisement for Request for Proposals;
- Instructions to Offerors;
- Proposal Form (Section 00 00 30);
- Any Contract Documents referenced in this Request for Proposals;
- Any addenda to this Request for Proposals issued by LVISD;
- Attached forms

### **3. DRAWINGS, SPECIFICATIONS, CONTRACT DOCUMENTS AND ADDENDA**

- 3.1. The “Contract Documents” for this Request for Proposals include, without limitation, the Agreement for Construction Contract (“Agreement for Construction”), General Conditions of the Contract for Construction (“General Conditions”), and the Notice of Prevailing Wage Rates (“Notice of Prevailing Wage Rates”), collectively referred to in this Request for Proposals as the “Contract.”

- Copies of Drawings, Specifications, Contract Documents, and Addenda (if any) and other documents related to this Request for Proposals, are available electronically on the LVISD website at: [http://www.lagovistaisd.net/page/business.required\\_postings](http://www.lagovistaisd.net/page/business.required_postings)

#### 4. FORMAT FOR PROPOSALS

- 4.1. Each proposal (“Proposal”) submitted by an offeror (“Offeror”) must contain the following:
- The completed Proposal Form (Section 00 00 30);
  - The completed Felony Conviction Notice;
  - The completed Suspension and Debarment Certification;
  - The completed Disclosure Form;
- 4.2. The Proposal information must be typed on the Proposal Form. Refer to the Request for Competitive Sealed Proposals for additional format information.
- 4.3. The Proposal Deadline may be extended by Addendum to this Request for Proposals.
- 4.4. Proposals which have been timely received will be publicly opened at the Place for Submitting Proposals immediately after the Proposal Deadline, and the names of the Offerors and any monetary proposals made by the Offerors will be read aloud via virtual conference, provided to all entities proposing and/or requesting via email to attend.

#### 5. METHOD OF SELECTING CONTRACTOR

- 5.1. Offerors will be evaluated based on the following selection criteria and weighted value for each criterion (collectively, “Selection Criteria”):

<u>Selection Criteria</u>	<u>Weighted Value</u>
Construction Cost as Proposed	48%
Relevant Experience and Past Performance	30%
Proposed Personnel/Resources	10%
Financial Condition	6%
Safety Record	6%

- 5.2. Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Proposal to establish the responsibility, qualifications and financial ability of Offerors, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner’s satisfaction within the prescribed time.
- 5.3. If the Contract is to be awarded, it will be awarded to the lowest Offeror whose evaluation by Owner indicates to Owner that the award will provide the District with the best value at project completion. The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided and to

determine the low Offeror on the basis of the sum of the Base Proposal and the Alternates accepted.

5.3.1. If the contract is to be awarded, Owner will give the Successful Offeror a Notice of Award within sixty days after the day of the Proposal opening.

5.3.2. The Owner shall have the right to reject any or all Proposals and to reject a Proposal not accompanied by any required proposal security, or by other data required by the Proposal Documents, or to reject a Proposal which is in any way incomplete or irregular.

## 6. QUESTIONS REGARDING THIS REQUEST FOR PROPOSALS

6.1. Only those responses to inquiries which are made by formal written Addenda shall be binding. Oral and other interpretations or clarifications will be without legal effect, and shall not be binding on LVISD. The Offeror must acknowledge receipt of all Addenda in its Proposal. However, each Offeror will be bound by the terms of all Addenda, and its Proposal will be construed to include the information contained in the Addenda, whether or not Offeror has received them or acknowledged receipt.

## 7. WITHDRAWAL OF PROPOSALS

7.1. Prior to the Proposal Deadline, an Offeror may withdraw its Proposal, and may, if it chooses, submit a new Proposal, if the new Proposal is submitted before the expiration of Proposal Deadline. The request for withdrawal of a Proposal must be in writing and signed by an authorized representative of the Offeror.

7.2. After the Proposal Deadline, an Offeror may not withdraw its Proposal for a period of 90 days after Proposal opening, unless withdrawal is required by applicable law or permitted by LVISD in accordance with LVISD Board Policy.

7.3. Each Proposal received will be presumed to be accurate and free from error, unless clear and convincing evidence to the contrary is presented.

## 8. POST-PROPOSAL INFORMATION

8.1. By submitting a Proposal, the Offeror agrees to provide evidence upon request of LVISD that the Offeror satisfies the Minimum Qualifications set out in Section 1.3 above.

8.2. By submitting a Proposal, the Offeror agrees to promptly furnish any additional information required by LVISD in order to evaluate the Proposals.

## 9. REJECTION OF PROPOSALS

9.1. Proposals may be rejected if they do not contain the information required by this Request for Proposals or if they do not contain the information stated herein.

9.2. Proposals may be rejected if the Minimum Qualifications specified in Section 1.3 above are not met.

9.3. Proposals may be rejected if they contain qualifications, conditions to performance, or if they are incomplete, or for any other reason authorized by law.



- 9.4. LVISD reserves the right to waive any minor informality or irregularity in the Proposal or Proposal process, and to reject any and all Proposals.

#### 10. BOND AND INSURANCE REQUIREMENTS

- 10.1. Insurance meeting the requirements set out in the General Conditions must be furnished by the selected Offeror within 5 days after the Contract is signed by the Offeror.
- 10.2. If the Contract amount is over \$25,000, the selected Offeror must provide payment and performance bonds each in the amount of 100% of the Contract Price within 5 days after the Contract is signed by the Offeror. Bonds must be provided by a Treasury-listed corporate Surety authorized to do business in the State of Texas.
- 10.3. The Offeror's attention is directed to Subsection 10.4 of the General Conditions which expressly sets out the Worker's Compensation Insurance requirements for the Project. The Contractor and each subcontractor must maintain Worker's Compensation Insurance coverage as required in Subsection 10.4 and the Contractor is required to provide a certificate of coverage for each subcontractor prior to that subcontractor beginning Work on the Project Site, showing that coverage is being provided for all of its employees for the duration of the Work. Subsection 10.4 is incorporated herein for all purposes.

#### 11. SAFETY PROGRAM MANUAL AND PROJECT SAFETY PLAN REQUIREMENTS

- 11.1. The selected Offeror must submit its Safety Program Manual in accordance with the requirements set out in the General Conditions not later than 5 days after the Offeror signs the Contract.
- 11.2. The selected Offeror must submit a Safety Plan for the Project meeting the requirements set out in the General Conditions not later than 5 days after the Offeror signs the Contract.

#### 12. EXAMINATION OF SITE AND CONTRACT DOCUMENTS

- 12.1. Each Offeror is required to visit the Project Site and to fully acquaint itself with the conditions and limitations as they exist at the Project Site, including the effect that weather conditions may have on the Project Site. Each Offeror shall also fully acquaint itself with the existing and anticipated sources and supplies of labor and materials, and shall also thoroughly examine the Contract Documents. Failure of the Offeror to visit the Project Site and acquaint itself with the conditions of the Work and the Contract Documents shall in no way relieve the Offeror from any obligations with respect to its Proposal.

#### 13. PUBLIC INFORMATION

- 13.1. LVISD considers all information, documentation and other materials requested to be submitted in response to this solicitation to be of a non-confidential and/or non-proprietary nature and therefore shall be subject to public disclosure under the Texas Public Information Act (Tex. Gov't Code, Chapter 552.001, *et seq.*) after a contract is awarded.

13.2. Offerors are hereby notified that LVISD strictly adheres to all statutes, court decisions, and opinions of the Texas Attorney General with respect to disclosure of public information.

14. DEADLINE FOR SIGNING CONTRACT AND LVISD'S RIGHTS IF DELAY

14.1. The timely completion of this Project is essential. LVISD has the right to consider negotiations with the selected Offeror for the Contract incomplete until and unless the Contract is signed and the bonds, insurance, Safety Program Manual and Safety Plan are submitted in accordance with the following deadlines. In order to avoid unnecessary delays in the Project, the selected Offeror must:

14.1.1 sign the Contract no later than 10 days after the selected Offeror has been notified that it is the successful Offeror, and

14.1.2 provide its Safety Program Manual and the Safety Plan for the Project and provide all required bonds and insurance within 5 days after the selected Offeror signs the Contract.

14.2. If the selected Offeror fails to meet one or more of these deadlines, then in addition to any and all other rights and remedies to which LVISD is entitled, LVISD shall have the right to:

14.2.1 terminate its negotiations with the selected Offeror and begin negotiations with the next ranked Offeror; or

14.2.2 proceed with the Contract with selected Offeror, but treat each day beyond the 10-day deadline in which the Contract is unsigned by the Offeror, and/or each day beyond the 5 day deadline in which one or more of the required documents has not been submitted, as a day of unexcused delay under the Contract.

15. WAIVER OF CLAIMS

15.1. EACH OFFEROR BY SUBMISSION OF A PROPOSAL TO THIS REQUEST FOR PROPOSALS WAIVES ANY CLAIMS IT HAS OR MAY HAVE AGAINST THE ENGINEER, ITS CONSULTING ENGINEERS, OR ANY OTHER CONSULTANTS, AND THEIR RESPECTIVE EMPLOYEES, OFFICERS, MEMBERS, DIRECTORS AND PARTNERS, AND LVISD, ITS EMPLOYEES, OFFICERS, AGENTS, REPRESENTATIVES, AND THE MEMBERS OF LVISD'S GOVERNING BODY, CONNECTED WITH OR ARISING OUT OF THIS REQUEST FOR PROPOSALS, INCLUDING, THE ADMINISTRATION OF THE REQUEST FOR PROPOSALS, THE PROPOSAL EVALUATIONS, AND THE SELECTION OF THE OFFEROR. SUBMISSION OF A PROPOSAL INDICATES OFFEROR'S ACCEPTANCE OF THE EVALUATION TECHNIQUE AND OFFEROR'S RECOGNITION THAT SOME SUBJECTIVE JUDGMENTS MUST BE MADE BY LVISD DURING THE SELECTION PROCESS. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, EACH OFFEROR ACKNOWLEDGES THAT LVISD SHALL DOCUMENT THE BASIS OF ITS SELECTION AND SHALL MAKE THE EVALUATIONS PUBLIC NOT LATER THAN THE 7TH DAY AFTER THE DATE THE CONTRACT IS AWARDED, AND EACH OFFEROR WAIVES ANY CLAIM IT HAS OR MAY HAVE AGAINST THE

ABOVE-NAMED PERSONS, DUE TO INFORMATION CONTAINED IN SUCH EVALUATIONS.

16. CONFLICT OF INTEREST QUESTIONNAIRE

16.1. Offeror is advised to determine if it is required under Chapter 176 of the Texas Local Government Code to file a completed conflict of interest questionnaire with LVISD. If Offeror is required by law to complete the questionnaire, the Conflict of Interest Questionnaire (Form CIQ) should be completed and submitted to the District.

<https://www.ethics.state.tx.us/data/forms/conflict/CIQ.pdf>

17. DISCLOSURE OF INTERESTED PARTIES

17.1. In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Texas Government Code. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The disclosure requirement applies to a contract entered into on or after January 1, 2016.

17.2. After the LVISD Board of Trustees selects the Offeror, the successful Offeror will be required to complete an electronic Form 1295 ("Form 1295") on the Texas Ethics Commission website <https://www.ethics.state.tx.us/filinginfo/1295/> and submit the completed and executed Form 1295, including the certification of filing, to LVISD prior to entering into a contract with LVISD in accordance with this statute. Additional information is available on the Texas Ethics Commission website at [www.ethics.state.tx.us](http://www.ethics.state.tx.us). Submission of a response to this Request for Proposals indicates Offeror's acceptance and intended compliance with these requirements.

18. FEEDBACK TO SUBCONTRACTORS/SUPPLIERS

18.1. If requested by a subcontractor or material supplier who submitted a bid or proposal to Offeror in connection with this procurement but who is not listed as a proposed subcontractor or supplier on Offeror's completed Disclosure Statement, Offeror shall provide feedback to such subcontractor or supplier as to how its bid/proposal compared with the other bids/proposals received by Offeror for the same services or materials (e.g., bid was highest bid received, bid fell in the middle of bids received, etc.).

19. RETENTION OF PROPOSAL DOCUMENTATION

19.1. All proposal materials and supporting documentation that are submitted in response to this Request for Competitive Sealed Proposals become the property of Lago Vista ISD..

**END OF SECTION**

**SECTION 00 30 00 - PROPOSAL FORM**

Contractor offers and proposes to perform the Work, in accordance with the Contract Documents, for the Contract Amount based on the Pricing Schedule set forth below, within the Substantial Completion Date required by the Owner.

BASE PROPOSAL: as specified in the Drawings and Specifications.			
ITEM NO.	Type	Scope Description: Refer To 011000	LUMP SUM PROPOSAL
1	Roofing: A01	Install new retrofit roof system as specified with all associated MEP work indicated, sealants, flashings and sheet metal.	\$
2	Roofing: A02, A04, A05	Install new retrofit roof system as specified with all associated all associated MEP work indicated, sealants, flashings and sheet metal, routing and sealing of 400 LF of cracks at existing walls above A05.	\$
Subtotal, Lump Sum Base Proposal:			\$
Contractor Overhead & Profit:			\$
TOTAL LUMP SUM PROPOSAL:			\$

ALTERNATE PROPOSAL(S): indicate below the amount of additional or saved calendar days are associated with the alternate proposal scope item, along with additional or deduct proposal amounts.			
ITEM NO.	Type	Scope Description:	LUMP SUM PROPOSAL and DURATION (where requested)
1	Schedule	In lieu of performing base bid work commencing in June of 2021, commence work on August 1, 2021, providing working hours for disruptive operations outside school hours. Substantial Completion Date revised to December 1, 2021.	ADD or DEDUCT (circle one) \$
2	Roofs: Canopies A03.1 - A03.4	Replace existing metal panels with new metal panels to match existing, including all flashings, gutters, and downspouts as specified.	ADD \$ Added Days:
3	Walls Above Roofs: A05	Install new elastomeric coating system as specified, over all stucco wall surfaces above Roof Area A05.	ADD \$ Added Days:
4	Roofs: B01, B02, B03	Install new retrofit roof system as specified with all associated MEP work indicated, sealants, flashings and sheet metal.	ADD \$ Added Days:
5	Walls Above Roofs: B01, B03	Install insulation, plywood, underlayment, hat channels, and new wall panels at areas indicated on the drawings above Roof Areas B01 and B03.	ADD \$ Added Days:
6	Roofs: A01	In lieu of specified metal retrofit roof system, replace existing metal panels with new metal panels to match existing, including all flashings, gutters, and downspouts as specified. Install thermal blocks and new batt insulation at locations where missing.	ADD or DEDUCT (circle one) \$

**UNIT PRICES**

*Note, costs are per unit, however an estimated quantity is provided as a basis for the pricing per unit provided. **DO NOT price quantity basis, price per unit.***

ITEM	Type	Item Description	QUANTITY BASIS	PRICE PER UNIT	UNITS
1	METAL	Pre-finished 24-gauge galvanized sheet, 12" stretch-out	10 LF	\$	LF
2	METAL	Pre-finished 24 gauge galvanized steel gutter, 6"x6"	10 LF	\$	LF
3	METAL	Pre-finished 24 gauge galvanized steel downspout, 5"x5"	10 LF	\$	LF
4	SEALANT	Rout and seal existing cracks in stucco, approx. 1/2" width by 1/2" depth, silicone sealant to match existing stucco.	10 LF	\$	LF
5	MISC	Misc. Work: Lead Man and Helper	8 HR	\$	HR
6	MISC	Misc. Roofing Material Mark-up (%)	N/A		%

**SUBSTANTIAL COMPLETION CALENDAR DAYS**

Project scope of work for the Base Proposal must be substantially complete prior to **September 1, 2021**. Failure to substantially complete the work by the Substantial Completion Date set forth above will result in the assessment by the Owner of liquidated damages in the amount of \$ 250 per day that is required by the Contractor to substantially complete the work after this Date.

Completion of this Proposal Form acknowledges this requirement. This contract time will be adjusted in the event of weather delays and change orders affecting duration of the project.

**OFFEROR INFORMATION**

All of the following information must be provided by Offeror. Use additional sheets if necessary. If additional sheets are used, clearly indicate the question number to which you are responding. Responses must be typed or printed neatly. Illegible responses will not be considered. The Offeror is also sometimes hereinafter referred to below as the "organization" or the "company."

**A.1 General Information**

A.1.1 Name of Offeror: \_\_\_\_\_

A.1.2 Name of Project: \_\_\_\_\_

A.1.3 Address of office from which Offeror will conduct the Work: \_\_\_\_\_

A.1.4 Offeror's Contact Person for this Work:  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_ Phone: \_\_\_\_\_

A.1.5 Offeror 's Home Office Address:  
\_\_\_\_\_

A.1.6 Does any relationship exist between the Offeror, its officers, principals, or employees and any of LVISD's officers, or Trustees?  YES  NO  
If yes, please explain. \_\_\_\_\_

A.1.7 Principal Business:  
 General Construction  Mechanical/Electrical/Plumbing  
 Roofing  Interior Finish-out  
 Other (Please specify) \_\_\_\_\_

A.1.8 Licensing/Certifications for Prime Contractors:  
List trade categories in which your organization is legally qualified to do business in Killeen, Texas, and indicate registration or license numbers, as applicable.

If a Technology, Fire Alarm, Security or Roofing specialty contractor, please provide a list of each manufacturer with which your organization is authorized/certified to supply, service and install their products. Submit letters and certificates from the manufacturers, on manufacturers' letterheads, regarding the authorization to supply, service and install their products and, in addition, provide copies of certifications for the various personnel involved in the Project.

A.1.9 Minimum Qualifications:  
To the extent not otherwise described in Section 1.8 above, describe your organization's compliance with all Minimum Qualifications set forth in Section 1.3 of the Request for Proposals and include all necessary attachments evidencing same.

A.1.10 Work to be Performed on this Project by Offeror's Own Forces:  
List the general categories of work that your organization intends to perform on this Project using its own forces.  
\_\_\_\_\_

## A.2 Organization

A.2.1 How many years has your organization been in business as a contractor? \_\_\_\_\_

A.2.2 How many years has your organization been in business under its present business name? \_\_\_\_\_

A.2.3 Under what other or former names has your organization operated?  
Name: \_\_\_\_\_ Years: \_\_\_\_\_  
Name: \_\_\_\_\_ Years: \_\_\_\_\_

A.2.4 If your organization is a corporation, answer the following:  
Date of incorporation: \_\_\_\_\_ State of incorporation: \_\_\_\_\_  
President's name: \_\_\_\_\_

A.2.5 If your organization is a limited liability company, answer the following:  
Date of organization: \_\_\_\_\_ State of organization: \_\_\_\_\_

President's, Manager's or Managing Member's name: \_\_\_\_\_

A.2.6 If your organization is a partnership, answer the following:  
Date of organization: \_\_\_\_\_ Type of Partnership: \_\_\_\_\_  
Name(s) of general partner(s): \_\_\_\_\_

A.2.7 If your organization is individually owned, answer the following:  
Date of organization: \_\_\_\_\_ Name of owner: \_\_\_\_\_

A.2.8 For all business entities other than publicly held corporations, provide the following:

Award to Nonresident Offerors

Is your business organized under the laws of the State of Texas?  YES  NO  
What is the location of your principal place of business? \_\_\_\_\_

Proposals from nonresident contractors shall be evaluated according to Tex.  
Gov. Code § 2252.002.

A.2.9 Is your company currently for sale or involved in any transaction to expand or to become acquired by another business entity? If yes, please explain the impact both in organizational and directional terms. \_\_\_\_\_

**A.3 Relevant Experience**

A.3.1 **On the attached Table A**, list all projects your company has in progress and provide all additional information requested.

A.3.2 **On the attached Table B**, list all school projects that your company has completed in the past eight (8) years, beginning with LVISD schools, and provide all additional information requested. As used herein, "school" means K-12 and higher education.

A.3.3 **On the attached Table C**, list all non-school projects your company has completed in the past eight (8) years and provide all additional information requested.

A.3.4 Describe the way in which your company develops and maintains project schedules. How often do you update schedules? **Limit your response to one page.**

**A.4 Past Performance**

A.4.1 Claims and Suits. (If the answer to any of the questions below is yes, please attach details not to exceed one page for each of the following questions.)

Has your organization ever failed to complete any work awarded to it? (If yes, attach details.)

YES  NO

A.4.2 Are there any judgments, claims, arbitration proceedings or suits (past, pending or outstanding) against your organization or its officers arising out of or in connection with your company's performance under a contract for construction management and/or construction services? (If yes, attach details, including a description of how such suits or claims were resolved, if applicable.)

YES  NO

A.4.3 Has your organization filed any law suits or requested arbitration with regard to construction contracts within the last five years? (If yes, attach details.)  
 YES  NO

A.4.4 Has your organization been assessed liquidated damages on a project in the last eight (8) years? (If yes, attach details.)  
 YES  NO

A.4.5 Within the last five years, has any officer or principal of your organization ever been an officer or principal of **another** organization when it failed to complete a construction contract? (If yes, attach details.)  
 YES  NO

A.4.6 Trade References. Provide the following information for three trade references:

Company name: \_\_\_\_\_  
Contact person: \_\_\_\_\_  
Address : \_\_\_\_\_ Telephone: \_\_\_\_\_

Company name: \_\_\_\_\_  
Contact person: \_\_\_\_\_  
Address : \_\_\_\_\_ Telephone: \_\_\_\_\_

Company name: \_\_\_\_\_  
Contact person: \_\_\_\_\_  
Address : \_\_\_\_\_ Telephone: \_\_\_\_\_

**A.5 Personnel**

A.5.1 **On the attached Table D**, list the names of the key individuals [Project Manager, Construction Superintendent, Assistant Superintendent (if applicable), and Field Engineer(s)] of your organization which are proposed to be assigned to this Project and provide the additional information requested on Table D. For each key individual listed on Table D, provide a resume (not to exceed 2 pages) which includes the key individual's construction experience and a description of his/her qualifications and experience relative to the Project.

**A.6 Financial**

Bank References - Provide the following information for three Bank references:

Company name: \_\_\_\_\_  
Contact person: \_\_\_\_\_  
Address : \_\_\_\_\_ Telephone: \_\_\_\_\_

Company name: \_\_\_\_\_  
Contact person: \_\_\_\_\_  
Address : \_\_\_\_\_ Telephone: \_\_\_\_\_

Company name: \_\_\_\_\_  
Contact person: \_\_\_\_\_  
Address : \_\_\_\_\_ Telephone: \_\_\_\_\_

A.6.1 Surety:

A.6.1.1 Name of your organization's bonding company:

\_\_\_\_\_



A.6.1.2 Name, address and phone number of agent:

Company name: \_\_\_\_\_  
Contact person: \_\_\_\_\_  
Address : \_\_\_\_\_ Telephone: \_\_\_\_\_

A.6.2 Financial Statement. All statements submitted will be used exclusively by KISD in the evaluation of the award of the contract on the underlying project. Statements will be kept confidential to the extent permitted by law.

A.6.2.1 Attach an audited or reviewed financial statement, including an independent auditor's report, balance sheet, income statement, and the related notes to the financial statement. Financial statements that are more than one-year old are not acceptable.

A.6.2.2 Name and address of firm preparing attached financial statement, and date thereof:

Company name: \_\_\_\_\_  
Contact person: \_\_\_\_\_  
Address : \_\_\_\_\_ Telephone: \_\_\_\_\_

A.6.3 If financial statements for an affiliate of the organization are also attached, will such organization act as guarantor of the contract for construction?  
 YES  NO

State whether your company is currently in default on any loan agreement or financing agreement with any bank, financial institution, or other entity? (If yes, specify date(s), details, circumstances, and prospects for resolution.)

A.6.4 State whether your company is currently contemplating or has pending a petition in bankruptcy for debt relief, or whether a creditor has threatened to file an involuntary petition against Offeror.

**A.7 Safety Record**

A.7.1 Please provide the following information in connection with your organization's safety record:

A.7.1.1 Your organization's OSHA (Occupational Safety and Health Administration) 300 Logs for the last three (3) completed Calendar years. OSHA log must be completed, signed and dated. If no accidents, record "0" in appropriate column totals.

A.7.1.2 Loss run from your organization's insurance carrier or insurance agent covering your organization's workers' compensation insurance coverage. (Loss run is also referred to as "statement of claims" or SOC.) A loss analysis/loss summary may be substituted as long as it contains individual claims descriptions.

- Loss run must be provided by your organization's insurance carrier or insurance agent. Insurance carrier's company name or insurance agent (agency) must be clearly legible on documents provided.
- Names of claimants on loss run may be redacted/blacked out.

- If there have been no losses, provide copy from your firm's insurance carrier stating no losses.
- Loss run/Loss Analysis/Loss Summary must be from the most recently completed policy year.

A.7.1.3 Loss ratio from your organization's insurance carrier or insurance agent covering your organization's workers' compensation insurance coverage.

- Loss ratio must be provided by your organization's insurance carrier or insurance agent. Insurance carrier's company name or insurance agent (agency) must be clearly legible on documents provided.
- Time period corresponding to loss ratio must be provided for the most recent policy year.
- Typed or handwritten information concerning loss ratio prepared by your firm WILL NOT be accepted. Experience rating documents WILL NOT be accepted for this Paragraph.
- If your loss run/loss analysis for the most completed policy period indicates no losses, then a separate document showing 0 % (zero percent) loss ratio will not be required.

A.7.1.4 Your organization's current experience modifier from your organization's workers' compensation insurance premiums provided by your organization's insurance carrier, insurance agent or rating agency.

Experience modifier must be provided by your organization's insurance carrier, insurance agent or rating agency. Insurance carrier's company name or insurance agent (agency) must be clearly legible on documents provided. Experience modifier must be from most recent completed policy year. Experience modifier must clearly indicate time period/year covered. Hand-written experience modifiers WILL NOT be accepted. Experience rating documents indicating a calculated experience modifier will be accepted provided there is a final calculated experience modifier with applicable year indicated.

**A.8 Attendance of Pre-Proposal Conference**

As an Offeror, did your company attend the pre-proposal conference?

YES  NO

Attendee(s):

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CERTIFICATION

Executed as of this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Offeror: \_\_\_\_\_  
(Full legal name of firm, including DBA, if applicable)

Address: \_\_\_\_\_  
\_\_\_\_\_

City, State, Zip Code: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

**Table A - All Projects in Progress**

	<b>Project Name</b>	<b>Owner</b>	<b>Owner's Contact Person and Phone Number</b>	<b>Architect</b>	<b>Architect's Contact Person and Phone Number</b>	<b>Contract Amount</b>	<b>Percent Complete</b>	<b>Scheduled Completion Date</b>
1								
2								
3								
4								
5								
6								
Total Value of All Projects in Progress: \$ _____								

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**Table B - All School (K-12 and higher education) projects completed in the past 8 years,  
beginning with projects for LVISD**

	Project Name	Owner	Owner's Contact Person and Phone Number	Architect	Architect's Contact Person and Phone Number	Original Contract Amount	Total Change Order Amount	Final Contract Amount	Date of Completion	% of work completed with Own Forces	Liquidated Damages (Yes or No)
1											
2											
3											
4											
5											
6											
Total Value of All School Projects Completed in the Past 8 Years:    \$ _____											

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**Table C - All Non-School projects completed in the past 8 years**

	Project Name	Owner	Owner's Contact Person and Phone Number	Architect	Architect's Contact Person and Phone Number	Original Contract Amount	Total Change Order Amount	Final Contract Amount	Date of Completion	% of work completed with Own Forces	Liquidated Damages (Yes or No)
1											
2											
3											
4											
5											
6											
Total Value of All Non-School Projects Completed in the Past 8 Years: \$ _____											



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## Table D – Personnel

Key Individuals	Number of years with this Company	Commitment for duration of the Project (Yes or No)	
Project Manager (Name):			Number of school projects this team of key individuals has completed together:  <div style="text-align: right;">_____</div> Number of non-school projects this team of key individuals has completed together:  <div style="text-align: right;">_____</div>
Construction Superintendent (Name):			
Assistant Superintendent (Name):			
Field Engineer (Name):			

List below the names of all school and non-school projects that at least two of the key individuals listed above have worked on together:	
1.	2.
3.	4.
5.	6.
7.	8.
9.	10.
11.	12.
13.	14.
15.	16.
17.	18.
19.	20.
21.	22.
23.	24.

END OF PROPOSAL FORM

## FELONY CONVICTION NOTICE FORM

Statutory citation covering notification of criminal history of contractor is found in the Texas Education Code §44.034.

### FELONY CONVICTION NOTIFICATION

State of Texas Legislative Senate Bill No. 1, Section 44.034, Notification of Criminal History, Subsection (a), states “a person or business entity that enters into a contract with a school district must give advance notice to the district if the person or an owner or operator of the business entity has been convicted of a felony. The notice must include a general description of the conduct resulting in the conviction of a felony”.

Subsection (b) states “a school district may terminate a contract with a person or business entity if the district determines that the person or business entity failed to give notice as required by Subsection (a) or misrepresented the conduct resulting in the conviction. The district must compensate the person or business entity for services performed before the termination of the contract”.

THIS NOTICE IS NOT REQUIRED OF A PUBLICLY-HELD CORPORATION

I, the undersigned agent for the firm named below, certify that the information concerning notification of felony convictions has been reviewed by me and the following information furnished is true to the best of my knowledge.

**VENDOR'S NAME:** \_\_\_\_\_

**AUTHORIZED COMPANY OFFICIAL'S NAME:** \_\_\_\_\_

A. My firm is a publicly-held corporation, therefore, this reporting requirement is not applicable.

**Signature of Company Official:** \_\_\_\_\_

B. My firm is not owned nor operated by anyone who has been convicted of a felony.

**Signature of Company Official:** \_\_\_\_\_

C. My firm is owned or operated by the following individual(s) who has/have been convicted of a felony.

Name of Felon(s): \_\_\_\_\_  
(attach additional sheet if necessary)

Details of Conviction(s): \_\_\_\_\_  
(attach additional sheet if necessary)

**Signature of Company Official:** \_\_\_\_\_

# LAGO VISTA INDEPENDENT SCHOOL DISTRICT SUBCONTRACTOR/SUPPLIER DISCLOSURE FORM

Lago Vista ISD requires that offerors disclose all proposed subcontractors/suppliers, to ensure that work is performed by firms meeting all the requirements in the Contract Documents. Please provide the requested information listed below for each subcontractor and supplier included in Proposal. If proposed subcontractor will be performing work specified in the Contract Documents where minimum qualifications are listed in the Project Manual, Offeror must provide qualification information for that subcontractor as an attachment to this form demonstrating compliance.

Name of Offeror: \_\_\_\_\_

Name of Subcontractor: \_\_\_\_\_

Subcontractor Scope: \_\_\_\_\_

Dollar Value of Contract (Bid Price) \$ \_\_\_\_\_

Name of Subcontractor: \_\_\_\_\_

Subcontractor Scope: \_\_\_\_\_

Dollar Value of Contract (Bid Price) \$ \_\_\_\_\_

Name of Subcontractor: \_\_\_\_\_

Subcontractor Scope: \_\_\_\_\_

Dollar Value of Contract (Bid Price) \$ \_\_\_\_\_

Name of Subcontractor: \_\_\_\_\_

Subcontractor Scope: \_\_\_\_\_

Dollar Value of Contract (Bid Price) \$ \_\_\_\_\_

Name of Subcontractor: \_\_\_\_\_

Subcontractor Scope: \_\_\_\_\_

Dollar Value of Contract (Bid Price) \$ \_\_\_\_\_

Name of Subcontractor: \_\_\_\_\_

Subcontractor Scope: \_\_\_\_\_

Dollar Value of Contract (Bid Price) \$ \_\_\_\_\_

BY SIGNATURE OF THE AREA BELOW, OFFEROR REPRESENTS THAT ALL SUBCONTRACTORS/SUPPLIERS ARE LISTED ABOVE AND MEET THE MINIMUM REQUIREMENTS FOR PERFORMANCE OF THE WORK AS INDICATED IN THE CONTRACT DOCUMENTS.

Name of Authorized Offeror Representative: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

- 
1. FAILURE TO COMPLETE THIS FORM MAY RESULT IN THE DISQUALIFICATION OF YOUR BID/PROPOSAL.
  2. ALL INFORMATION PROVIDED IS SUBJECT TO VERIFICATION.

## **SUSPENSION AND DEBARMENT CERTIFICATION**

Federal Law (A-102 Common Rule and OMB Circular A-110) prohibits non-federal entities from contracting with or making subawards under covered transactions to parties that are suspended or debarred or whose principals are suspended or debarred. Covered transactions include procurement contracts for goods or services equal to or in excess of \$25,000 and all nonprocurement transactions (e.g., subawards to subrecipients).

Contractors receiving individual awards of \$25,000 or more and all subrecipients must certify that their organization and its principals are not suspended or debarred by a federal agency.

Before an award of \$25,000 or more can be made by your firm, you must certify that your organization and its principals are not suspended or debarred by a federal agency.

I, the undersigned agent for the firm named below, certify that neither this firm nor its principals are suspended or debarred by a federal agency.

VENDOR'S NAME: \_\_\_\_\_

Signature of Company Official: \_\_\_\_\_

Date Signed: \_\_\_\_\_

Printed name of company official signing above: \_\_\_\_\_

**SECTION 00 52 00 - CONTRACT BETWEEN OWNER AND CONTRACTOR**

This Contract dated this \_\_\_\_ day of \_\_\_\_, 2021 is between \_\_\_\_\_ (“Owner”) and \_\_\_\_\_ (“Contractor”) and is binding among and between these parties as of the date of the Owner’s signature, and constitutes the Owner’s Notice to Proceed to the Contractor to commence with the scope of work described in this Contract.

**RECITALS**

1. The legal address for the Owner and for the Contractor and the addresses for delivery of Notices and other project documents are as follows:

Owner: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_  
Telephone: \_\_\_\_\_ FAX: ( \_\_\_\_\_ ) \_\_\_\_\_

Contractor: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_  
Telephone: \_\_\_\_\_ FAX: \_\_\_\_\_  
Contractor’s License # \_\_\_\_\_ FEIN/SSN \_\_\_\_\_

**PROJECT IDENTIFICATION**

2. The Project is identified as:

PROJECT NAME: \_\_\_\_\_  
SITE ADDRESS: \_\_\_\_\_  
*Street Address*  
*City* \_\_\_\_\_ *State* \_\_\_\_\_ *ZIP Code* \_\_\_\_\_  
*Site Telephone* \_\_\_\_\_ *Site Fax* \_\_\_\_\_

GENERAL PROJECT DESCRIPTION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The Project Name indicated above is required to be shown for identification purposes on all project-related material and documents including, but not limited to Notices, Change Orders, Submittals, Requests For Information, Requests for Quotes, Field Directives, Meetings Minutes, Correspondence, Schedule of Values and Certificate for Payment, Test Reports, and other related material.

3. After negotiated bidding, the Contactor is awarded this Contract to perform the Work described by the Contract Documents for the above-described project (“the Project”).

## THE CONTRACT

---

THEREFORE, in consideration of the Recitals set forth above, and good and valuable consideration as set forth below, the parties agree as follows:

1. **STATEMENT OF WORK:** The Contractor shall furnish all labor, equipment, and materials and perform all Work for the Project in strict accordance with the Contract Documents.

2. **CONTRACT DOCUMENTS:** This Contract shall consist of the following:

- this Contract Between Owner and Contractor
- General Conditions of the Construction Contract (included in the Project Plans and Specifications as Section 00 72 00)
- the Owner’s Project Plans and Specifications, dated \_\_\_\_\_;
- Addenda and Clarifications issued for the Project, as applicable;
- Proposal Form submitted by Contractor for the Work including Lump Sum and Unit Price Costs, dated \_\_\_\_\_.
- Exhibits (as specified below):

\_\_\_\_\_  
\_\_\_\_\_  
All of these documents are incorporated herein by reference, and their use shall be governed by the General Conditions.

3. **TIME FOR COMPLETION:** The Work shall be commenced on a date to be specified in a written order of the Owner and shall be Substantially Complete within \_\_\_calendar days of Owner’s receipt of this fully-executed Contract (which constitutes the Owner’s Notice to Proceed).

4. **COMPENSATION TO BE PAID TO THE CONTRACTOR:** The Owner agrees to pay to the Contractor, and the Contractor agrees to accept, as just and adequate compensation for the performance of the Work in accordance with the Contract Documents the sum of \_\_\_\_\_ dollars (\$\_\_\_\_\_).

5. **PAYMENTS:** The procedures for establishing a Schedule of Values for the Work, for requesting monthly progress payments for Work in place, and for requesting payments for properly stored materials are stated in the General Conditions.

6. **CONTRACTUAL CLAIMS:** Any contractual claims shall be submitted in accordance with the contractual dispute procedures set forth in the General Conditions and the Supplemental General Conditions, if any, attached to this Contract.



IN WITNESS WHEREOF, the parties hereto on the day and year written below have executed this agreement in three (3) counterparts, each of which shall, without proof or accountancy for the other counterparts, be deemed and original thereof.

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Owner

By: \_\_\_\_\_  
Signature in ink                      Date

By: \_\_\_\_\_  
Signature in ink                      Date

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Attest: \_\_\_\_\_  
Signature in ink                      Date

Attest: \_\_\_\_\_  
Signature in ink                      Date

Name: \_\_\_\_\_  
(Print)

Name: \_\_\_\_\_  
(Print)

## **SECTION 00 72 00 - GENERAL CONDITIONS OF THE CONTRACT**

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1. GENERAL PROVISIONS
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  - 1.2 Correlation and Intent
  - 1.3 Ownership and Use of Drawings, Specifications and Other Instruments of Service
2. RESPONSIBILITIES OF THE ARCHITECT/ENGINEER
  - 2.1 Owner/Engineer Relationship
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3. RESPONSIBILITIES OF THE CONTRACTOR
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  - 3.2 Conditions Affecting the Work
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  - 3.4 Permits, Fees and Responsibilities
  - 3.5 Patents, Copyrights and Licenses
  - 3.6 Construction Schedule
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  - 4.1 Award of Subcontracts for Portions of the Work
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## 1. Article 1. GENERAL PROVISIONS

### 1.1 DEFINITIONS

- A. "Agreement" means LVISD's Agreement between Owner and Contractor for Construction.
- B. "LVISD" or "Owner" means the Lago Vista Independent School District of Travis County, Texas.
- C. "Engineer" means the person or organization designated to perform the functions of Engineer for this Contract, and identified in the Schedule of Special Conditions hereto, or in a separate writing signed by a Contracting Officer.
- D. "Change Order" means a written amendment to the contract mutually agreed to by the Owner and Contractor that is generally based on a Change Order Request.
- E. "Change Order Request" means description, design documents, and cost and time of installation for a change in the Contract to be included in a Change Order.
- F. "Claim" means, as between the Owner and the Contractor, an assertion that the party making the claim is entitled, as a matter of right, to an adjustment in the Contract Amount, and/or the Contract Time, or is otherwise entitled to payment or damages. With regard to third persons, including subcontractors, a claim is an assertion of entitlement to payment or damages.
- G. "Contract" means the Contract Documents that form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Engineer and Contractor, or between the Owner and a subcontractor.
- H. "Contract Amount" or "Proposal" means the amount identified in the Contract as the sum of the Cost of the Work and the Contractor overhead and profit, subject to adjustment as provided in the Contract Documents. The term Contract Amount shall have the same meaning as "Contract Sum" or "Contract Price."
- I. "Contract Documents" consist of the (i) Agreement, (ii) Special Conditions (if any), (iii) Supplemental Conditions (if any), (iv) Owner's General Conditions of the Contract for Construction, (v) Owner's Notice of Prevailing Wage Rates and Benefits Compliance, (vi) Drawings, and Specifications, (vii) Owner's Solicitation Documents and the Contractor's response, to the extent not modified by the other Contract Documents, and any attachments and exhibits to any of the foregoing, and Modifications issued after execution of the Contract. In the event of a conflict between two or more of the Contract Documents, each shall prevail over the other in the order of preference listed above, unless otherwise provided by the terms of the Contract Documents. In the event of a conflict between the Drawings and the Specifications, the provisions of Section 1.2.B. shall apply.
- J. "Contract Time" means the time provided in the Contract Documents for substantial and final completion of the Work.
- K. "Contracting Officer" means a person authorized to bind Owner in matters relating to the Contract; specifically, the President of the Board of Trustees of LVISD, the Superintendent of Schools of LVISD, the Chief Financial Officer of LVISD, the Director of Facilities of LVISD, or such other person as may be authorized by resolution of the Board of Trustees of LVISD to exercise the functions of a Contracting Officer for this Contract.

- L. The "Contractor" means "Contractor", "Proposer", or "Offeror" as identified in the Contract Documents.
- M. "Cost of the Work" shall mean the actual cost of all Work provided by Contractor under the Contract which is subject to payment or reimbursement by Owner, unless otherwise provided in the Agreement.
- N. "Day" means a calendar day unless the context indicates otherwise or the term "business day" is used. A business day shall mean weekdays but exclusive of Federal holidays.
- O. "Drawings" means the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams. The term "Drawings" does not include shop drawings.
- P. "Final Completion" means the date the Contract has been fully performed by the Contractor (except for the Contractor's responsibility to correct defective or nonconforming Work, and to satisfy other requirements, if any, which necessarily survive final payment), and a final Certificate for Payment approved by the Owner has been issued by the Engineer.
- Q. "Modification" is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, or (3) a written order for a minor change in the Work issued by the Engineer or Owner.
- R. "Person" means an individual, sole proprietorship, corporation, limited liability company, partnership, limited partnership, or other entity.
- S. "Personal property" means any property that is not real estate.
- T. "Preconstruction" or "Preconstruction Phase" means the period after execution of the Contract but prior to the commencement of construction.
- U. The "Project" is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.
- V. The "Project Manual" is a volume assembled for the Work which may include the bidding requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.
- W. "Samples" means physical examples furnished by the Contractor to illustrate materials, equipment or workmanship, and to assist in the establishment of standards by which the Work will be judged.
- X. "Shop Drawings" means drawings, diagrams, schedules, and other data, which are prepared for the Work by the Contractor or any subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work. "Product Data" means illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- Y. "Solicitation Documents" means the documents issued by Owner to solicit construction services, including the Request for Bids, Request for Competitive Sealed Proposals, Request for Qualifications, the Instructions, the Forms, any Drawings, Specifications or other documents or information referred to therein, and all Addenda.

- Z. "Solicitation Process" means the process by which the Owner advertises for and selects the Contractor for the performance of services and the Work.
- AA. "Specifications" means that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.
- BB. "Subcontractors" are those persons or organizations having a contract with the Contractor or another subcontractor to (i) perform labor, (ii) supply materials or equipment, or (iii) fabricate materials or equipment off-site.
- CC. "Submittals" means shop drawings, product data, and samples as defined in Article 3, Section 3.7A and B herein, and any other documents or items required to be submitted by Contractor to Engineer or Owner under the terms of the Contract Documents or in connection with the Contract.
- DD. "Substantial Completion" is that stage of completion, short of final completion, at which the Work, or a discrete portion thereof, is usable by the Owner for the purpose for which it is intended (any necessary Certificate of Occupancy having been obtained), and at which, in order to obtain possession and control of the Work or the particular discrete portion, it is advantageous to the Owner to assume the burden of maintenance and risk of loss thereof.
- EE. The "Work" means the construction and services defined in the Agreement and required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services to be provided by the Contractor to fulfill the Contractor's obligations and labor, materials, equipment and services provided or to be provided by subcontractors, sub-subcontractors, material suppliers, or any other entity for whom the Contractor is responsible under or pursuant to the Contract. The Work may constitute the whole or part of the Project.

Any terms used in the General Conditions which are not expressly defined herein, or in the other Contract Documents, or which do not have a specific meaning inferable from the context in which they are used, shall have the meanings normally ascribed to them in the construction industry, particularly as those terms are used and understood in Lago Vista, Texas or in the location where the Work is performed.

## 1.2 CORRELATION AND INTENT

- A. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by any one Contract Document shall be as binding as if required by all. Omissions from the Drawings or Specifications, or the misdescription of details of Work which are evidently necessary to carry out the intent of the Drawings and Specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the Work, but they shall be performed as if fully and correctly set forth and described in the Drawings and Specifications. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable therefrom as being necessary to produce the intended results. In the event Contractor has any questions or concerns regarding the Drawings or Specifications, or the completeness, adequacy or constructability of any of the design documents, or if Contractor believes that there is an error or inconsistency in any of the design documents, Contractor shall notify Owner and Engineer as soon as possible, and shall request clarification or additional information from Engineer.

- B. In the case of an inconsistency between Drawings and Specifications, or within either document, and not clarified by addendum, or responses to requests for information, the better quality or greater quantity of Work described shall be provided in accordance with the Owner's interpretation.
- C. Organization of the Specifications and arrangement of Drawings shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of what is to be performed by any trade.
- D. Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.
- E. The Specifications and the accompanying Drawings are the property of Owner and shall be returned to Owner upon request at the completion of the Work. The Contractor may retain one record set.
- F. Time is of the essence in this Contract.

### 1.3 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

- A. The Drawings, Specifications and other documents, including those in electronic form, prepared by the Engineer and the Engineer's consultants are Instruments of Service through which the Work to be executed by the Contractor is described. Neither the Contractor nor any subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by the Engineer and the Engineer's consultants who shall be deemed the authors of them and will retain the rights provided in the Agreement between Owner and Engineer. All copies of Instruments of Service, except the Contractor's record set, shall be suitably accounted for to the Engineer and Owner, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Engineer and the Engineer's consultants, and copies thereof furnished to the Contractor, are solely for use with respect to this Project. The Contractor, subcontractors and material or equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Engineer and the Engineer's consultants appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this authorization shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Engineer and the Engineer's consultants. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Engineer's or Engineer's consultants' copyrights or other reserved rights.
- B. Contractor shall restrict its Work to the designated areas of the Project site, and any other work areas which Contractor is permitted to use by Contract or lease. Contractor shall not trespass onto the property of any other person or conduct Work in areas prohibited by Owner. Contractor shall not permit vehicles, debris, materials or equipment to be placed or stored on the property of a third party or within public rights of way, unless Contractor has obtained a permit, license or other written permission to do so, or is otherwise complying with applicable law. In using easements or rights of way, Contractor shall conform to all applicable usage requirements established by law or the documents creating the easement or right of way.

## 2. Article 2. RESPONSIBILITIES OF THE ENGINEER



## 2.1 OWNER/ENGINEER RELATIONSHIP

- A. All formal communications from the Contractor to Owner in connection with the Contract shall be in writing addressed to the attention of the Owner's Contracting Officer, with a copy to Owner's designated project manager ("Owner's Project Manager"), shall reference the Contract by project name and number, and shall be transmitted in duplicate. Any or all of the Owner's formal communications to Contractor will be issued by the Owner or through the Engineer.
- B. The Owner's Project Manager does not have the authority to execute Change Orders or agree to changes in the Work which affect the Contract Amount or the Contract Time. These changes must be approved by the appropriate Contracting Officer.
- C. The Engineer shall advise and consult with the Owner as is necessary for the proper administration of the Project.
- D. The Contracting Officer may delegate any part of his respective functions hereunder, but the Contractor will be notified in writing of any such delegation and the extent thereof.

## 2.2 CONTRACT ADMINISTRATION

- A. Engineer will perform all obligations under the Agreement between Owner and Engineer, including those set forth below. The Engineer will inspect the Work for general compliance with the Contract Documents. The Engineer will initiate Change Order Requests and evaluate the Contractor's proposed cost and related time. The Engineer will conduct inspections to determine the date or dates of Substantial Completion and the date of Final Completion. The Engineer will review, upon receipt from the Contractor, the as-built drawings, written warranties, owner's manuals and related documents required by the Contract. The Engineer will review requests for payment submitted by Contractor and will make recommendations to Owner on payment.

## 3. Article 3. RESPONSIBILITIES OF THE CONTRACTOR

### 3.1 SUPERVISION AND DUTY

- A. Contractor will provide all labor, equipment, and materials necessary to perform the Work in accordance with the terms of the Contract Documents and will supervise the performance of such Work and perform the other obligations set out in the Contract Documents within the time periods provided therein. Contractor will perform all Work in a good and workmanlike manner, free from negligence and defects in labor and materials, and in conformance with all applicable federal, state and local laws and the Contract Documents. The Contractor shall give adequate attention to the faithful prosecution and completion of this Contract and shall keep on the Project site at all times, skilled subcontractors and laborers sufficient in number and expertise to perform the Work in accordance with the Contract Documents, and within the Contract Time. Contractor shall be responsible for the performance and services of all subcontractors, suppliers, and persons providing labor or materials for the Work in connection with the Contract, and the acts and omissions of such persons in the performance of the Work shall be deemed to be those of Contractor.
- B. The Owner will furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site to the extent provided in the Agreement or otherwise agreed to by Owner and Contractor in writing. Owner shall decide what surveys, soil analyses and other studies by consultants are to be performed in accordance with the Work and the scope of such consulting services and shall provide Contractor with the results of all such surveys, studies and analyses, provided

however that Owner does not warrant or guarantee the accuracy or completeness of any information so provided. Contractor shall have the full responsibility for determining the location of all utilities. Contractor shall confirm the location of each utility shall excavate and dispose of each on-site utility and shall cap each off-site utility as required by the Work and as may be included in the Specifications. The Contractor shall make available the results of any site investigation, test borings, analyses, studies or other tests conducted by, or in possession of the Contractor or any of its agents. The Contractor represents that it is generally familiar with the Project site. The Contractor shall exercise special care in executing subsurface work in proximity of known subsurface utilities, improvements and easements. Nothing in this subsection shall be read or construed as limiting the responsibilities of the Contractor or its subcontractors pursuant to the terms of these General Conditions, or under other terms of the Contract.

- C. The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Engineer in the Engineer's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.
- D. Except as provided in the Contract Documents to the contrary, direct communications between Owner and Contractor that affect performance or administration of the Contract shall be made or confirmed in writing by Contractor with copies forwarded to Engineer.
- E. The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe or may otherwise be objectionable, the Contractor shall give timely written notice to the Owner and Engineer and shall not proceed with that portion of the Work without further written instructions from the Engineer. If the Contractor is then instructed by Owner to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Contractor shall not be responsible to Owner for any resulting loss or damage unless caused by the negligence or intentional misconduct of Contractor or persons performing Work under the Contract.
- F. The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its subcontractors.
- G. The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.
- H. All employees and subcontractors of the Contractor shall be qualified by training and experience to perform their assigned tasks. The Contractor shall not use in the performance of the Work or permit to be used any employee or subcontractor who is incompetent, careless, or unqualified to perform the Work assigned to it. Contractor shall engage sufficient workers on the Project at all times to perform the Work in a good and workmanlike manner and in the time periods required by the Contract Documents.
- I. The Contractor agrees that in the performance of the Work called for by this Contract, it will employ only such labor, and engage subcontractors that employ only such labor, with

the requisite skills, expertise and experience to perform the Work required of such persons in a good and workmanlike manner, and who will not delay or interfere with the lawful progress of the Project within the Contract Time, and will be acceptable to and work in harmony with all other workers employed on the Project site or on any other building, structure or other improvement which the Contractor or any other contractors may then be erecting or altering on behalf of Owner.

- J. In the event of a strike or stoppage of work resulting from a dispute involving or affecting the labor employed by the Contractor or any of its subcontractors, Owner, at its option and without demand, may terminate the Contract for convenience unless the Contractor shall remedy the strike or work stoppage or other disruption within twenty (20) calendar days after the dispute arises.
- K. Contractor shall furnish Owner, on request, resumes of Contractor's key personnel involved in the day-to-day Work on the Project.
- L. Contractor will not permit at any time alcohol, controlled substances or firearms to be present at the Project site. No smoking will be permitted in any area of the Project which is enclosed or in the finish-out stage of construction.
- M. Lot lines and permanent benchmarks have been established as shown on the Drawings. The Contractor shall be solely responsible for properly laying out the Work and the Project unless there are errors not reasonably discoverable by Contractor, and for all lines, elevations and measurements for all of the Work executed under the Contract Documents. Contractor shall verify the figures shown on the Drawings before laying out the Work and will be held responsible for all costs resulting from its failure to do so.
- N. The Contractor has the responsibility to ensure that all material suppliers and subcontractors, their agents, and employees adhere to the Contract Documents, and that they order materials on time, taking into account the current market and delivery conditions and times and that they provide materials on time. The Contractor shall coordinate its Work with that of all other persons or entities performing Work on the Project including deliveries, storage, installations and construction utilities. The Contractor shall be responsible for the space requirements, locations, and routing of all materials and equipment required under the Contract Documents. In areas and locations where the proper and most effective space requirements, locations, and routing cannot be made as indicated, the Contractor shall meet with all others involved, before installation, to plan the most effective and efficient method of overall installation.
- O. The Contractor shall employ at the Project site at all times during the progress of the Work individuals able to communicate effectively with the Owner and Engineer, including but not limited to: a competent project manager ("Contractor's Project Manager"), a competent superintendent ("Superintendent") and any necessary assistants to supervise and direct the Work.
  - 1. The list of all supervisory personnel, including the Contractor's Project Manager and Superintendent, that the Contractor intends to use on the Project and a chain-of-command organizational chart shall be submitted to the Owner and Engineer for approval.
  - 2. The Contractor shall not engage supervisory personnel or utilize an organizational structure and chain-of-command other than as approved by Owner and Engineer, and shall not change such form or organizational structure without the written approval of the Owner and Engineer.
  - 3. The Contractor's Project Manager or Superintendent shall represent the Contractor in Contractor's absence and all communications given to the Contractor's Project Manager or Superintendent shall be as binding as if given to the Contractor.

4. The Contractor shall not remove an approved Superintendent from the Work without written, timely notice to Owner of such Superintendent's removal and the proposed replacement having been approved by the Engineer and Owner. Owner and Engineer shall have the right to reasonably require Contractor to remove from the Project any Superintendent or on-site supervisor whose performance is not reasonably satisfactory to Owner and Engineer and replace such Superintendent or on-site supervisor with a Superintendent or on-site supervisor satisfactory to Owner and Engineer.
- P. The Contractor shall provide the Owner and Engineer access to the Work in preparation and progress wherever located at all times.
- Q. Contractor shall, at its sole cost and expense, comply with the provisions of Subsection 1 below regarding criminal history background checks on workers employed in connection with the Work.
1. In accordance with TEC §22.0834, but in any event prior to the date such covered employee enters the Project site, Contractor shall obtain the national or state criminal history record information as required by TEC §22.0834 for each covered employee. The criminal history record information for each covered employee on the Project shall be current as of the date such worker begins work on the Project site. Contractor shall not assign to or allow on the Project site any covered employee who has been convicted of (i) a felony offense under Title 5 of the Texas Penal Code; (ii) an offense or conviction of which a defendant is required to register as a sex offender under Chapter 62 of the Texas Code of Criminal Procedure; (iii) an offense or crime (whether a felony or a misdemeanor) involving moral turpitude, including without limitation theft, bribery, fraud, perjury, sexual offenses, or offenses involving intentional acts of violence toward persons or property; or (iv) an offense under the laws of another state or federal law that is equivalent to an offense under (i), (ii) or (iii) above. Provided, however, Contractor may assign to or allow on the Project site a covered employee if the only convictions reported on the criminal history record information are crimes involving only misdemeanor theft offenses occurring more than seven (7) years prior to the date the worker would commence work on the Project. If during the Project, Contractor or Owner receives updated criminal history record information for a covered employee that includes a disqualifying criminal history under this Subsection 3.1.Q.2, Contractor shall immediately remove such covered employee from the Project site.
    - a. Contractor shall maintain at all times a list of all covered employees on the Project (as updated from time to time by Contractor, the "List of Covered Employees") which contains the following information for each covered employee: (i) full name; (ii) whether Contractor obtained state or national criminal history record information; (iii) the full name of the covered employee's employer, if applicable; and (iv) Texas driver's license or other identification number or such other information as Owner may request from time to time to enable Owner to obtain criminal history record information for the covered employee. The covered employees on the List of Covered Employees shall be grouped by employer.
    - b. Prior to commencement of construction of the Work, Contractor shall deliver to Owner the List of Covered Employees; and (b) Contractor's fully executed written certification on a form provided by Owner certifying that (i) all information on the List of Covered Employees is true and correct in all respects; (ii) Contractor has obtained all required criminal history record information relating to each covered employee on the List of Covered Employees in accordance with TEC §22.0834; and (iii) none of the covered employees on the List of Covered Employees has a disqualifying criminal history under this Subsection.

- c. As the Work progresses, each covered employee on the List of Covered Employees who is no longer employed on the Project shall be marked as "inactive" and the last date of such employee's employment on the Project shall be noted. In addition, each new covered employee employed on the Project from time to time and not included on the most recent List of Covered Employees or previously designated as "inactive" and once again employed on the Project shall be added to the List of Covered Employees and the date of employment or reemployment shall be noted.
  - d. If it is determined that any statement in any Contractor Certification is untrue or misrepresented when made or Contractor otherwise fails to comply with this Subsection, Contractor shall be in material default under the Contract. Further, if it is determined at any time that a covered employee is on the Project site in violation of this Subsection, then, notwithstanding anything contained in Section 13.3.A hereof to the contrary, Contractor shall immediately remove such covered employee with no requirement of written notice from Owner. All Work on the Project performed by the Contractor or any subcontractors shall stop (with no extension of the Contract Time or adjustment in the Contract Amount) until such covered employee is no longer on Owner's property. Owner reserves the right to cause Owner's police or other security personnel to remove such employee from Owner's property.
- R. All workers employed on the Project by the Contractor or a subcontractor shall wear at all times while on the Project site a visible identification badge reasonably acceptable to Owner, provided by the Contractor or subcontractor, as applicable. Each identification badge must include without limitation the name of the worker, a current photograph of the worker, the name of the Contractor, the name of the subcontractor, if applicable, and the name of the Project. Owner may conduct periodic random checks of workers on the Project site to determine compliance with this Section.

### 3.2 CONDITIONS AFFECTING THE WORK

- A. In agreeing to perform the Work within the Contract Time and for the Contract Amount as set forth in the Contract, Contractor acknowledges, represents and warrants to Owner that it has thoroughly reviewed all of the Contract Documents, and has visited and examined the site as to visible surface conditions or conditions ascertainable from the results of any subsurface tests or information provided in connection with the Project, the Contract Documents, and reasonably examined all legal, physical, and other conditions affecting the Work, including without limitation, all soil, subsurface, water, survey and engineering reports and studies delivered to or obtained by the Contractor in connection therewith.
1. Contractor specifically warrants and represents to the Owner that it has by such careful examination of such information and based thereon, satisfied itself as to:
    - a. the nature, location, and character of the Project and the Project site;
    - b. the nature, location, and character of the general area in which the Project is located;
    - c. the conditions prevailing at the Project site, including climactic and weather conditions that are normal for the area, and those that are currently prevailing at the Project site;
    - d. anticipated labor supply and costs;
    - e. sufficiency and completeness of the Contract Documents, including the Drawings and Specifications, and the
    - f. availability and costs of labor, materials, supplies, professional services and equipment, in order to complete the Work in accordance with the Contract Documents, within the Contract Time and for not more than the Contract Amount.

2. Contractor represents that all subcontractors engaged or to be engaged in the performance of the Work will be familiar with the requirements for performance by them of their obligations. The Owner shall not be obligated to make any adjustment in the Contract Time and/or Contract Amount set out in the Contract, due to any failure by the Contractor to perform any of the foregoing examinations or determinations, or any misestimate or miscalculation of Contractor, or any subcontractor or supplier in connection therewith.
- B. Since the Contract Documents are complementary, before starting each portion of the Work, the Contractor shall carefully study and compare the various Drawings and other Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to the Contract, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the Project site affecting it.
1. The Contractor shall notify the Engineer of materials, systems, procedures or methods of construction, either shown on the Drawings or Specifications, that it believes are incorrect, inadequate, obsolete, unsuitable for the purpose intended, or which could have an adverse effect upon installation or completion by others under separate contracts. These services shall be performed during the Preconstruction Phase to the greatest extent possible, but in any event before the commencement of Work affected by such matters.
  2. Any errors, inconsistencies or omissions discovered by the Contractor shall be reported promptly to the Engineer and Owner as a request for information in the form as the Engineer and Owner may require. Any design errors or omissions noted by the Contractor during this review shall be reported promptly to the Engineer and Owner, but it is recognized that the Contractor's review is made in the Contractor's capacity as a Contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents. The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to the Contractor shall be reported promptly to the Engineer and Owner.
  3. All notifications required by this Section 3.2 shall be given no later than five (5) days after Contractor first becomes aware of the problem. If the Contractor fails to perform its obligations under this Section, or performs Work that it reasonably should have known to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Engineer and Owner, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction. In addition, if the Contractor fails to perform the obligations as provided in Subsections B and C, Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.
- C. If the Contractor believes that additional cost or time is involved in the Work because of matters noted during the Construction Phase which could not reasonably have been detected by the Contractor during the Preconstruction Phase, or because of clarifications or instructions issued by the Engineer as a result thereof, the Contractor shall promptly notify Engineer and Owner in writing as soon as possible after Contractor becomes aware of the need for additional time or cost, but in no event later than five (5) days thereafter, and shall subsequently make a request for Change Order as provided in this Contract in order to be entitled to additional compensation or an extension of the Contract Time.
1. Contractor shall not be entitled to any additional time or compensation for matters that it should have reasonably noted during the Preconstruction Phase.

2. If Contractor's claim for additional time or additional cost is approved by Owner, the Contract Time and/or Contract Amount shall be equitably adjusted by Change Order.
- D. Any provision in the Contract Documents to the contrary notwithstanding, nothing in Sections 3.2 B and C shall reduce, diminish, limit or relieve Contractor from its obligations, representations and warranties contained in Section 3.2.A, and the Agreement.

### 3.3 DIFFERING SITE CONDITIONS

- A. The Contractor shall promptly, and before such conditions are disturbed, notify the Owner in writing of:
1. Subsurface or latent physical conditions at the Work site differing materially from those indicated in the Contract Documents, or
  2. Unknown physical conditions at the Work site, of an unusual nature, differing materially from those which could reasonably be anticipated to be encountered at the Project site or generally recognized as inherent in work of the character provided for in the Contract Documents.

Notice must be given to Owner as soon as possible, but in no event later than 5 days after Contractor first becomes aware of the condition.

- B. The Owner and/or the Engineer shall promptly investigate the conditions, and if the Owner finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the Work under the Contract, an equitable adjustment shall be made and the Contract shall be modified by Change Order accordingly.
- C. No claim of the Contractor under this Section 3.3 shall be allowed unless the Contractor shall have given the notice required in Section 3.3.A above.

### 3.4 PERMITS, FEES, AND RESPONSIBILITIES

- A. The Contractor shall, at Contractor's expense as part of the cost of the Work, be responsible for obtaining all necessary licenses, fees, and permits, and for complying with any applicable Federal, State and municipal laws, codes and regulations, in connection with the prosecution of the Work. Contractor shall take proper safety and health precautions to protect the workers, the public, the Work and the property of others. Contractor shall be responsible for all materials delivered and work performed until final completion and acceptance of the entire Work.
- B. The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities applicable to the performance of the Work.

### 3.5 PATENTS, COPYRIGHTS, AND LICENSES

- A. The Contractor shall be responsible for obtaining all consents and licenses required to perform the Work, and to pay all royalties and license fees arising in connection with the Work performed under the Contract Documents.
- B. The Contractor will defend suits or claims for infringement of intellectual property rights, patent rights, or breach of license agreements, and indemnify Owner, the Engineer and their respective officers, members of their governing body, agents and employees against all liability, loss and expense (including attorneys' fees) for such alleged infringement or

breach arising out of the performance of the Contract, or out of the use or disposal by or for the account of Owner of supplies furnished, or construction Work performed under the Construction Documents. These obligations are in addition to any other indemnification obligations provided by the Contract Documents and shall survive termination of the Contract or completion of Contractor's obligations under the Contract as to events occurring prior to such termination or completion.

### 3.6 CONSTRUCTION SCHEDULE

- A. The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Engineer's review and approval a Contractor's Construction Schedule for the Work meeting the requirements set forth in this Section. In no event shall the Construction Schedule be submitted later than the time the Contractor submits its first Estimate for Partial Payment.
- B. The Construction Schedule shall show the dates for starting and completing the various component activities making up the Work, and the logical relationships between them, and shall be in a format and in sufficient detail to permit the Work to be competently managed and its progress monitored. The Construction Schedule shall take account of the time required for the preparation and review of required Shop Drawings and other submittals and the time periods provided in the Contract Documents for review and approval of submissions by Engineer and/or Owner. The Contractor shall use the schedule to plan, coordinate and manage all construction activities.
- C. The Schedule shall be related to the entire Project, and shall provide for Substantial Completion of all of the Work within the Contract Time.
- D. In performing the Work, the Contractor shall comply with the most recent approved Construction Schedule. Contractor shall submit updated schedules monthly thereafter for the review and approval of the Engineer and Owner with each Estimate for Partial Payment, or more frequently if the schedule is impacted by events occurring in connection with the Work. Such submittal is a condition to Owner's obligation to make progress or other payments to Contractor under the Contract. The effect of all Change Orders and the onset of any adverse weather conditions or other events which impact the Schedule or which are cited by Contractor as the basis for a request for a time extension shall be duly noted on the updated Construction Schedule and their effect on the Schedule and the critical path shown. Failure to comply with this requirement may result in a denial of the Contractor's request or claim for an extension of time due to such delays. Contractor shall promptly notify Engineer and Owner as soon as it becomes aware that the Work is lagging behind the time frame shown on the latest approved Construction Schedule, regardless of the cause for such delay, and will notify them of the action that Contractor recommends or will take in order to bring the Project back on schedule, including, but not limited to, acceleration of the Work in accordance with the provisions of the Contract Documents.
- E. Submittal of the Construction Schedule, and successive updates or revisions, is for the information of the Owner and Engineer, to allow them to monitor progress and to permit the coordination of their activities with those of the Contractor. Owner and Engineer shall accept or reject the submittal of a schedule within the same period allowed for review of other submittals, or if no time period is expressly provided, within a reasonable time after receipt. Acceptance of a Construction Schedule, schedule update or revision indicating a completion prior to the end of the Contract Time does not give rise to an acceleration or delay claim by the Contractor for any time outside of the schedule but included in the Contract Time. Similarly, the Owner's acceptance of a Construction Schedule, update or revision, that depicts an event which Contractor asserts as the basis for a delay claim, or a request for a time extension or cost increase, does not constitute an agreement by Owner to such request or claim, and does not relieve the Contractor from pursuing the procedure



for requesting a Change Order, time extension or claim for delay set forth in the Contract Documents. Acceptance of a Construction Schedule, update or revision does not indicate the approval by the Owner or Engineer of the Contractor's proposed sequences and duration. Acceptance of a Construction Schedule update or revision indicating late completion does not constitute the Owner's consent to a late finish, or waive either the Contractor's responsibility for timely completion or the Owner's rights and remedies for the Contractor's failure to do so.

- F. The Contractor shall prepare and keep current, for the Engineer's approval, a separate schedule of submittals which is coordinated with the Contractor's Construction Schedule and allows the Engineer and/or Owner reasonable time to review submittals. It is understood and agreed that in establishing a reasonable time period for review of any submittals or requests, Owner shall be allowed a sufficient time period to submit any matter requiring Board approval to the LVISD Board of Trustees at a regularly scheduled Board meeting.

### 3.7 SUBMITTALS

- A. The Contractor shall review and designate (stamp) its approval and submit, with reasonable promptness and in orderly sequence, all Shop Drawings, Product Data and Samples required by the Contract Documents, or subsequently by the Owner and/or Engineer as covered by a Change Order or Construction Change Directive.
- B. Shop Drawings, Product Data and Samples shall be properly identified, as specified, or as the Engineer may require. At the time of submission, the Contractor shall inform the Engineer in writing of any deviation in the Shop Drawings, Product Data or Samples from the requirements of the Work and of the Contract Documents.
- C. By approving and submitting Shop Drawings, Product Data and Samples, the Contractor thereby represents that Contractor has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so, and that Contractor has checked and coordinated each Shop Drawing, Product Data and Sample with the requirements of the Work and of the Contract Documents.
- D. The Contractor shall submit to the Engineer, with such promptness as to cause no delay in the Work or in the activities of the Owner or of separate contractors, the number of Contractor-approved copies of Shop Drawings, Product Data and Samples required for the Owner's, Engineer's and Contractor's use. The review by the Engineer of the Shop Drawings, Product Data or Samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Engineer in writing of such deviation at the time of submission and the Engineer has given written approval to the specific deviation, nor shall the review of the Engineer relieve the Contractor from responsibility for errors or omissions in the Shop Drawings, Product Data or Samples.
- E. The Contractor shall make any corrections required by the Engineer and shall resubmit the required number of corrected copies of the Shop Drawings, Product Data or new Samples of materials until approved. The Contractor shall direct specific attention in writing to any new revisions other than the corrections requested by the Engineer on previous submissions. In the event Contractor resubmits Shop Drawings, Product Data or Samples of materials more than one time because not previously approved, and Engineer charges Owner for Additional Services for such multiple reviews under the provisions of the Agreement between Owner and Engineer, Contractor shall be responsible for paying for, or reimbursing Owner for, the cost of such Additional Services.

- F. No work requiring a Shop Drawing, Product Data or Sample submittal shall be commenced until the submittal has been reviewed and approved by the Engineer. All such Work shall be in accordance with reviewed and approved Shop Drawings, Product Data and Samples.
- G. The Contractor shall maintain at the site office for the Owner and Engineer, one copy of all reviewed Shop Drawings, Product Data, Samples and similar required submittals. These shall be delivered to the Engineer for submittal to the Owner upon completion of the Work.
- H. The Contractor shall submit all requests for information to the Engineer for resolution.
- I. The Contractor shall maintain at the Project site for the Owner one record copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record field changes and selections made during construction, and one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Engineer and shall be delivered to the Engineer for submittal to the Owner upon completion of the Work as provided in Section 3.9, signed by the Contractor, certifying that they show complete and "as-built" conditions, stating sizes, kind of materials, vital piping, conduit locations and similar matters.

### 3.8 MATERIALS AND WORKMANSHIP

- A. Contractor warrants that all materials and labor provided under this Contract shall be installed and performed in a good and workmanlike manner in accordance with the Contract Documents, and shall be free from defects and deficiencies.
- B. Unless otherwise specifically provided in the Contract, all equipment, material, and articles incorporated in the Work covered by the Contract shall be new and of the most suitable grade for the purpose intended. The Contractor shall furnish to the Engineer for its approval the name of the manufacturer, the model number, and other identifying data and information respecting the performance, capacity, nature, and rating of the machinery and mechanical and other equipment that the Contractor contemplates incorporating into the Work. When required by the Contract or when called for by the Owner or Engineer, the Contractor shall furnish the Engineer, for approval, full information concerning the material or articles the Contractor contemplates incorporating into the Work. When so directed by Owner or Engineer, samples shall be submitted for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, materials, and articles installed or used without required approval shall be at the risk of subsequent rejection.
- C. Engineer shall not call for lead based paint or asbestos containing materials to be used in connection with the Project. No lead based paint and no materials containing asbestos shall be incorporated into the Project. Contractor, subcontractors, and suppliers may be required to certify that these materials were not provided or installed as part of this Contract.
- D. All Work under the Contract shall be performed in a skillful and workmanlike manner. The Owner may, in writing, require the Contractor to remove from the Work any person the Owner deems incompetent, careless, or otherwise objectionable.
- E. Neither custom nor usage of trade shall require Owner to accept materials or workmanship not in strict and complete compliance with the Contract Documents.
- F. Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, electricity and other utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated into the Work.

- G. Should the Contract Documents require Work to be performed after regular working hours or should the Contractor elect to perform work after regular working hours, the additional cost of such Work shall be borne by the Contractor as part of the Contract Amount.
- H. Should the Owner, through no default of Contractor, desire to reduce the Contract Time and authorize overtime, the additional cost (premium portion only) shall be paid by the Owner and the Contract Amount shall be adjusted accordingly, only if such work is authorized in writing by the Owner as a Change Order prior to performance.
- I. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them, or who are disorderly or who fail to observe Owner's rules for Work on the Project site.
- J. The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.
- K. The Contractor shall not damage or endanger a portion of the Work of fully or partially completed construction of the Owner or separate contractors including damage or endangerment by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate Contractor; such consent shall not be unreasonably withheld. Structural members shall not be cut except with written permission of the Engineer. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.
- L. After installation of the Work, Contractor shall carefully fit around, close up, repair, patch and point up such Work to match adjoining surfaces by use of proper tools and materials using workers skilled in the required trades.

### 3.9 AS-BUILT DRAWINGS

- A. During the performance of Work under the Contract, the Contractor shall record and delineate accurately on one set of prints of the Drawings, which will be furnished to Contractor by the Engineer, all changes in such Work which constitute significant departures from the original Drawings. The set of Drawings thus corrected and changed shall show the Work as actually constructed ("As-Built Drawings"). Such As-Built Drawings shall be delivered to the Engineer for review and approval at the earliest practicable date prior to completion of all Work under the Contract, but in any event not later than the date of final acceptance of the completed Work.
- B. The Contractor shall review said As-Built Drawings on site with the Engineer at monthly intervals to verify proper recording of data and shall incorporate such revised Drawings as may be furnished by the Engineer as the job progresses.
- C. The As-Built Drawings shall show sufficient detail to convey, among other pertinent information, the following:
  - 1. Physical dimensions, relation to existing conditions, and horizontal and vertical location of all underground or hidden installations; and
  - 2. All modifications to the Work as recorded in Change Orders.

- D. With the As-Built Drawings, Contractor shall submit manufacturers' literature, including service manuals, schematic diagrams, control diagrams, maintenance charts, parts lists, etc., as required to provide complete equipment operation and maintenance information.

### 3.10 CLEANUP

- A. The Contractor shall keep the Project site and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract, and shall establish a regular maintenance program to minimize accumulation of dirt and dust. Contractor shall promptly remove any dirt or debris resulting from the Work which is on adjacent streets and shall with the consent of adjoining landowners, remove such dirt or debris from adjoining properties.
- B. At Substantial Completion, all interior floors shall be cleaned in accordance with Owner's directions, carpets shall be vacuumed, glass in doors and windows shall be cleaned, countertops, cabinets and other surfaces shall be free from debris, dirt and dust, landscaping shall be neat and plants and grass installed as part of the Work shall be healthy and in good condition, and exterior surfaces and walkways shall be free from dirt and debris. If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.
- C. Upon completion of the Work and before acceptance and final payment will be made, the Contractor shall clean and remove from the Work site all surplus and discarded materials, temporary structures and debris of every kind. Surplus and waste materials removed from the Work site shall be disposed of in accordance with applicable laws and regulations. The Contractor shall remove from and about the Project site the Contractor's tools, construction equipment and machinery, and all spillage and tracking arising from the performance of the Work from such areas.
- D. If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the Project site and surrounding area free from waste materials and rubbish, the Owner may clean up and allocate the cost among those responsible.

### 3.11 WARRANTIES

- A. In addition to all other warranties provided in or pursuant to the Contract Documents, and without limitation or restriction on the rights and remedies of Owner arising in connection with the obligations of the Contractor under the Contract Documents, the Contractor warrants the materials, workmanship and Work to be in conformance with the Contract Documents and to be free from defects in materials and workmanship for a period of two (2) years. Unless (1) the terms of the Contract Documents call for the warranty period to begin at final completion, or (2) Owner expressly agrees to a warranty period for a component of the Work which runs from the date of Substantial Completion of the component, or (3) unless otherwise provided in the Contract Documents or (4) unless otherwise agreed to by Owner and Contractor in writing, the warranty provided by this Subsection 3.11.A will be deemed to run from the date of Substantial Completion of the Work as documented by the Engineer pursuant to the terms of the Contract. The warranty described herein binds the Contractor to repair or replace (at the option of Engineer or Owner) without cost to Owner, any Work that is out of compliance with the Contract Documents and any Work which during the warranty period described herein exhibits defects in workmanship or materials or which malfunctions or fails to work correctly or in the manner intended. The Contractor shall, at Contractor's own expense, correct any such defect or deficiency no later than thirty days after receiving written notice of such defect from the Owner or Engineer, or within such shorter period of time as Owner or Engineer may reasonably request. Contractor shall be obligated as part of its warranty obligation,

to repair or replace any other portion of the Work damaged or destroyed by (i) the non-complying, malfunctioning or defective Work, or (2) the process of repairing or replacing the non-complying, malfunctioning or defective Work. The warranty provided herein will be extended by any work performed by the Contractor (or performed by the Owner or Surety in the event Contractor fails to perform its warranty obligations) in repairing or replacing non-complying, malfunctioning or defective work or materials, so that all repaired or replaced work shall have, in addition to any manufacturer's warranty, a warranty term from Contractor commencing from the date repairs or replacements are completed. In the event Contractor fails to comply with these provisions, Owner shall have, in addition to any other rights and remedies provided by law or the Contract Documents, the right to (i) perform the repair or replacement by its own employees or other contractor and demand reimbursement from Contractor for all amounts incurred by Owner, in which event Contractor shall pay said amounts to Owner within 30 days after demand, and/or (ii) make demand on Surety to perform Contractor's obligations. The Contractor's warranty excludes remedy for damage or defect caused by Owner's abuse, modifications not executed by the Contractor except as authorized herein, improper or insufficient maintenance by Owner, improper operation by Owner, or normal wear and tear and normal usage. If required by the Engineer or Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment used in the Work.

- B. Work not conforming to Contract requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor shall perform all work reasonably required to correct Work with errors, omissions, defects or deviations from what is required by the Contract Documents, at no cost to the Owner.
- C. All warranties required by the Contract Documents shall include labor and materials and shall be signed by the manufacturer and/or subcontractor as the case may be and countersigned by the Contractor. All warranties shall be delivered to the Engineer upon completion of the Work and before the submission of Contractor's Final Estimate for Partial Payment. At the time of final completion of the Work, the Contractor agrees to assign to the Owner any and all manufacturers' warranties relating to materials and labor used in the Work and further agrees to perform the Work in such manner so as to preserve any and all such manufacturers' warranties.
- D. In addition to the foregoing stipulations, the Contractor shall comply with all other warranties referred to in any portions of the Contract Documents, and where warranties overlap, the more stringent requirement shall govern.
- E. The Contractor represents, warrants and covenants to the Owner that it is fully authorized and qualified to enter into the Contract and that if all or any portion of the Work is required by law or by the Contract Documents to be performed by persons with special or specific licensure, certifications, training or qualifications, the employees and/or subcontractors selected to perform such Work shall be, and shall remain, fully licensed, certified, trained and qualified to perform such Work throughout the term of the Contract. Contractor will provide evidence of the same to the Owner upon request.
- F. The provisions of this Section 3.11 shall survive the termination of this Contract, howsoever caused, and no partial payment, or final payment by Owner, nor issuance of a certificate of Substantial Completion nor a certificate of final completion, nor acceptance of occupancy in whole or in part of the Work shall waive or release any of the provisions of this section or constitute an acceptance of defective Work or Work which does not comply with the Contract Documents.
- G. In the event items on the punch list (as defined in Section 8.3 below) at Substantial Completion are not completed within the period fixed by Engineer in the Certificate of Substantial Completion pursuant to Section 8.3.A hereof, the warranty on those items shall

commence on the date of final acceptance of the Work or completion of those items to the reasonable satisfaction of Engineer and Owner, whichever is later.

### 3.12 INDEMNIFICATION

- A. To the fullest extent permitted by applicable law, the Contractor agrees to indemnify, defend and hold harmless Owner, its officers, trustees, agents, employees, and representatives from and against any liability, damages, costs, loss, expenses, claims, actions, proceedings, suits (including counsel fees and other expenses of suit), whether groundless or not, judgments and awards, arising in connection with or related to the performance of Work by Contractor, its employees, any subcontractor, or other person performing services or work on behalf of any of them, including a default by Contractor under the provisions of the Contract Documents or a failure to obtain or maintain insurance required by the Contract Documents. This indemnification shall apply to, but not be limited to, any damage to property or injury (including death) to person (including any damage or injury to property or person or any employee of the Contractor, its subcontractors, Owner, or the Engineer) which may occur or be alleged to have occurred in connection with the performance of this Contract. Contractor shall not be obligated to indemnify any of the indemnified parties against their own negligence; however, Contractor shall be required to defend the indemnified parties regardless of whether the action giving rise to the suit, proceeding, action, claim, damages, loss, cost or expense is determined to be caused in whole or in part by the negligence of one or more parties indemnified hereunder. The Contractor assumes all risk of damage or injury (including death) to the Contractor's own property or person or to the property or person of the Contractor's employees or subcontractors from any cause whatsoever. This indemnification shall survive termination of the Contract or completion by the Contractor of all of its obligations under this Contract, as to events arising prior to such termination or completion.
- B. In claims against any person or entity indemnified under this Section 3.12 by an employee of the Contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this section shall not be limited by a limitation on amount or type of damages, insurance, compensation or benefits payable by or for the Contractor or a subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.
- C. The provisions of this indemnification and all other Indemnification obligations set out in the Contract Documents, shall survive the termination of this Contract, howsoever caused, or completion of the Contract as to events occurring prior to such termination or completion, and no payment, partial payment, nor issuance of a certificate of Substantial Completion nor a certificate of Final Completion nor acceptance or occupancy in whole or in part of the Work shall waive or release any of the provisions of this section or of any other indemnification contained in the Contract Documents.

### 3.13 REPARATIONS FOR DAMAGED PROPERTY, IMPROVEMENTS AND WORK

- A. Should the Contractor cause damage to the property or improvements of the Owner or the work of any separate contractor to the Owner, or to the property of any third party, Contractor shall, upon due written notice by the Owner, separate contractor, or third party, make timely reparations acceptable to the damaged party or parties.

### 3.14 SUBSTITUTIONS OF MATERIALS OR EQUIPMENT

- A. The Owner may refuse to accept substitutions of materials or equipment which were not requested by the Contractor and approved by Owner during the Solicitation Process.

- B. Owner may, in its discretion, agree to accept substitutions of materials or equipment after the Contract has been signed for good cause shown. The Contractor may make substitutions of materials or equipment only with the prior written consent of Owner after evaluation and approval by the Engineer and in accordance with a Change Order. A request for substitution constitutes a representation by Contractor that Contractor:
1. has investigated the proposed product and determined that it is equal or superior in all respects to the specified product;
  2. shall provide identical warranties as those required for the specified product or any extended warranties required by Owner as a condition for approval of the substitution;
  3. shall coordinate installation and make changes to other Work which may be required at no cost to Owner;
  4. waives claims for additional costs or time extension which may subsequently become apparent;
  5. certifies that the proposed product will not affect or delay the approved Construction Schedule; and
  6. shall pay for changes to the design of the building, Work, or any components thereof, including architectural or engineering design, detailing and construction costs caused by or resulting from the requested substitution.

#### **4. Article 4. SUBCONTRACTORS.**

##### **4.1 AWARD OF SUBCONTRACTS FOR PORTIONS OF THE WORK**

- A. The Contractor shall submit to the Engineer and the Owner Contractor's list of proposed subcontractors and material suppliers on the Subcontractor Disclosure Form supplied by Owner or such other form required by Owner. The Contractor shall not contract with any subcontractor until the Engineer and the Owner have concurred with the selection in writing. The Contractor will not be required to contract with any subcontractor or person or organization against which Contractor has an objection. The Contractor shall not make any substitution for any subcontractor or person or organization that has been accepted by the Engineer and the Owner, unless Owner and Engineer are notified in writing of such proposed substitute and the substitute is acceptable to the Engineer and the Owner. In the event of any conflict between this Section 4.1 and the provisions in the Agreement regarding subcontractor selection, the Agreement shall control.

##### **4.2 SUBCONTRACTUAL RELATIONS**

- A. All subcontracts shall be in writing.
- B. Nothing contained in the Contract Documents shall create any contractual relation between Owner and any subcontractor or supplier or any party with whom Owner or any of its subcontractors or suppliers contracts.
- C. By appropriate written agreement, the Contractor shall require each subcontractor, to the extent of the Work to be performed by the subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the subcontractor's Work which the Contractor, by the Contract Documents, assumes toward the Owner and Engineer.

- D. Each subcontract agreement shall preserve and protect the rights of the Owner and Engineer under the Contract Documents with respect to the Work to be performed by the subcontractor, including Owner's rights to terminate for convenience, so that subcontracting thereof will not prejudice such rights. Where appropriate, the Contractor shall require each subcontractor to enter into similar agreements with subcontractors. The Contractor shall make available to each proposed subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the subcontractor will be bound, and, upon written request of the subcontractor, identify to the subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such Contract Documents available to their respective proposed subcontractors.
- E. Each such subcontract shall:
1. require that such Work be performed in accordance with the terms and requirements of the Contract Documents;
  2. require the subcontractor to carry and maintain insurance in accordance with the Contract Documents;
  3. require the subcontractor to furnish such reasonable certificates and waivers as the Owner may request;
  4. require that any subcontractor waive any rights it may have against the Owner for damage caused by fire or other perils covered by property or risk insurance maintained by the Contractor or subcontractor or required to be maintained by the Contractor's subcontractor in connection with the Project.
  5. provide that all warranties provided to Contractor, including material warranties, are fully assignable to the Owner;
  6. provide for contingent assignability of the subcontract as herein provided;
  7. require each subcontractor provide a certificate in writing to Owner that it provides workers compensation insurance coverage for each employee as required by law;
  8. require subcontractor compliance with the prevailing wage rate requirements established by law and the Contract Documents; and
  9. provide that the subcontract is subject to Owner's right to terminate or suspend work on the terms set forth herein.

All provisions required by the Contract to be set out in subcontracts shall be deemed incorporated by reference into each subcontract entered into pursuant to or in connection with the terms of this Contract, as if set out in full. Contractor shall be liable to Owner for any damages resulting from Contractor's failure to comply with the provisions of this Section 4.2.

#### 4.3 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

- A. Each subcontract agreement for a portion of the Work is hereby assigned by the Contractor to the Owner and the Surety; provided, however, that such assignment shall be effective as to Owner only after Owner's written termination of the Contract or of Contractor's right to proceed under terms of the Contract, and acceptance in writing by Owner of the particular subcontract.



## 5. Article 5. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

### 5.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

- A. Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site, and the Contractor shall cooperate fully with such other contractors and Owner's employees and carefully fit Contractor's own Work to such work as directed by the Owner or Engineer.
- B. If the Contractor believes that it has suffered or will suffer delay or additional costs or damages as a result of the work performed by Owner or a separate contractor, the Contractor shall notify Engineer and the Owner in writing as soon as possible, but in no event more than 5 days after Contractor becomes aware of such conditions, in order to give Owner an opportunity to avoid, reduce or mitigate such events. Any claim by Contractor for a time extension or additional costs shall be submitted as a request for Change Order.
- C. When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.
- D. The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedule deemed necessary after a joint review and mutual agreement. Contractor's construction schedule shall reflect such approved construction schedules, as amended from time to time. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised and approved by the Contractor, separate contractors and the Owner.
- E. Time is of the essence of this Contract.

### 5.2 MUTUAL RESPONSIBILITY OF CONTRACTORS

- A. The Contractor shall indemnify Owner and its officers, trustees, employees and agents from all liability, loss or expense (including attorneys' fees) arising from alleged interference with or damage to the work or property of other contractors or Owner by Contractor, its subcontractors, or anyone performing Work under this Contract. This indemnification shall survive termination or completion of the Contract as to events occurring prior to such termination and completion, and shall be in addition to any other indemnification obligations set out in this Contract.
- B. The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Owner's and/or Contractor's construction and operations with theirs as required by the Contract Documents.
- C. If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor, prior to proceeding with that portion of the Work, shall look for and promptly report to the Engineer and Owner any discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Contractor shall notify them no later than five (5) days after it becomes aware of the problem or potential problem. Failure of the Contractor so to

report in a timely manner shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

- D. The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor, to the extent not caused by the fault of the separate contractor. The Owner shall be liable to the Contractor for costs incurred by the Contractor because of delays or defective construction of a separate contractor of Owner, to the extent not resulting from the fault or breach by Contractor or Contractor's subcontractors or suppliers. Each party shall promptly notify the other as soon as it becomes aware of a delay, improperly timed activity or condition of defective construction which could result in damages to the other but in no event later than five (5) days after first becoming aware of the problem. Contractor's claim shall be submitted as a request for a Change Order as provided herein.
- E. The Contractor shall promptly remedy damage caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in the Contract Documents.
- F. The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in the Contract Documents. If such separate contractor initiates legal or any other proceedings against the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor, who shall defend such proceedings at its own expense, and hold harmless and indemnify the Owner, its officers, trustees, agents and employees from any and all Claims, causes of action, damages, loss, liability and expenses arising from Contractor's acts or omissions or the acts or omissions of Contractor's employees, subcontractors or parties for whom Contractor has liability. The Contractor shall pay or reimburse the Owner for all attorneys' fees and court or other costs which the Owner has incurred over and above those paid for directly by the Contractor. These obligations are in addition to all other defense and indemnification obligations under the Contract Documents, and shall survive termination or completion of the Contract.

## **6. Article 6. CHANGES IN THE WORK.**

### **6.1 CHANGE ORDERS**

- A. Owner and Contractor may at any time, without notice to or approval of the Surety, by written Change Order hereto, make changes in the Work, the Contract Amount, the Contract Time, or otherwise modify the Contract.
- B. A Change Order is a written modification of the Contract between the Owner and Contractor, signed by the Owner, the Contractor, and the Engineer, which authorizes a change in the Scope of the Work or an adjustment in the Contract Amount or the Contract Time. Work performed under a Change Order is subject to all provisions of the Contract Documents. The Change Order is developed after the Change Order Request Process is completed. A Change Order will not be deemed fully executed until signed by Owner's Contracting Officer.
- C. All changes in the scope of the Work, the Contract Amount and the Contract Time shall be documented by a Change Order. Only the Contracting Officer has authority to sign and agree to a Change Order on behalf of Owner. Neither the Engineer nor the Owner's Project Manager has the authority to bind the Owner to the terms of a Change Order without the signature of the Contracting Officer.

## 6.2 INTERIM CHANGE AUTHORIZATION

- D. When the Owner determines that changes in the Work must be made promptly in order to prevent damage to the Work in place, to prevent significant delay in the Project or to maintain safety, the Owner may issue an Interim Change Authorization directing the Contractor to proceed with changes in the Work prior to completion of the change order process. The Interim Change Authorization shall provide for the work to be performed on the basis of (1) cost and/or time not to exceed specified amounts, or (2) time and materials basis or (3) a combination thereof.
- E. Upon receipt of the Interim Change Authorization, Contractor shall commence the Work and keep records on the time and cost incurred in the performance of the Work. Contractor shall not be entitled to payment for work performed under an Interim Change Authorization until the Change Order is fully executed.

## 6.5 CHANGE ORDER REQUESTED BY CONTRACTOR

- A. A request for a Change Order may be initiated by the Contractor as provided in this Section.
- B. If the Contractor believes that it will incur additional cost or time because of any written interpretation of the Contract Documents, or any written or oral instruction concerning the execution of the Work issued by the Owner or the Engineer, and constituting a change in the scope or character of the Work, the Contractor must promptly notify the Owner and Engineer of the Contractor's belief before beginning the requested work. Contractor shall provide Owner and Engineer with written notice that there will be a time extension and/or additional cost for the requested Work as soon as possible but in no event later than 5 days after Contractor receives the instructions from Owner or Engineer. In addition, Contractor must provide Owner and Engineer with a written proposal for the time and/or cost of the requested work, and a justification for such additional time or expense, within 15 days after Contractor receives the request for the change in Work.
  - 1. If the Owner determines that the change in the Work should take place, the Owner will initiate the Change Order Request process, which will conclude in either an Agreed Change Order as provided herein.
  - 2. Except for a change in the Work due to an Emergency Condition, as provided in Section 9.9, the Contractor may not commence the requested change in the Work without a signed Change Order or Interim Change Authorization. Contractor shall not be entitled to an increase in the Contract Amount or an extension of the Contract Time if it performs a change in the Work without a signed Interim Change Authorization or Change Order, except as provided in Section 9.9 for an Emergency Condition.
  - 3. Except as herein provided, no order, statement or conduct of an Owner or the Engineer shall entitle the Contractor to an increase in the Contract Time or Contract Amount for work performed.
- C. The Contractor may request a Change Order for damages under the following circumstances only, provided that all notification and other requirements for Contractor's establishment of those rights as provided in the Contract Documents have been met:
  - 1. Unanticipated physical conditions at the site, pursuant to Section 3.3 which the Engineer addresses by means of changes in the Drawings and Specifications, or unanticipated environmental conditions at the site as described in Section 9.7;

2. The existence of errors, omissions and imperfections in the design documents which the Contractor could not reasonably have detected or brought to the attention of the Owner and Engineer in time to correct without a delay in the construction, as provided in Section 3.2;
3. Unexcused Owner delays, including failure of the Owner or the Engineer to take timely actions required under the Contract Documents or to provide information required by the Contractor to proceed with the Work within the time period provided by the Contract, or if no time period is specified, within a reasonable period of time; and subject to the provisions of Section 7.1.C;
4. Delays caused by Owner's separate contractor in performing work on the Project as provided in the Contract in Section 5.1 and Section 7.1.C;
5. Additional cost or delays caused by emergency conditions, not due to the fault of Contractor or anyone for whom Contractor is liable, as provided in Section 9.9; or
6. Any other provision of the Contract that expressly permits Contractor to obtain an adjustment to the Contract Time and/or Contract Amount, in accordance with such provisions.

Contractor's request for a Change Order must be in writing, must describe the events authorizing the adjustment in the Contract Time and/or Contract Amount, and must provide a justification for the amounts requested. Contractor's request for a Change Order must be submitted to Owner within the time period provided by the Contract, or if no time period is provided, then no later than 15 days after the commencement of the event which gives rise to a claim for a Change Order. Contractor's failure to observe the notice requirements set forth in the Contract Documents which are intended to provide Owner with notice of a problem, potential problem or delay and an opportunity to investigate and take action to eliminate or ameliorate the problem, may constitute a failure to mitigate damages affecting the Contractor's right to an adjustment of the Contract Time and/or Contract Amount.

- D. The Contractor may request a time extension for excused delays as provided in Article 7. In order to request an extension of the Contract Time, Contractor must comply with the requirements of Article 7 and submit a Time Extension Request with its payment request, as provided therein.
- E. In evaluating a request for an adjustment of Contract Time in response to Contractor's request for a Change Order, in no event will an extension of time be granted for delays that merely extend the duration of non-critical activities, or which consume only float without delaying the Substantial or Final Completion date. Any extension of the Contract Time granted shall be net of any unexcused delays caused by or due to the fault of Contractor or anyone performing Work under the Contract. No delay days shall be given for time periods in which the delay complained of ran concurrently with excused delays or with other conditions which prevented performance. If more than one cause of delay is asserted for any given time period, only one extension of time will be permitted for such period.
- F. Except as expressly provided in this Section, and subject to the provisions of the Contract Documents, Contractor shall not be entitled to an increase in the Contract Sum or the Contract Time and shall bear full responsibility for all risks affecting the Contractor's cost of performance. Contractor's right and entitlement to adjustments in Contract Time or the Contract Amount are subject to applicable provisions in the Contract Documents establishing Contractor's rights or the waiver of those rights, including, without limitation, those set forth in Article 7. Nothing in this Section is intended to enlarge the Contractor's rights, or to provide the Contractor with additional rights not otherwise granted under the terms of the Contract Documents.

## 6.6 BASIS FOR COMPENSATION FOR CHANGES

- A. **Method of Compensation.** The cost for extra work performed by Contractor or subcontractor will be determined by either (1) an agreed lump sum, (2) an agreed unit price or (3) an actual field cost, as agreed to by Owner. The allowable mark-up percentages for extra work are described in Subsection E below. Extra work will be subject to the following limitations and proposals will be submitted accordingly.
- B. **Lump Sum.** If the lump sum method is used, the Contractor shall submit appropriate supporting data as described herein. For general construction Work, the Contractor shall submit a breakdown consistent with Contractor's pay estimate breakdown, detailed with estimated quantities for both labor and materials. Unless otherwise provided in the Contract Documents, costs for the purposes of Article 6 shall be limited to the following, and the amounts charged shall only be those costs incurred as a direct result of the change in the Work:
1. costs of direct labor, including social security, old age and unemployment insurance, and workers' compensation insurance paid by Contractor. (Labor, as used in this subsection, shall mean labor or services performed by the Contractor's Superintendent and employees under the Superintendent, and all subcontractors and suppliers.);
  2. costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
  3. rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
  4. costs of premiums for all bonds and insurance required by Owner to be provided and permit fees related to the Work; and
  5. field office expense where the Contractor's field office must be maintained primarily on account of the change in the Work.
- C. **Unit Price:** If the unit price method is used, the Contractor shall submit a proposal based on unit prices stated in the Proposal or Contract Documents, or agreed upon by the Contractor and Owner subsequent to Contract Bids.
- D. **Actual Field Cost:** If actual field costs are used, the Contractor shall keep and submit, in such form as the Engineer and Owner may prescribe, an itemized accounting together with appropriate supporting data, of actual costs incurred as described in Article 6 above.
- E. **Allowable Mark-ups.**
1. Unless otherwise expressly provided by the Agreement, the Contractor and subcontractor will be allowed mark-up percentages for overhead and profit for changes in the Work as described below. If the Agreement specifies allowed mark-up percentages for the Contractor, but not for the subcontractors, then the mark-up percentages provided in Subsection E.2 below shall only apply to subcontractors, and the provisions of the Agreement shall control the mark-ups allowed to Contractor. All other provisions of this Subsection E regarding mark-ups, other than the allowed percentages, will apply to both Contractors and subcontractors, unless the Agreement expressly provides other terms and conditions. The percentage mark-up allowed the Contractor and subcontractor shall cover and compensate Contractor for Contractor's profit and overhead, which

include home and field office expense, home and field office personnel, and all other expenses not embraced in the Method of Compensation defined in Article 6. No separate allowance for overhead shall be allowed. Where the Contractor's field office must be maintained primarily on account of the change in the Work, the cost to operate and maintain the same shall be included in the Method of Compensation before calculation of allowable markup. On changes involving deleted items, the Owner shall receive credit for overhead and profit on each deleted item.

2. For Work performed by Contractor's own employees, the maximum allowable mark-up percentage of the actual cost of the Work will be 20% on the first \$10,000, 15% on the next \$10,000 and 10% on the balance over \$20,000; however, the minimum total mark-up shall be not less than \$75. If subcontracted Work is involved, the Contractor will include with Contractor's cost proposal a detailed breakdown for the subcontractor in accordance with the above requirements for the Contractor. For Work performed by a subcontractor's own employees, the subcontractor will be allowed the same mark-up percentages as provided above for the Contractor. The Contractor will be allowed the following mark-up on subcontracted Work being performed by forces other than Contractor's own employees: a maximum of 10% on the first \$30,000, 7 1/2% on the next \$30,000 and 5% on the balance over \$60,000; however, the minimum total mark-up shall be not less than \$75. For subcontracted Work being performed by forces other than the subcontractor's own employees (e.g, subcontracted Work being performed by the employees of a subcontractor to the Contractor's subcontractor), such subcontractor whose employees are not performing the subcontracted Work will be allowed the same mark-up percentages as provided in the immediately preceding sentence for Contractor.
3. If the scope of Work is reduced by the Owner such that the Contractor will not incur costs for deleted Work, the Contractor will credit those costs to the Owner and retain only Contractor's overhead and profit incurred prior to notification of Owner's reduction of the scope of the Work. If extra Work is requested by the Owner, the Contractor will be allowed to add to Contractor's actual costs a percentage as noted above to cover Contractor's overhead and profit. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.
4. Contractor shall submit for payment of the Change Order Work as part of Contractor's regular submission of an Estimate for Partial Payment.

## **7. Article 7. TIME DELAY**

### **7.1 CONTRACTOR EXCUSED DELAYS**

The Contractor's right to proceed or perform the Work shall not be terminated for default, nor the Contractor charged with liquidated damages or other remedies for delay under the Contract Documents, due solely to delays that are excused under the provisions of this Section 7.1. In order to have a delay considered an excused delay under this Article 7, Contractor must provide all notices regarding the delay required by this Article 7 and by any other provisions of the Contract Documents in a timely manner, including the submission of Time Extension Request forms with its Estimate for Partial Payment as required under the terms of the Contract Documents. Any provision of the Contract Documents to the contrary notwithstanding, if Contractor fails to achieve Substantial Completion by the Substantial Completion Date set by the Contract, delays in the completion of the Work occurring after the Substantial Completion Date shall in no event be considered excused delays under this Article 7 and Contractor shall not be entitled to extensions of the Contract Time for any such delays.

A. Contractor Force Majeure.

1. A delay in the completion of the Work that arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor or any subcontractor, and which could not have been prevented through the exercise of reasonable care, including but not restricted to, acts of God, acts of the public enemy, acts of terrorism, acts of federal, state or local government in its sovereign capacity, fires, floods, epidemics, quarantines, restrictions, strikes, freight embargoes, unusually severe weather (excluding delays caused by above-average but not excessive rainfall) as described in B below, or delays of Owner as described in Section C below, shall be considered an excused delay provided that all notices are given as required by the Contract Documents. The failure of the Contractor or any subcontractor to order supplies, materials or equipment when shortages are known or expected, in time to perform the Work in accordance with the Contract Documents, is not an excused delay.
2. Within 5 days from the date that Contractor first becomes aware of a delay or the likelihood of delay from a force majeure event, Contractor must notify Owner, the Contracting Officer and Engineer in writing of the cause of delay and, if possible, Contractor's estimate of duration, to enable Owner to investigate and document the cause and duration of the delay. The Contractor shall submit with each Estimate for Partial Payment a "Time Extension Request" form (provided by the Owner) documenting any requests for Contract time extension. If Contractor fails to provide the notice required by this subsection, and Owner is unable to adequately verify the cause or duration of the delay, or the impact of the force majeure event on the construction schedule, the delay will not be considered excused.

B. Delay for Weather Conditions.

1. The Contract Time set out in the Contract Documents, including Substantial Completion Date and Final Completion Date, are deemed to include normal weather conditions at the Project site. The Contractor may be entitled to an excused delay due to unusual and severe weather conditions if the weather conditions are (i) excessive and severe for the period of time, (ii) could not have been reasonably anticipated, (iii) had an adverse effect on the scheduled construction, and (iv) Contractor reasonably performed other Work on the Project in place of the scheduled work and still incurred a delay in the construction schedule. In order to be entitled to a delay on this basis, Contractor must provide Owner and Engineer with notice of the delay (as provided herein) and (ii) data substantiating the claim, including weather information issued by the National Oceanic and Atmospheric Administration ("NOAA") for the City in which the Project is located (or if such information is not available for the Project location, then for the closest City) which shows that the weather conditions were in excess of those that are normal for the site, and job logs that indicate impacted work and estimated affect of the weather. Unless the parties agree to a different method of determining weather conditions, weather information produced by NOAA will be used to determine normal and abnormal weather conditions at the Project site.
2. In order to be entitled to a Time extension due to weather conditions, Contractor must provide Owner and Engineer with notice of the adverse condition and its impact on the construction schedule as soon as Contractor becomes aware that a delay will or is likely to occur, to enable Owner to investigate and document the conditions, but in no event later than 5 days after the date of the commencement of the weather condition giving rise to the claim for the delay. The Contractor shall

submit with each Estimate for Partial Payment a "Time Extension Request" form (provided by the Owner) documenting any requests for Contract time extension. If Contractor fails to provide the notice required by this subsection, and Owner is unable to adequately verify the cause or duration of the delay, or the impact of the weather condition on the construction schedule, the delay will not be considered excused.

C. Delay Caused by Owner.

1. If the Contractor is delayed at any time in the construction of the Work through no fault of Contractor or any subcontractor, by an act of the Owner or Engineer (other than an excused delay), or of a separate contractor employed by the Owner (other than an excused delay), then the Contractor shall promptly notify the Owner and Engineer, in writing, of such delay, to enable Owner and/or Engineer to take action to reduce or eliminate the delay. Contractor must notify Owner and Engineer in writing as soon as possible after it becomes aware of the condition that it believes has caused or will be likely to cause a delay, but in no event later than 5 days after it becomes aware of such condition. Contractor's failure to do so will constitute a failure to mitigate damages. Owner shall not be liable for damages or delays for the period before notice of the delay is given to Owner.
2. The Contractor shall submit with each Estimate for Partial Payment a "Time Extension Request" form (provided by the Owner) documenting any requests for Contract time extension. Owner's proper exercise of any of its rights or remedies under the Contract Documents, including, but not limited to, remedies of suspension of the Work or requirement for correction or re-execution of any defective Work, shall not under any circumstances be construed as constituting a failure to mitigate damages. Owner shall not be liable for damages or delays for the period before notice of the delay is given to Owner.

7.2 OWNER EXCUSED DELAYS

- A. Owner shall not be deemed in default in its obligations under this Contract, nor shall Contractor be entitled to remedies, rights or damages as a result of a delay by Owner in the performance of its obligations under the Contract as a result of one or more of the following: unforeseeable causes beyond the control and without the fault or negligence of the Owner, its officers or employees, including but not restricted to, acts of God, acts of the public enemy, acts of terrorism, acts of federal, state or local government acting in its sovereign capacity, fires, floods, epidemics, quarantines, restrictions, strikes, freight embargoes, unusually severe weather, or acts of Engineer or its consultants or their respective employees or separate Contractors, at any time arising from unforeseeable causes beyond the control and without the fault or negligence of such parties, or delays caused by Contractor or any subcontractor. A delay described in this Section 7.2.A shall constitute an event of force majeure applicable to Owner.
- B. Owner shall use reasonable efforts to notify Contractor promptly after it becomes aware of the occurrence of an event giving rise to a delay. If Owner's performance is delayed through an event constituting an excused delay, Owner shall be entitled to an equitable extension of time in which to perform its obligations.



### 7.3 CONTRACTOR REMEDIES FOR DELAY

- A. In the event of an excused delay under Section 7.1 A, B or C. Owner will provide Contractor with such reasonable extension of the Contract Time as may be equitable, provided that all conditions for obtaining an extension are met, unless Owner determines to require acceleration of the Work, as provided in Section 7.3.C. The time extension will be set out in a Change Order as provided in Article 6. Any such extension of the Contract Time shall be net of any unexcused delays caused by or due to the fault of Contractor or anyone performing Work under the Contract, (including the financial condition of the Contractor or any subcontractor).
- B. Any provision of the Contract Documents to the contrary notwithstanding, it is expressly agreed that the extension of the Contract Time (or payment for acceleration of the Work as provided in Section 7.3.C) shall be Contractor's sole remedy for any delay unless the same shall have been caused by acts of the Owner which are a direct and unavoidable cause of damage to Contractor, and then only to the extent that such acts continue after Contractor's written notice to Owner of such delay as provided in Section 7.1 C.1 and Owner is not prevented from correcting the delay due to an event of force majeure.
- C. Any provision in the Contract Documents to the contrary notwithstanding, in the event Contractor would be entitled to an extension of the Contract Time under the provisions of the Contract Documents, Owner shall have the right, instead of awarding additional time, to require Contractor to accelerate the Work, as provided in Section 13.2, and Owner shall pay Contractor for the reasonable additional costs incurred by Contractor that are attributable to such acceleration, as provided by Change Order.

### 7.4 OWNER REMEDIES FOR DELAY

- A. Liquidated Damages: Time is of the essence in this Contract, it being important that this Project be quickly and timely completed. The Contractor and Owner acknowledge the difficulty of ascertaining actual damages for delay in performance, and therefore the Contractor and Owner understand and agree that for each and every day the Work or any portion thereof shall remain substantially incomplete after the Substantial Completion Date set by the Contract, Owner shall be entitled to liquidated damages as described in the Agreement. Liquidated damages may be withheld by Owner from amounts due to Contractor, or if not so withheld in full or in part, such amounts owing will be payable to Owner within 30 days after demand by Owner.
- B. Acceleration of the Work: In addition to any other rights and remedies available to Owner under the Contract Documents or available at law or equity, in the event the Work has been delayed due to unexcused delay by Contractor, or otherwise due to the fault of Contractor, its subcontractors, or anyone providing Work under this Contract, Owner may direct that the Work be accelerated by means of overtime, additional crews, additional shifts and/or resequencing of the Work in order to bring it back on schedule and/or to maintain it there as described in Section 13.2.

## 8. Article 8. PAYMENTS AND COMPLETION

### 8.1 PROGRESS PAYMENTS

- A. Promptly following execution of the Contract by Owner and the Contractor, the Contractor shall submit a Schedule of Values to the Engineer for approval, consisting of a breakdown of the Contract Amount, itemizing material and labor for the various classifications of the Work and the costs allocated thereto, prepared in such form and supported by such data to substantiate its accuracy, as the Owner may require. The breakdown will be used as a basis for reviewing the Contractor's Estimate for Partial Payment. The Contractor's

Estimate for Partial Payment must be submitted on the Estimate for Partial Payment Form provided by Owner with five (5) signed original counterparts. A Time Extension Request form shall be submitted with each Estimate for Partial Payment whether or not an extension of time is requested. If an extension of time is requested, Contractor must state in the Time Extension Request the number of days requested and the cause for delay.

- B. Upon submission by the Contractor of its Estimate for Partial Payment accompanied by written invoices, and such other documentation as Owner or Engineer may require to substantiate the payment requested and Work performed, as well as any other documentation required to be submitted under the Contract Documents, Owner shall make monthly payments as the Work progresses, based upon percentage of the completion of the Work as determined from the Estimate for Partial Payment submitted by the Contractor, approved by the Engineer and approved by a Contracting Officer. The Contractor shall not submit the first Estimate for Partial Payment sooner than thirty days after commencement of the Work. No payment shall be made to the Contractor until all post-proposal or post-bid information, as applicable, has been submitted, approved and performance of Work begun. Payments will be made in accordance with the following provisions:
1. for Contract amounts of \$400,000 or more, payments will be made to the Contractor by the Owner within fifteen days from the date the Estimate for Partial Payment is approved by the Engineer and Contracting Officer (if the Estimate is undisputed and in proper order). Payment will be made in the amount of ninety-five percent (95%) of the value of all labor and materials fixed in proper position and all materials and equipment properly stored on the premises or other locations for which the Owner has expressed written approval.
  2. for Contract amounts less than \$400,000, payments will be made to the Contractor by the Owner within fifteen days from the date the Estimate for Partial Payment is approved by the Engineer and Contracting Officer (if the Estimate is undisputed and in proper order). Payment will be made in the amount of ninety percent (90%) of the value of all labor and materials fixed in proper position and all materials and equipment properly stored on the premises or other locations for which the Owner has expressly approved in writing, subject to the following provisions: (a) 10% of each Estimate shall be retained until the Work is 50% complete based on the percentage that the value of all labor and materials fixed in proper position bears to the total value of the Work under the Contract; (b) after the Work is over 50% complete, Owner may, at its sole discretion, reduce the amount of retainage to 5%, provided that the Contractor is not in default, the Contract is bonded, the Work is on current schedule and there is no controversy regarding the acceptability of the workmanship and materials or products, and provided further that the Engineer determines that the Work is in conformance with the Contract Documents. If any of these conditions do not continue, Owner may, at its sole discretion, reinstate the full 10% retainage until such time as the above conditions are met, in addition to any other rights and remedies it may have under the Contract.
- C. When the Project is Substantially Complete, the retained amount may, at the Owner's discretion, be reduced to only that amount necessary to assure full performance of the Contract.
- D. Owner shall not be bound to make Partial Payments if Performance and Payment Bonds are not required under the Contract. Owner shall have the right to make payment only on final completion of the Work.
- E. All amounts withheld by Owner as retainage and which are payable to the Contractor after Owner has deducted out liquidated damages and/or any other amounts to which Owner is

entitled under the terms of the Contract, are payable to the Contractor with the final payment.

- F. All material and work covered by Partial Payments made shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which Payments shall have been made, or the restoration of any damaged work or as a waiver of the right of Owner to require strict fulfillment of all of the terms of the Contract. Payments to the Contractor shall not be construed to release the Contractor or its sureties from any obligation under this Contract.

## 8.2 PAYMENTS WITHHELD OR NULLIFIED

- A. The Engineer or Owner may withhold or nullify any progress payment or final payment in whole or in part, to the extent necessary in the Engineer's or Owner's reasonable opinion to protect the Owner from loss for which the Contractor is responsible, including loss because of:
1. defective Work not remedied;
  2. third party claims threatened, filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
  3. failure of the Contractor to make payments properly to subcontractors or for labor, materials or equipment;
  4. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Amount;
  5. damage to the property of Owner, a third party, or another contractor;
  6. reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
  7. failure to carry out the Work in accordance with the Contract Documents; or
  8. failure to provide any submittals or documentation required under the Contract Documents in a timely manner, including a Schedule of Values, Construction Schedule, and Time Extension Request.
- B. If the above reasons for withholding payment are removed, and any defaults cured in a timely manner and prior to Owner exercising other rights or remedies, and no other condition of default or reason for withholding, offsetting or nullifying payment exists, then payment will be made for amounts previously withheld. To the greatest extent permitted by applicable law, Owner shall not be deemed to be in breach of the Contract Documents by reason of the withholding of any payment which Owner is entitled to withhold pursuant to, or which it withholds in good faith in reliance on, any provision of the Contract Documents, and no interest shall accrue in connection with the withheld payment(s) determined to have been properly withheld. In determining whether amounts claimed for payment by Contractor, or any subcontractor, are in dispute, Owner shall have the right to consider amounts withheld under this provision, due to Contractor fault or in an attempt to protect the public from loss or overpayment of public funds, to be amounts in dispute. Nothing in this Section or in the Contract Documents shall limit or reduce any right of the Owner to offset amounts owed to Contractor by amounts Contractor owes to Owner, or to exercise any other rights or remedies provided by law or equity.

- C. Undisputed payments not paid when due shall bear interest at the rate and in accordance with the provisions set forth in Section 2251.021, *et seq.*, of the Texas Government Code.

### 8.3 SUBSTANTIAL COMPLETION

- A. When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Engineer for review and approval a comprehensive list of items to be completed or corrected and a schedule for completion ("Contractor's List") which is acceptable to the Owner.
  - 1. The Contractor shall proceed promptly to complete and correct items on the Contractor's List, including any items added to the Contractor's List by the Engineer during the Engineer's review or the period thereafter prior to final acceptance of the Work (the Contractor's List and any items added by Engineer prior to final acceptance of the Work are collectively called the "punch list").
  - 2. Failure to include an item on the punch list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Upon receipt of the Contractor's List, the Engineer will make an inspection to determine whether the Work or designated portion thereof is substantially complete.
  - 3. If, upon such inspection, the Engineer determines that the Work or a designated portion thereof is not substantially complete, Contractor shall be charged with the cost to Owner of any and all additional inspections deemed necessary by the Engineer or Owner to determine that the Work or a designated portion thereof is substantially complete.
  - 4. When the Work or designated portion thereof is determined by Owner to be substantially complete, the Engineer will prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance and shall fix the time within which the Contractor shall finish all items on the punch list accompanying the Certificate.
  - 5. If no time period for completion of the punch list is fixed in such Certificate of Substantial Completion, the Work, including all items on the punch list, must be completed within sixty (60) days after Substantial Completion.
  - 6. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion or the Contract Documents.
  - 7. The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate.
- B. Upon Substantial Completion, Section 5 of the "Certification of Compliance" form [TEA §61.101(d)] must be executed by the Contractor and returned to the Engineer, who will forward same to Owner.

## 8.4 FINAL ACCEPTANCE AND PAYMENT

- A. The Contractor shall notify the Engineer when the Work, including the punch list, is complete, and the Engineer will arrange a final inspection with the Contractor and the Owner.
1. If, upon inspection, the Engineer or Owner determines that the Work, including the punch list, is not complete, Contractor shall be charged with the cost to Owner of any and all additional inspections deemed necessary by the Engineer or Owner to determine that the Work, including the punch list, is complete. If Contractor fails to complete the Work, including the punch list, within the time period for completion of the punch list fixed by the Engineer in the Certificate of Substantial Completion or within sixty (60) days after Substantial Completion, whichever is later, Owner may charge Contractor with the reasonable cost to Owner of additional Engineer services (including Project site visits) deemed necessary pending Contractor's completion of the Work, unless such services relate only to new Work authorized by Change Order following the date of Substantial Completion.
  2. Upon completion of the Work, including the punch list, in full and strict conformity to the Contract Documents, final acceptance of the Work by a Contracting Officer, and Contractor's satisfaction of its obligations for final payment, Owner shall pay the unpaid balance of the Contract Amount less any sum that may be necessary to settle any claim Owner may have against the Contractor or that may be necessary to settle any outstanding obligations of the Contractor or of its subcontractors arising out of or incidental to the performance of the Contract or which is otherwise withheld pursuant to the terms of the Contract Documents.
  3. Neither the Certificate of Substantial Completion, nor final acceptance payment, nor any other provisions in the Contract Documents, shall relieve the Contractor of its obligations under the Contract Documents or under any warranty.
- B. Prior to final payment and as a condition thereto, Contractor shall furnish Owner with all warranties, instructions, lien releases, documents and other submittals required by the Contract Documents, or otherwise required by Engineer or Owner, a notarized Certificate of Satisfaction of Bills, stating that all bills and claims for labor, materials, equipment and otherwise, connected with the Work for which the Owner or the Owner's property might be responsible or encumbered, shall have been satisfied, or will be fully satisfied out of the final payment within 30 days of Contractor's receipt of such payment.
1. Contractor shall also furnish a release of all claims against Owner, in form satisfactory to Owner, whether of Contractor, subcontractors or of others, arising under and by virtue of the Contract.
  2. In addition, the Contractor shall deliver to Owner all As-Built Drawings and one (1) Owner's Manual containing all Contractor and subcontractor names, addresses and phone numbers; all warranties and plumbing, electrical, and communication equipment/fixture product data; all special equipment product data; and all parts lists and operating, maintenance, and service manuals.
  3. In the event there are any (1) subcontractors, suppliers or other third-party claims against Contractor which will not be satisfied by Contractor after final payment is made, or (2) any claims which are not currently subject to dispute resolution procedures set out in the Contract but which Contractor does not deem to have been settled, the Contractor shall notify Owner in writing no later than the time of final Application for Payment. Owner shall have the rights with regard to such claims provided for in the Contract Documents. If Contractor does not expressly

notify Owner of any and all specific claims against Owner which are not already pending and subject to negotiation or other claim resolution procedure as provided by this Contract, and which Contractor deems unsettled, then Contractor waives all such claims by Contractor's acceptance of final payment.

- C. Owner shall not be obligated to make any progress payment or the final payment if the Surety objects to such payment or refuses to consent to such payment, or withdraws its consent to such payment. If requested by the Surety, or if Owner determines that it is advisable to do so, Owner shall have the right to make payments jointly to Contractor and Surety, or to Contractor and any subcontractor, supplier, or other person claiming payment for labor or materials. In the event of a dispute between Contractor and/or the Surety or persons performing labor or supplying materials, or to a third party claimant, as to whom payment of amounts held by Owner should be made, Owner shall have the right to interplead the funds held by it in the registry of a court of competent jurisdiction, and to withhold from the amounts held by Owner all attorney's fees and other costs incurred by Owner in connection with such dispute.
- D. The Contractor shall arrange for a reasonable amount of instruction for the Owner's employees and representatives to insure proper operation of all equipment furnished.
- E. Acceptance of final payment by the Contractor shall constitute a waiver of claims by the Contractor against Owner except those previously made in writing and identified by Contractor as unsettled at the time of final Estimate for Partial Payment. Final payment is considered to have taken place when Contractor or any of its representatives negotiates Owner's final payment check, whether labeled final or not, for cash, or deposits the check in any financial institution. The provisions of this Article shall not be altered, reduced or diminished by any notation, statement or reservation written on the check by Contractor in connection with its endorsement. Such notification, statement, or reservation shall be deemed an invalid attempt by Contractor to amend the provisions of this Contract without the Owner's written consent.

## **9. Article 9. PROTECTION OF PERSONS AND PROPERTY**

### **9.1 SAFETY PRECAUTIONS AND PROGRAMS**

- A. The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. It shall be the duty and responsibility of the Contractor and all of its subcontractors to be familiar with and comply with all requirements of Public Law 91-596, 29 U.S.C. §§ 651 *et seq.*, the Occupational Safety and Health Act of 1970, (OSHA) and all amendments thereto, and to enforce and comply with all applicable provisions of OSHA. Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for safety of persons or property to protect them from damage, injury or loss and shall erect and maintain all necessary safeguards for such safety and protection.
- B. Contractor shall notify owners of adjacent property and of underground facilities and utility owners when prosecution of the Work may affect them or their facilities, and shall cooperate with them in the protection, removal, relocation and replacement of their facilities and/or utilities.
- C. Contractor shall be responsible for coordinating the exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the site in connection with laws and regulations.

- D. Contractor shall be responsible for initiating and holding regular safety meetings at least once per week.
- E. On or before the 10<sup>th</sup> day of each calendar month, Contractor shall submit to Owner a monthly report in a form provided by Owner stating the total man-hours worked at the Project site by Contractor and all subcontractors each day during the immediately preceding calendar month. For purposes of completing this monthly man-hour report, Contractor's daily observation at the Project site of the number of workers and hours worked is sufficient.
- F. With respect to each injury on the Project site, Contractor shall furnish to Owner a copy of Contractor's first report of injury report within one (1) business day after Contractor's filing of such report with its insurance company, but in no event later than the sixth (6<sup>th</sup>) day after the date of such injury. In addition, Contractor shall notify the LVISD/TASB Safety Department by telephone at 512-791-7662 immediately upon the occurrence of an injury at the Project Site.

## 9.2 EMERGENCY FACILITIES

- A. Contractor shall maintain at all times free access to fire lanes and emergency and utility control facilities such as fire hydrants, fire alarm boxes, utility valves, manholes, junction boxes, etc.

## 9.3 SAFETY OF PERSONS AND PROPERTY

- A. The Contractor shall take all reasonable precautions for safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to:
  - 1. students, faculty, employees and visitors at any school where construction or renovation activities are being conducted and neighboring property owners;
  - 2. persons performing Work on the Project site and other persons who may be affected thereby;
  - 3. the Work and all materials and equipment to be incorporated therein, whether in storage or off site, under care, custody or control of Contractor or any of its subcontractors; and
  - 4. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, fences, roadways, structures and utilities not designed for removal, relocation or replacement in the course of construction.
- B. The Contractor shall comply with all applicable laws, ordinances, rules, regulations, policies of the Owner's Board of Trustees and lawful orders of any public authority having jurisdiction for safety of persons or property or to protect them from damage, injury or loss.
- C. For all excavation of trenches (as that term is defined in the regulations under the United States Occupational Safety and Health Act, 29 CFR Section 1926.650), as shown in the Solicitation Documents or Contract Documents, Contractor shall comply in all respects with the detailed plans and specifications set out in applicable OSHA regulations, and all other applicable laws. Specific Trenching Requirements, of the regulations of the Occupational Safety and Health Administration. Contractor shall assume full responsibility for compliance with the Occupational Safety and Health Administration regulations pertaining to trench safety systems. Contractor will be responsible for completion of additional detailed plans and specifications for trench safety to the extent that such detailed plans

and specifications are necessary to supplement the provisions of these General Conditions.

- D. The Contractor shall designate a responsible member of Contractor's organization at the site whose duty shall be prevention of accidents and who has suitable training and experience to competently perform this function. This person shall be the Contractor's Superintendent, unless otherwise designated in writing by the Contractor to the Owner.

#### 9.4 SCHOOL SAFETY REQUIREMENTS

- A. When Work is to be performed at a Project site in which school activities are being conducted, Contractor shall take special care, and shall require its subcontractors, and all persons performing Work at the site to take special care, to protect the safety and welfare of the students, teachers, employees, and visitors at the school, and to perform the Work with as little disruption to the learning environment and school activities as possible.
- B. When Work is to be performed at a Project site where school activities are being conducted, it is expressly understood and agreed that Contractor's and any subcontractor's employees and other persons performing Work at the Project site shall not engage in any inappropriate interaction of any nature whatsoever with students, teachers, employees and visitors at the school, including talking, touching, staring, or in any way contributing to a hostile or offensive environment. It is further expressly understood and agreed that there is to be no fraternization between Contractor's and any subcontractor's employees, and other persons performing Work at the site, and students, teachers, employees and visitors at the school. There shall be zero tolerance for violations of these provisions.
- C. The possession or use of tobacco products, alcoholic beverages, illegal drugs, and firearms or weapons on Owner's property is prohibited at all times, twenty-four hours a day. There shall be zero tolerance for violations of this provision.
- D. Contractor, subcontractors, and all other persons performing Work in connection with the Project shall strictly observe (i) all school bus safety laws and other written requirements, (ii) speed limits in the vicinity of the Project site, including, without limitation, school speed limits, and (iii) any posted speed limits on the Project site established by Owner. Contractor shall require strict compliance with this provision.
- E. Contractor, subcontractors and all other persons performing Work at the Project site shall use only such access to the site and facilities as are designated by Owner, and shall comply with all other rules and requirements established by Owner for use or occupancy of the Project site.
- F. Owner shall have the right to require the immediate removal from the Project site of any person performing Work who violates the provisions of this Section 9.4, and to prohibit such person from being allowed to perform Work at the Project site in the future.
- G. A Contractor who fails to enforce compliance with the provisions of this Section 9.4, or who suffers or allows an employee, subcontractor or other person performing Work at the Project site to violate any of these provisions, shall be in breach of this Contract.
- H. Contractor shall prominently post at the job site these requirements and any other rules or regulations required by law or established by Owner for the safety and protection of students, teachers, school employees and visitors or for the performance of Work at the Project site. Such rules or requirements shall constitute a part of the requirements under the Contract Documents for the performance of the Work, and the Contractor's failure to observe or enforce these requirements shall constitute a default under the Contract.



## 9.5 LOCATION AND PROTECTION OF UTILITIES

- A. Notwithstanding any other provisions of the Contract, the Contractor shall be solely responsible for location and protection of any and all public lines and utility customer service lines in the Work area. Locations of utilities shown on plans are approximate only and do not necessarily indicate all utilities that may be encountered during construction or their exact location. Failure of a utility to be indicated or an incorrect location on information provided to Contractor by Owner or Engineer does not relieve the Contractor of responsibility to determine the locations of all lines and utilities and protect utility lines as provided herein. The Contractor shall notify "One Call" (1-800-344-8377), and exercise due care to locate and to mark, uncover or otherwise protect all such lines within the limits of construction and any of the Contractor's work or storage areas. Upon request, the Owner shall provide such information as known about the location and grade of water, sewer, gas, telephone, electric and other utilities in the work area, but such information shall not relieve the Contractor's obligation hereunder, which shall be primary and not delegable.

## 9.6 ASBESTOS

- A. Contractor will not commence Work until Contractor has received from Owner information identifying the location(s) of asbestos containing materials within the areas of the Work at the Project site.
- B. In the event the Contractor encounters on the site material reasonably believed to be asbestos which has not been rendered harmless, the Contractor shall immediately stop work in the area affected and report the condition to the Owner and Engineer in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Contractor if in fact the material is asbestos and has not been rendered harmless. The Work in the affected area shall be resumed, by written agreement of the Owner and Contractor, in the absence of asbestos or when it has been rendered harmless.
- C. The Contractor shall comply with all applicable provisions and requirements of federal, state and local laws and regulations on removal and/or encapsulation of asbestos in public schools, including 15 USCA sections 2641 *et seq.*; 40 CFR part 763; TEX. REV. CIV. STAT. art. 4477-3a; and 25 TEX. ADMIN. CODE § 295.31 *et seq.* as the same may be modified or amended from time to time or superseded by other laws.
- D. Remediation or removal of asbestos-containing materials shall only be conducted in accordance with all applicable laws, and performed by a licensed or certified asbestos abatement contractor. Such person must maintain insurance, including environmental liability insurance, in accordance with the requirements set forth herein.
- E. Contractor shall not knowingly install asbestos or asbestos containing materials into the Work.

## 9.7 HAZARDOUS SUBSTANCES

- A. Prior to commencement of the Work, Owner will provide all reports in its possession or control relating to the environmental condition of the Project site and Contractor shall be responsible for determining whether any environmental condition impacts the Contractor's Work, and for promptly notifying Owner and Engineer of any such impact. Contractor shall notify Owner and Engineer in writing as soon as possible, but in no event later than 5 days after Contractor becomes aware that hazardous materials, or suspected hazardous materials are located on the Project site or in connection with the Work and that such materials may impact the Contractor's Work. Contractor shall not disturb asbestos-containing materials or any environmental condition, unless such Work is within the scope

of services to be performed by Contractor, and is performed in accordance with applicable law by duly licensed or certified professionals.

- B. If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a hazardous material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Engineer in writing. In the event the Contractor encounters on the site material that Contractor knows, or reasonably believes to be a hazardous substance which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and Engineer in writing.
- C. The Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. When the material or substance has been rendered harmless, Work in the affected area shall resume. If Work is delayed by hazardous materials that were not known to be present at the Project site, the Contract Time and/or Contract Amount shall be equitably adjusted by Change Order in accordance with the provisions of the Contract, provided the hazardous material or substance or clean-up requirements were not caused by Contractor or any subcontractor or supplier, or person for whom Contractor is liable and notice of the conditions was timely given to Owner as provided herein.
- D. Contractor agrees that it shall not transport to, use, generate, dispose of or install at the Project site any hazardous substance (as defined herein), except in accordance with applicable Environmental Laws. Further, in performing the Work, the Contractor shall not cause any release of hazardous substances into, or contamination of, the environment, including the soil, the atmosphere, any water course or ground water, except in accordance with applicable Environmental Laws. In the event the Contractor engages in any of the activities prohibited in this Section, to the fullest extent permitted by law, the Contractor hereby indemnifies, defends and holds harmless Owner and all of its officers, trustees, directors, agents and employees from and against any and all claims, damages, losses, causes of action, suits and liabilities of every kind, including but not limited to, expenses of litigation, court costs, punitive damages and attorneys' fees, arising out of, incidental to or resulting from the activities prohibited in this Section.
- E. For purposes of this Contract, the term "hazardous substance" or "hazardous materials" shall mean and include, but shall not be limited to, any element, constituent, chemical, substance, compound or mixtures, which are defined in or included under or regulated by any local, state or federal law, rule, ordinance, by-law or regulation pertaining to environmental regulation, contamination, clean-up or disclosure, including with limitation. The Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), The Resource Conservation and Recovery Act ("RCRA"), The Toxic Substances Control Act ("TSA"), The Clean Water Act ("CWA"), The Clean Air Act ("CAA") and The Marine Protection Research and Sanctuaries Act ("MPRSA"), the Occupational Safety and Health Act ("OSHA"), The Superfund Amendments and Reauthorization Act of 1986 ("SARA"), or other state superlien or environmental clean-up or disclosure statutes, including all state and local counterparts of such laws (all such laws, rules and regulations being referred to collectively as "Environmental Laws"). It is the Contractor's responsibility to comply with this Section based on the law in effect at the time its services are rendered and to comply with any amendments to those laws, for all services rendered after the effective date of any such amendments.

## 9.8 CONTRACTOR'S SAFETY PLAN GUIDELINES

- A. The Contractor shall provide a written Safety Plan for the Project that will provide a safe environment for all workers, and which complies with, but is not limited to, the following guidelines. The Contractor is responsible for reviewing the specific requirements of the Contract, analyzing the planned methods of operation, and incorporating any additional specific or unique safety requirements in the written plan. The Contractor is solely responsible for ensuring that all applicable safety regulations are addressed as part of the Safety Plan. Prior to commencement of any Work on the Project site (i) the Contractor shall deliver a copy of the Safety Plan to Owner, and (ii) the Safety Plan must be in place and fully operational.
- B. General Provisions -- The Safety Plan for the Project shall include, but not be limited to, the following elements:
  - 1. references to all OSHA requirements and other applicable Federal, State and local safety laws, rules and regulations;
  - 2. evacuation plans as may be required;
  - 3. emergency response procedures;
  - 4. identification of the Contractor's safety manager and all other designated individuals responsible for administering the Safety Plan;
  - 5. safety provisions developed by the Contractor for its normal operation of construction activities or any specific provisions being employed for special construction activities; and
  - 6. all other provisions necessary to properly protect all workers, the school population, and the Owner's employees and representatives carrying out their normal activities and duties at the Project site.

## 9.9 EMERGENCIES

- A. In an emergency affecting safety of persons or property, where Contractor does not have time to contact the Owner's Project Manager or Engineer, or where such persons cannot be reached, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation and/or extension of time claimed by the Contractor on account of its response to an emergency that is not due to Contractor fault or negligence of Contractor or persons performing the Work on Contractor's behalf shall be determined by Engineer and Owner as provided under the provisions of this Contract regarding Change Orders.

## 9.10 OFFSITE WORK

- A. The Contractor and its subcontractors shall utilize appropriate safety measures in performing such offsite work in public ways and sidewalks including, without limitation, obtaining and establishing adequate traffic barriers and installing appropriate signage, having sufficient trained personnel to direct vehicular and pedestrian traffic and hiring police as required to properly and safely conduct such Work. Such measures shall be designed so as to allow the Contractor and its subcontractors to properly carry out the required work in public ways and sidewalks while minimizing safety problems and disruption to the public using such public ways and sidewalks, all in compliance with applicable laws and regulations.

## Article 10. INSURANCE AND BONDS

### 10.1 REQUIRED INSURANCE COVERAGE

- A. Contractor shall provide insurance coverages and comply with the terms described in Subsections 10.1 through 10.6 (and 10.7 and/or 10.8 if applicable) for all Work required by the Contract through the end of the warranty period (with the exception of Builders' Risk, which is required only until all of the Work is finally complete and accepted by Owner). Contractor shall also maintain any extended coverage required herein for insurance coverage authorized to be provided on a claims made basis.
- B. Contractor shall require each subcontractor to provide the insurance coverage described in Subsection 10.4 in accordance with the provisions of Subsections 10.1 and 10.2, and to provide the certificate of coverage for worker's compensation insurance described in Subsection 10.4. Subcontractors performing environmental remediation or abatement or transportation of hazardous materials must provide the insurance required in Subsections 10.3 through 10.7 (except that Builders' Risk shall not be required if not available for the services performed by such subcontractor) and must comply with Subsections 10.1 and 10.2. Subcontractors performing professional services as described in Subsection 10.8 must comply with the insurance coverage required by such subsection and with Subsections 10.1 and 10.2. All required insurance must be provided through the end of the warranty period (with the exception of Builders' Risk, which is required only until all of the Work is finally complete and accepted by Owner). Subcontractors must maintain such other insurance as Contractor may require and any extended coverage required herein for insurance coverage authorized to be provided on a claims made basis.
- C. The required insurance must be provided prior to the commencement of services or Work under the Contract, and must be provided at all times throughout the term of the Contract, as herein provided.
- D. Contractor shall require each subcontractor to maintain commercially reasonable insurance coverage in connection with the Project as well as the insurance specifically required herein.
- E. The Contractor's and any subcontractor's failure to comply with any of these provisions constitutes a breach of contract by the Contractor which entitles Owner to pursue the rights and remedies set forth in the Contract Documents if the Contractor does not remedy the breach within ten days after receipt of notice of breach from Owner.

### 10.2 GENERAL REQUIREMENTS

- A. Contractor shall carry insurance in the types and amounts specified herein, which shall include coverage for items owned by Owner in the care, custody and control of Contractor prior to and during construction and warranty period.
- B. Contractor must complete and forward a Certificate of Insurance on the form provided or approved by Owner and associated endorsements to the Owner before the Contract is executed as verification that Contractor and subcontractors have the coverage required below. Contractor and subcontractors shall not commence Work until the required insurance is obtained and until such insurance has been reviewed and approved by Owner. Maintenance of insurance by the Contractor and approval of insurance by Owner shall not relieve or decrease the liability of Contractor hereunder and shall not be construed to be a limitation of liability on the part of Contractor. Contractor must also complete and forward a Certificate of Insurance to Owner whenever a previously identified policy period has expired as verification of continuing coverage. Contractor must provide the Certificate of

Insurance to Owner showing the extended or replacement coverage, prior to the date for expiration of the policy or policies shown on the Certificate of Insurance held by Owner.

- C. Contractor's and subcontractor's insurance coverage is to be written by companies licensed to do business in the State of Texas at the time the policies are issued and shall be written by companies with A.M. Best ratings of A VII or better unless otherwise approved by the Owner. If an insurance company becomes insolvent or goes into receivership or liquidation, the Contractor or subcontractor affected shall provide the required insurance coverage from an alternate insurer that meets the requirements of this Contract.
- D. All endorsements naming the Owner as additional insured, waivers, and notices of cancellation endorsements as well as the Certificate of Insurance shall indicate the Owner as: Lago Vista Independent School District, 8039 Bar K Ranch Rd, Lago Vista, TX 78645.
- E. If insurance policies are not written for amounts specified below, Contractor or subcontractor shall carry Umbrella or Excess Liability Insurance for any differences in amounts specified. If Excess Liability Insurance is provided, it shall follow the form of the primary coverage.
- F. Owner shall be entitled, upon request and without expense, to receive certified copies of policies and endorsements thereto and may make any reasonable requests for deletion or revision or modification of particular policy terms, conditions, limitations, or exclusions except where policy provisions are established by law or regulations binding upon either of the parties hereto or the underwriter on any such policies.
- G. Owner reserves the right to review the insurance requirements set forth during the effective period of this Contract and to make reasonable adjustments to insurance coverage, limits, and exclusions when deemed necessary and prudent by Owner based upon changes in statutory law, court decisions, the claims history of the industry or financial condition of the insurance company as well as Contractor.
- H. Contractor and subcontractors shall not cause any required insurance to be canceled nor permit any insurance to lapse during the term of the Contract or as required in the Contract Documents.
- I. Contractor and subcontractors shall be responsible for premiums, deductibles and self-insured retentions, if any, stated in policies. All deductibles or self-insured retentions shall be disclosed on the Certificate of Insurance.
- J. Contractor shall provide Owner thirty (30) days written notice of erosion of the aggregate limits below occurrence limits for all applicable coverages indicated within the Contract.
- K. If Owner owned property is being transported or stored off-site by Contractor, then the appropriate property policy will be endorsed for transit and storage in an amount sufficient to protect Owner's property.
- L. The insurance coverages required under this Contract are required minimums and are not intended to limit the responsibility or liability of Contractor, or to prevent Contractor from maintaining greater coverage, or from requiring greater coverage from its subcontractors, should Contractor so choose.
- M. Contractor and each subcontractor shall use a Certificate of Insurance form provided or approved by Owner.
- N. If the Owner is damaged by the failure or neglect of the Contractor or a subcontractor to purchase or maintain insurance as required by the Contract Documents, then the

Contractor shall bear all costs attributable to or resulting from such failure, and shall be liable to Owner for any loss or liability that Owner sustains as a result of such failure or neglect. This obligation shall survive termination or completion of the Contract as to any failure or neglect to obtain or maintain insurance during the period required by the Contract Documents.

### 10.3 BUSINESS AUTOMOBILE LIABILITY INSURANCE.

- A. Provide coverage for all owned, non-owned and hired vehicles. The policy shall contain the following endorsements in favor of Owner:
  - 1. Waiver of Subrogation endorsement in favor of Owner;
  - 2. 30 day Notice of Cancellation endorsement; and
  - 3. Additional Insured endorsement naming Owner as an additional insured.
- B. Provide coverage with a minimum combined single limit of \$1,000,000 per occurrence for bodily injury and property damage. Alternate acceptable limits are \$500,000 bodily injury per person, \$1,000,000 bodily injury per accident and at least \$250,000 property damage liability each accident.

### 10.4 WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE

- A. Coverage shall be consistent with statutory benefits outlined in the Texas Workers' Compensation Act (Title 5, Subtitle A, Texas Labor Code). Contractor shall assure compliance with this Statute by submitting two (2) copies of a standard certificate of coverage (e.g. ACCORD form) to Owner's Representative for every person providing services on the Project as acceptable proof of coverage. The Certificate of Insurance, Section 00650, must be presented as evidence of coverage for Contractor. Workers' Compensation Insurance coverage written by the Texas Workers Compensation Fund is acceptable to Owner. Contractor's policy shall apply to the State of Texas and include these endorsements in favor of Owner:
  - 1. Waiver of Subrogation in favor of Owner; and
  - 2. 30 day Notice of Cancellation.
- B. The minimum policy limits for Employers' Liability Insurance coverage shall be \$500,000 bodily injury each accident, \$500,000 bodily injury by disease policy limit and \$500,000 bodily injury by disease each employee.
- C. Definitions:
  - 1. Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (TWCC 81, TWCC 82, TWCC 83, or TWCC 84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.
  - 2. Duration of the Project - includes the time from the beginning of the Work on the Project until the Project has been finally completed and accepted by Owner and any warranty period has terminated.
  - 3. Persons providing services on the Project ("subcontractor" in §406.096 of the Texas Labor Code) - includes all persons or entities performing all or part of the

services the Contractor has undertaken to perform on the Project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the Project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to the Project. "Services" does not include activities unrelated to the Project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

- D. Workers' Compensation policies shall include waivers of subrogation as against Owner, its officers, trustees and employees.
- E. The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the Project, for the duration of the Project.
- F. The Contractor must provide a certificate of coverage to Owner prior to being awarded the Contract.
- G. If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the Project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with Owner showing that coverage has been extended prior to the expiration date of the coverage.
- H. The Contractor shall obtain from each person providing services on the Project, and provide to Owner:
  - 1. a certificate of coverage, prior to that person beginning work on the Project, so Owner will have on file certificates of coverage showing coverage for all persons providing services on the Project; and
  - 2. no later than seven days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project.
- I. The Contractor shall retain all required certificates of coverage for the duration of the Project and for one year thereafter.
- J. The Contractor shall notify Owner in writing by certified mail or personal delivery, within 10 days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project.
- K. The Contractor shall contractually require each person with whom it contracts to provide services on the Project, to:
  - 1. provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of the Texas Labor Code, Section 401.011(44) for all of its employees providing services on the Project, for the duration of the Project;
  - 2. provide to the Contractor, prior to that person beginning work on the Project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the Project, for the duration of the Project;

3. provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project;
  4. obtain from each other person with whom it contracts, and provide to the Contractor: (a) a certificate of coverage, prior to the other person beginning work on the Project; and (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown the current certificate of coverage ends during the duration of the Project;
  5. retain all required certificates of coverage on file for the duration of the Project and for one year thereafter;
  6. notify Owner in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project; and
  7. contractually require each person with whom it contracts to perform as required by items 1–6 of this Subsection 10.4.L, with the certificates of coverage to be provided to the person for whom they are providing services.
- L. By signing this Contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to Owner that all employees of the Contractor who will provide services on the Project will be covered by workers' compensation coverage for the duration of the Project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the Commission's Division of Self-Insurance Regulation.
- M. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.
- N. The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles Owner to pursue the rights and remedies set forth herein if the Contractor does not remedy the breach within ten days after receipt of notice of breach from Owner.

#### 10.5 COMMERCIAL GENERAL LIABILITY INSURANCE.

- A. The Policy shall contain the following provisions:
1. Blanket contractual liability coverage for liability assumed under the Contract and all contracts relative to the Project.
  2. Completed Operations/Products Liability for the duration of the warranty period.
  3. Independent Contractors coverage.
  4. Aggregate limits of insurance per project endorsement.
  5. Additional Insured Endorsement naming Owner as an additional insured. Such coverage shall provide for Owner to be covered against claims arising out of construction operations and completed operations without further restriction and such coverage shall be endorsed to be primary insurance coverage to Owner.



6. 30 day notice of cancellation, nonrenewal or substantial modification in favor of Owner.
  7. Waiver of Transfer of Recovery Against Others in favor of Owner.
- B. Provide coverage with a minimum combined bodily injury and property damage per occurrence limit of \$1,000,000, and a general aggregate limit of \$2,000,000, completed operations/products aggregate limit of \$2,000,000, and Personal and Advertising Injury limit of \$1,000,000. The policy shall be amended so that the completed operations/products aggregate shall apply on a per project basis.

#### 10.6 BUILDERS' RISK INSURANCE

- A. Contractor shall maintain Builders' Risk Insurance or Installation Insurance on an all risk physical loss form in the Contract Amount. Coverage shall continue until the Work is accepted by Owner. Owner shall be a loss payee on the policy. If off site storage is permitted, coverage shall include transit and storage in an amount sufficient to protect property being transported or stored.

#### 10.7 HAZARDOUS MATERIALS INSURANCE

- A. For projects which include lead abatement instead of asbestos abatement, substitute "lead" for "asbestos" in the following paragraphs. For projects which include lead and asbestos abatement, change the word "asbestos" in the following paragraphs to read "lead and asbestos."
- B. For Work which involves asbestos or any hazardous materials or pollution defined as asbestos, Contractor or subcontractor responsible for the Work shall comply with the following insurance requirements in addition to those specified above:
1. Provide an asbestos abatement endorsement to the Commercial General Liability policy with minimum bodily injury and property damage limits of \$1,000,000 per occurrence and products/completed operations coverage with a separate aggregate of \$1,000,000. This policy shall not exclude asbestos or any hazardous materials or pollution defined as asbestos, and shall provide "occurrence" coverage without a sunset clause. The policy shall provide 30 day Notice of Cancellation and Waiver of Subrogation endorsements in favor of Owner.
  2. Contractor or subcontractor responsible for transporting asbestos or any hazardous materials defined as asbestos shall provide pollution coverage as required by law and the Contract Documents. Federal law requires interstate or intrastate transporters of asbestos to provide an MCS 90 endorsement with a \$5,000,000 limit when transporting asbestos in bulk in conveyances of gross vehicle weight rating of 10,000 pounds or more. Interstate transporters of asbestos in non-bulk in conveyances of gross vehicle weight rating of 10,000 pounds or more must provide an MCS 90 endorsement with a \$1,000,000 limit. The terms "conveyance" and "bulk" are defined by Title 49 CFR 171.8. All other transporters of asbestos shall provide either an MCS 90 endorsement with minimum limits of \$1,000,000 or an endorsement to their Commercial General Liability Insurance policy which provides coverage for bodily injury and property damage arising out of the transportation of asbestos. The endorsement shall, at a minimum, provide a \$1,000,000 limit of liability and cover events caused by the hazardous properties of airborne asbestos arising from fire, wind, hail, lightening, overturn of conveyance, collision with other vehicles or objects, and loading and unloading of conveyances.

3. Contractor shall submit complete copies of the policy providing pollution liability coverage to Owner.

#### 10.8 PROFESSIONAL LIABILITY INSURANCE

- A. For Work or services which require professional engineering or professional survey services to meet the requirements of the Contract, including but not limited to trench safety systems, traffic control plans, and construction surveying, abatement plans, the Contractor or subcontractors responsible for performing the professional services shall provide Professional Liability Insurance with a minimum limit of \$1,000,000 per claim and in the aggregate to pay on behalf of the assured all sums which the assured shall become legally obligated to pay as damages by reason of any negligent act, error, or omission committed with respect to all professional services provided in due course of the Work of this Contract.
- B. Policy shall be occurrence based. If the policy is claims made, the retroactive date shall coincide with the date of this Contract. The Certificate of Insurance shall state that this coverage is claims made and shall give the retroactive date. Coverage shall be continuous or contain an extended reporting period for not less than 12 months beyond the expiration of the warranty period.

#### 10.9 BONDS

- A. Prior to commencement of Work hereunder, Contractor will (if the Contract amount exceeds \$25,000.00) provide a Performance Bond and a Payment Bond, each in the penal amount of 100% of the Contract Amount, conditioned that Contractor will faithfully perform all Contractor's undertakings in this Contract and will fully pay all persons furnishing labor and material in the prosecution of the Work provided for in this Contract. Such Performance Bond and Payment Bond shall be on forms supplied by Owner, issued by a corporate Surety licensed to do business in Texas that is listed on the U.S. Treasury list of approved sureties as provided in Subsection 10.9 B. If any surety upon any bond becomes insolvent, is in receivership, is unable to perform its obligations, or otherwise ceases to do business in this State, the Contractor shall promptly furnish Owner with substitute bonds or equivalent security satisfactory to Owner to protect the interests of Owner and of persons furnishing labor and materials in the prosecution of the Work.
- B. All bonds furnished by Contractor must comply with Chapter 2253, Texas Government Code, including the requirement that such bonds must be executed by a corporate surety licensed to do business in Texas in accordance with Article 7.19-1, Texas Insurance Code. Such bonds shall be on forms supplied or approved by Owner. Surety shall be listed as an approved surety by the U. S. Treasury Department, if the bond amount is \$400,000 or more or as required by Owner in accordance with applicable law. If any surety on any bond becomes insolvent or is unable to perform its obligations thereunder, the Contractor shall immediately furnish replacement bonds or equivalent security acceptable to Owner to protect the interests of Owner and persons furnishing labor and materials to the Project.

#### 10.10 ADDITIONAL BOND REQUIREMENTS IF CONTRACT AMOUNT IS NOT ESTABLISHED WHEN CONTRACT IS SIGNED

- A. If a fixed Contract Amount or Guaranteed Maximum Price has not been determined at the time the Contract is signed by the Contractor, the penal sums of the Performance and Payment Bonds delivered to Owner must each be in an amount equal to the Project Construction Budget, as specified for each project in the Owner's Solicitation Documents. The Contractor shall deliver the bonds to Owner not later than the 5<sup>th</sup> day after the date the Contractor executes the Contract, unless Owner expressly agrees in writing to accept from the Contractor a bid bond or other financial security acceptable to Owner to ensure that

the Contractor will furnish the required Performance and Payment Bonds at the time the Contract Amount or Guaranteed Maximum Price is established.

- B. If Owner agrees to accept a bid bond or other financial security in lieu of Payment and Performance bonds at the time the Contract is executed by Contractor, then Contractor must provide Payment and Performance Bonds each in the amount of 100% of the Contract Amount or Guaranteed Maximum Price, within five (5) days after the Owner and Contractor agree upon the Guaranteed Maximum Price for the Project. If Payment and Performance Bonds are provided by Contractor at the time the Contract is executed based on the estimated project construction budget, and the Guaranteed Maximum Price, when established, is more than the amount of such estimated budget, Construction Manager will provide Owner with endorsements or replacement bonds so that the penal amount of each Bond is equal to 100% of the Guaranteed Maximum Price, within 5 days after the Guaranteed Maximum Price is agreed to by Owner and Contractor, as evidenced by the execution of an amendment to the Contract establishing the Guaranteed Maximum Price.

#### 10.11 WAIVER OF SUBROGATION

- A. Contractor and Owner waive all rights of recovery against the other party and such party's employees, officers, agents and Board members, for damages resulting from fire, or other causes of loss, but only to the extent the damages are covered by insurance proceeds actually received and applied to the payment of such damages, from insurance coverage required to be maintained under this Contract or other insurance coverage which is available to respond to such loss. Nothing in this provision will be deemed to waive any party's right to insurance proceeds.

### 11. **Article 11. INSPECTIONS, TESTS AND CORRECTION OF WORK**

#### 11.1 TIMES AND PLACES

- A. Except as otherwise provided in this Contract, inspection and test by Owner of material and workmanship required by this Contract shall be made at reasonable times and at the site of the Work, unless the Owner upon consultation with the Engineer determines that such inspection or test of material which is to be incorporated in the Work shall be made at the place of production, manufacture, or shipment of such.

#### 11.2 CONTINUING RESPONSIBILITY

- A. Except as otherwise specified by the Owner upon advice of the Engineer at the time of determining to make an inspection or test, no inspection or test shall relieve the Contractor of responsibility for damage to or loss of the material prior to acceptance, nor in any way affect the continuing rights of Owner after acceptance of the completed Work.

#### 11.3 INSPECTIONS AND TESTING

- A. All inspections and tests which may be required by the building codes and ordinances of the City of Lago Vista will be performed, at Contractor's expense, by all applicable governmental departments or entities whether or not the site of the Work is within the corporate limits of that City.

#### 11.4 REJECTED MATERIAL OR WORK

- A. The Contractor shall, without charge, promptly replace any material or correct any workmanship found by Owner or Engineer not to conform to the Contract requirements, unless in the public interest Owner consents to accept such material or workmanship with

an appropriate adjustment in Contract Amount. The Contractor shall promptly segregate and remove rejected material from the premises.

- B. The Contractor will be charged with the additional cost of any test or inspection of the replaced material or corrected workmanship.
- C. If the Contractor does not promptly replace rejected material or correct rejected workmanship, it shall be a material default under the Contract and Owner may (1) notwithstanding any provision of Section 13.3.A to the contrary, by contract or otherwise, immediately commence to replace such material or correct such workmanship and charge the cost thereof to the Contractor, or (2) pursue its rights and remedies under the Contract in accordance with Article 13.

#### 11.5 COOPERATION

- A. The Contractor shall furnish promptly, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Engineer. All inspections and tests by Owner shall be performed promptly. Special, full-size, and performance tests shall be performed as described in this Contract. The Contractor shall be charged with any additional cost of inspection when material and workmanship are not ready at the time specified by the Contractor for its inspection.

#### 11.6 COVERED WORK

- A. Should it be considered necessary or advisable by Owner at any time before acceptance of the entire Work to make an examination of Work already completed, by removing or tearing out same, the Contractor shall, on request, promptly furnish all necessary facilities, labor and material. If such Work shall have been covered without the approval of the Engineer, or if such Work is found to be defective or nonconforming in any material respect due to the fault of the Contractor, subcontractors or anyone furnishing labor or materials under this Contract, Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, an equitable adjustment shall be made in the Contract Amount to compensate the Contractor for the additional services involved in such examination and reconstruction and, if completion of the Work has been delayed thereby, Contractor shall, in addition, be granted a suitable extension of time.

### **Article 12. MISCELLANEOUS PROVISIONS**

#### 12.1 THIRD PARTIES

- A. All provisions of this Contract shall be binding upon and inure to the benefit of Owner, Contractor and their respective successors and assigns, but Contractor shall not assign this Contract in whole or in part, nor assign any monies due or to become due hereunder, without in each case the prior written consent of Owner. No provision of this Contract shall inure to the benefit of any third party that is neither an approved assignee nor a successor of Owner or of the Contractor.

#### 12.2 BANKRUPTCY

- A. It is recognized that (i) if any order for relief is entered on behalf of or against the Contractor pursuant to Title 11 of the United States Code, (ii) if any other similar order is entered under any other debtor relief laws, (iii) if the Contractor makes a general assignment for the benefit of its creditors, or (iv) if a receiver is appointed for the benefit of creditors, or (v) if a receiver is appointed on account of its insolvency, any such event could impair or frustrate

the Contractor's performance of the Contract Documents. Accordingly, it is agreed that upon the occurrence of any such event, the Owner, in addition to other rights and remedies hereunder, shall be entitled to request the Contractor or its successor in interest to provide adequate assurance of future performance in accordance with the terms and conditions of the Contract Documents. Failure to comply with such request within ten (10) days after delivery of the request shall entitle the Owner to terminate the Contract or Contractor's right to perform thereunder, to make demand on the Surety to perform the Contractor's obligations, and to any other enforceable rights set forth in the Contract Documents.

- B. In all events, pending receipt of adequate assurance of performance and actual performance in accordance therewith, the Owner shall be entitled to make demand on the Surety or proceed with the Work with its own forces or with other contractors on a time and materials or other appropriate basis, the cost of which will be backcharged against the Contract Amount. If such costs and damages exceed the unpaid balance, the Contractor shall be obligated to pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Engineer, upon application, and this obligation for payment shall survive termination of the Contract. To the extent the costs of completing the Work, including compensation for additional professional services (including but not limited to attorney's fees) and expenses, exceed those costs which would have been payable to the Contractor to complete the work except for the Contractor's default, the Contractor will pay the difference to the Owner, subject to any rights of the Surety, if the Surety performs Contractor's obligations, and this obligation for payment shall survive termination or completion of the Contract Documents. Such costs incurred by the Owner will be determined by the Owner and confirmed by the Engineer.
- C. Any provision in this Section 12.2 regarding the obligations of Contractor for the payment of amounts or the performance of obligations is subject to Contractor's rights under Federal law and nothing in this Section is intended to constitute an assertion of a debt in violation of any such rights.

### 12.3 NONWAIVER OF DEFAULT

- A. Any failure by Owner at any time, or from time to time, to require strict compliance with or to enforce any of the terms or conditions of this Contract shall not constitute a waiver of any such terms or conditions nor shall it affect or impair Owner's ability to require strict compliance with such terms or conditions in the future, or the right of Owner at any time to avail itself of such remedies as it may have for any breach or breaches of any such term or condition. An express waiver by Owner of any specific act of nonperformance or default shall not constitute a waiver of any subsequent acts of nonperformance or default.

### 12.4 SEVERABILITY

- A. If any provision of the Contract shall be determined to be invalid, unlawful or unenforceable, this Contract shall be reformed to the greatest extent necessary to make the offending provision valid and enforceable, or if this offending provision cannot be modified so as to be valid and enforceable, this Contract shall be reformed so as to exclude the offending provision from this Contract if it can be done without destroying the benefit of the bargain between the parties. As so reformed, the Contract shall be binding upon and enforceable by both Owner and the Contractor. No additional consideration shall be due to either party by reason of any such reformation.

### 12.5 CONSTRUCTION

- A. The Contract Documents shall not be construed more or less favorably between the parties by reason of authority or origin of language.

### **13. Article 13. TERMINATION OR SUSPENSION OF THE CONTRACT**

#### **13.1 SUSPENSION OF THE WORK FOR OWNER'S CONVENIENCE**

- A. Owner or the Engineer may order the Contractor in writing to suspend, delay or interrupt all or any part of the Work for such period of time as it may determine to be appropriate for the convenience of Owner.
- B. If the performance of all or any part of the Work is suspended by Owner for its convenience, through no fault of Contractor and for reasons other than an event of Force Majeure, by an act of a Contracting Officer in the administration of this Contract, for a cumulative period of time of more than 60 days during the term of this Contract, then Contractor shall be entitled to an equitable adjustment to the Contract Time and/or for any increase in the cost of performance of this Contract (excluding profit) necessarily caused by a suspension which is in excess of the 60 days herein provided, and the Contract modified in writing accordingly by Change Order.
- C. However, no adjustment shall be made under this clause for any suspension to the extent (1) that performance would have been suspended, delayed or interrupted by any other cause, including the fault or negligence of the Contractor, or (2) for which an equitable adjustment is provided for or excluded under any other provision of this Contract.

#### **13.2 RESPONSIBILITY FOR COMPLETION**

- A. The Contractor shall furnish such manpower, materials, facilities and equipment and shall work such hours, including night shifts, overtime operation and Sundays and holidays, as may be necessary to insure the progress of the Work in accordance with the approved Construction Schedule and the completion of the Work within the Contract Time. If Work falls behind the currently updated and approved Construction Schedule and it becomes apparent from the current schedule that the Work will not be completed within the Contract Time, the Contractor agrees that the Contractor will take some or all of the following actions as deemed necessary by the Owner to substantially eliminate the backlog of work and complete the Project within the Contract Time:
  - 1. Increase manpower in such quantities and crafts as will substantially eliminate, in the opinion of the Owner, the backlog of work;
  - 2. Increase the number of working hours per shift, shifts per working day, working days per week, or the amount of equipment, or any combination or the foregoing sufficient to substantially eliminate, in the opinion of the Owner, the backlog of work; and
  - 3. Reschedule activities to achieve maximum practical concurrence of accomplishment of activities.
- B. The Owner may require the Contractor to submit a recovery schedule demonstrating the Contractor's program and proposed plan to make up the lag in scheduled progress and to ensure completion of the Work within the Contract Time. If the Owner and Engineer find the proposed plan not acceptable, they may require the Contractor to submit a new plan. If the actions taken by the Contractor or the second plan proposed are not satisfactory, the Owner may require the Contractor to take any or all of the actions set forth in Section 13.2.A to make up the lag in scheduled progress.
- C. Failure of the Contractor to substantially comply with the requirements of this Section 13.2 may be considered grounds for a determination by the Owner, that the Contractor is failing

to prosecute the Work with sufficient diligence to ensure its completion within the Contract Time as required by Section 3.1.A.

- D. If Contractor's failure to meet the time periods provided in the approved Construction Schedule or other delay in the performance of the Work is due to Contractor's unexcused delay, the Contractor shall perform the services required by this Section 13.2 at no additional cost to Owner. If Owner determines that the failure or delay is due in part to Contractor's unexcused delay and in part to other causes which are not the fault of Contractor or for which Contractor is not responsible, the additional costs attributable to the acceleration of the Work required under this Section 13.2 shall be equitably allocated between Contractor and the Owner, provided however, that nothing in this provision is intended to waive or limit Owner's right to pursue claims against any third party for the additional cost of the Work allocated to Owner.
- E. Any provision in the Contract Documents to the contrary notwithstanding, in the event Contractor would be entitled to an extension of time under the provisions of the Contract, Owner shall have the right, instead of awarding additional time, to require Contractor to accelerate the Work, as provided in this Section, and Owner shall pay Contractor for the reasonable additional costs incurred by Contractor that are attributable to such acceleration, as provided by Change Order.

### 13.3 EVENTS OF DEFAULT

- A. Contractor will be in default under this Contract if Contractor fails to prosecute the Work diligently, in a timely manner and in accordance with the Contract Documents, or fails to perform any other obligation(s) under the terms of the Contract, and such default continues after Owner provides Contractor with written notice of default and opportunity to cure as herein provided. Unless a longer notice period is required by law, Owner shall give Contractor 10 days written notice and opportunity to cure. In the event of an emergency condition, where the Contractor's breach or the failure to cure the default presents an imminent threat to the safety of persons or property, Owner may exercise its rights and remedies under this Contract if Contractor does not cure the default within 3 days after notice of default is given, including the right to perform the curative work, and to charge Contractor for the costs incurred by Owner.
- B. Owner will be in default under this Contract if Owner commits a default under the terms of this Contract, and fails to cure such default within ten days after written notice by Contractor or within such longer time period as may be provided by law. Provided, however, that if the default is one that cannot be reasonably cured within such time period, Owner shall not be deemed in default if Owner commences the cure within the stated notice period, and diligently pursues the cure to completion. The notice of default and time periods provided by this Section shall be in addition to any other notice and cure periods provided by the Contract Documents.
- C. Any provision in this Contract to the contrary notwithstanding, upon a default by Contractor, Owner shall have, in addition to any rights or remedies provided by the Contract Documents, all rights and remedies available at law or equity. All such rights and remedies are cumulative, and not exclusive, and may be exercised by Owner independently, concurrently or successively.
- D. Upon a default by Owner, Contractor will have the rights provided by law or equity, subject to the provisions of the Contract, including those set forth in Article 14.
- E. In the event either party files suit in connection with the Contract Documents or the Project, the prevailing party shall be entitled to Court costs and reasonable attorney's fees.

#### 13.4 TERMINATION FOR CONVENIENCE OF OWNER

- A. The performance of Work under this Contract may be terminated by Owner in whole, or from time to time in part, whenever Owner shall determine that such termination is in the best interest of Owner. Any such termination shall be effected by delivery to the Contractor of a written notice of termination ("Notice of Termination") specifying the extent to which performance of Work under the Contract is terminated and the date upon which such termination becomes effective.
- B. After receipt of a Notice of Termination, the Contractor shall cooperate fully with Owner in minimizing the cost to Owner of such termination and shall, as directed by a Contracting Officer, protect the Work accomplished and properties acquired for performance of the Work, terminate or cancel incomplete subcontracts and purchase orders, and dispose of surplus materials and other properties.
- C. In the event of such a termination, the Contract Amount shall be equitably adjusted to a sum which shall fairly compensate the Contractor for all Work completed and for all costs incurred (net of salvage) in part performance of the incomplete portions of the Work and for all costs incurred in connection with the termination, but exclusive of profit on the incomplete portions of the Work. In no event shall such sum be less than the portion of the Contract Amount allotted to the completed portion of the Work.
- D. No amount shall be allowed the Contractor hereunder unless, within ninety-one days after all compensable costs of Contractor shall have become liquidated and determinable, and not thereafter, Contractor shall submit in writing to the Director of Construction Management Contractor's claim in the amount stated with such supporting particulars as the Director of Construction Management may request.

#### 13.5 TERMINATION FOR CONTRACTOR'S DEFAULT

- A. If the Contractor is in default under this Contract, and the default has extended beyond the cure period provided in this Contract, then Owner may, by written notice to the Contractor and without notice to Contractor's Surety, terminate this Contract or terminate Contractor's right to proceed with the Work under the Contract. In such event Owner may take over the Work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completing the Work such materials, equipment, machinery, tools, and supplies as may be on the site of the Work and necessary therefore. Owner may also make demand on the Surety to perform Contractor's obligations under the Contract. Whether or not the Contractor's right to proceed with the Work is terminated, Contractor and Contractor's Surety shall remain liable for any damage to Owner resulting from Contractor's refusal or failure to complete the Work within the specified time.
- B. If Owner should so terminate the Contractor's right to proceed, or the Contract, the resulting damages recoverable by Owner will include liquidated damages for delay as may be specified in the Agreement or other Contract Documents until Substantial Completion of the Work, together with any increased cost or expenses incurred by Owner in so completing the Work or curing the default.
- C. If, after notice of termination of the Contract or Contractor's right to proceed under the provisions of this Section 13.5, it is determined for any reason that the Contractor was not in default under the provisions of the Contract, or that the delay was excusable under the provisions of Article 7 hereof, the rights and obligations of the parties shall be the same as if the Notice of Termination had been issued pursuant to Article 13 concerning termination for the convenience of Owner.



**14. Article 14. ADMINISTRATIVE PROCEDURE FOR CONTRACTOR CLAIMS**

**14.1 ADMINISTRATIVE PROCEDURE FOR RESOLUTION OF CLAIMS**

- A. No claim by the Contractor for additional time or for additional compensation (including damages) shall be allowed unless it is timely presented to Owner and Engineer in writing, together with appropriate detailed supporting documentation, as provided by the terms of the Contract Documents and the provisions of this Article 14.
- B. Contractor must notify Owner and Engineer of its claim in writing (a) within 21 days (or such later period as may be required by law) after occurrence of the event giving rise to a claim or (b) within 21 days (or such later period as may be required by law) after the Contractor first recognizes, or should have recognized, the condition giving rise to the claim, whichever is later. Within 20 days of submitting a claim, Contractor must provide complete and detailed documentation concerning the nature and amount of the claim, to the extent that such information is reasonably available. Failure to comply with the requirements of this Subsection 14.01.B constitutes a waiver of Contractor's claim.
- C. Any claim by the Contractor for additional time or for additional compensation shall be presented by Contractor to Owner first as a request for a Change order to adjust the Contract Time and/or Contract Amount as provided in Article 6, and shall be approved or rejected by the Director of Construction Management.
- D. If the Owner's Contracting Officer should reject a claim of the Contractor so presented, or if he should fail to approve it within sixty days after presentment of all required information and supporting documentation, the Contractor may appeal in writing to the Board of Trustees of LVISD. The Decision of the Owner's Contracting Officer shall be final and binding unless the Contractor takes such an appeal within twenty days after the date of the decision. Contractor shall comply with the terms of any written appeal procedure established by Owner.
- E. If the Board of Trustees of LVISD should reject the Contractor's claim, or if the Board of Trustees should reject the Contractor's claim within ninety days after it is timely filed with the Board as specified in Subsection 14.01.D, the Contractor's administrative remedy under this Contract shall be deemed to be exhausted.
- F. No suit shall be brought by the Contractor upon this Contract, or for breach of this Contract, until the administrative remedy set forth herein shall have been exhausted, nor more than two years after exhaustion of the administrative remedy. In addition, the Contractor agrees to mediate any such claim with Owner, in good faith, prior to filing suit against Owner in connection with such matters.
- G. During the pendency of any claim, the Contractor shall proceed diligently with the work as directed by the Owner's Contracting Officer.
- H. This Contract shall be construed in accordance with the laws of the State of Texas, and venue for any case or controversy arising under or pursuant to this Contract or in connection therewith, shall lie in courts of competent jurisdiction in Travis County, Texas.

**15. Article 15. PARTIAL USE OR OCCUPANCY**

- A. The Owner shall have the right to use and occupy spaces or systems and other portions of the Work prior to completion and acceptance of all the Work (including occupancy by a tenant, operator or anyone else occupying or using the Project with the Owner's consent, or to install furnishings and equipment). In addition, the Owner shall have the right to accept and operate Project systems in advance of Substantial Completion.

- B. If the Owner desires to exercise its right of partial occupancy or use as provided herein, the Contractor shall cooperate with the Owner in making available for the Owner's use building services such as heating, ventilating, cooling, water, lighting, power, elevator and telephone for the proposed use and health, safety and comfort of the users or occupants of the space or spaces and other parties present on or entering or leaving the site. If the equipment required to furnish such services is not entirely completed at the time the Owner desires to use or occupy aforesaid space or spaces, the Contractor shall make every reasonable effort to complete the same as soon as possible so that the necessary equipment can be put into operation and use.
- C. Mutually acceptable arrangements shall be made between the Owner and Contractor for procedures, terms, and conditions governing the operation and maintenance of such services and facilities as may be utilized for the benefit of the Owner prior to Substantial Completion. The Owner will assume the proportionate and reasonable responsibility for operation and cost of the systems, equipment and/or utilities required to provide such services.
- D. The Owner's early occupancy or use of any portion of the Work as described in this Article 15 shall not constitute the Owner's acceptance of any Work, materials or equipment which are not in conformity with the requirements of the Contract Documents, nor relieve the Contractor from its obligations to complete the Work, or its responsibility for loss or damage due to or arising out of defects in, or malfunctioning of systems, equipment, material or any element of the Work, or from any unfulfilled obligations or responsibilities under the Contract Documents.
- E. The Contractor shall make no claim for delay or extension of the Contract Time or for damages of any kind arising directly or indirectly out of the exercise by the Owner of the rights reserved under this Article 15.

**16. Article 16. TAXES**

- A. The Contract Amount shall be deemed to include all taxes payable in connection with the Work.
- B. Owner is a tax exempt entity and Contractor shall take all steps required by applicable law to purchase materials, equipment and services free from sales and other taxes in accordance with law, including compliance with procedures established by the Texas Comptroller. If Contractor fails to obtain such tax exemption on any materials and equipment, Contractor shall notify Engineer and Owner shall not be obligated to pay the amount of such taxes as part of the Cost of the Work.
- C. Unless otherwise provided by applicable law, the following items are exempt from tax in connection with this Contract:
  - 1. The purchase of personal property, (including machinery or equipment and its accessories and repair and replacement parts) for use in the performance of a Contract for an improvement to realty if the personal property is incorporated into realty in the performance of the Contract;
  - 2. The purchase of property, other than machinery or equipment and its accessories and repair and replacement parts, for use in the performance of a contract for an improvement to realty if the personal property is (a) necessary and essential for the performance of the contract and (b) completely consumed at the job site. Personal property is completely consumed if after being used once for its intended

purpose, it is used up or destroyed. Personal property that is rented or leased for use in the performance of the Contract is not deemed to be completely consumed.

3. The purchase of a taxable service for use in the performance of a contract for an improvement to realty if the service is performed at the job site, and if (a) the Contract expressly requires the specific service to be performed or (b) the service is integral to the performance of the contract.

**17. Article 17. NOTICE TO PARTIES**

- A. Unless otherwise provided in the Agreement, notice given under this Contract shall be in writing, and shall be deemed delivered upon deposit in the U. S. Mail (whether or not actually received) if addressed to the recipient at the address for notice set forth in the Contract Documents, and sent by registered or certified mail return receipt requested, postage prepaid, with copy sent concurrently by facsimile. Notice given in any other manner shall be deemed delivered if and when actually received. Contractor or Owner may change its address for notice by providing the other party with written notice of the change of address for notice given in the manner provided by Article 17. Such change of address shall be effective 14 days after delivery of the notice.

**18. Article 18. PREVAILING WAGE RATES**

- A. Contractor and each subcontractor are responsible for complying with the applicable provisions of Chapter 2258 of the Texas Government Code regarding the payment of prevailing wage rates. Contractor and each subcontractor must pay wages to persons performing labor in connection with this Contract in an amount that is not less than the applicable prevailing wage rates and hourly supplement for health insurance for such workers.
- B. The prevailing wage rates and hourly supplement for health insurance applicable to the Project are set forth in Owner's Notice of Prevailing Wage Rates and Benefits Compliance as the "Total Hourly Compensation Rate" [Total Hourly Compensation Rate does not include benefits (other than the stated hourly supplement for health insurance) or pensions] for each of various classifications of construction workers and mechanics. Pursuant to Texas Government Code, Chapter 2258, the Board of Trustees of LVISD has ascertained and does specify that the general prevailing rate of per diem wages (for eight hours of work during regular working hours on a day not a Saturday or Sunday or holiday), in the locality in which the Work is to be performed is eight times the hourly base wage rate so listed for each respective craft or type of workman or mechanic needed to execute the Contract; also that the prevailing wage rate for legal holidays and overtime work (in excess of forty hours in such workweek) shall be not less than one and one-half times the hourly base wage rate.
- C. The Contractor shall forfeit as a penalty to Owner sixty dollars (\$60.00) for each laborer, workman or mechanic employed for each calendar day, or portion thereof, such laborer, workman or mechanic is paid less than said stipulated rate for any work done under this Contract by the Contractor or by any subcontractor under Contractor. Owner may withhold additional funds as appropriate when confronted with wage rate violations.

**END OF SECTION**

**RESOLUTION OF THE BOARD OF TRUSTEES  
LAGO VISTA INDEPENDENT SCHOOL DISTRICT  
PREVAILING WAGE RATE DETERMINATION FOR 2021 BOND PROJECTS**

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**WHEREAS**, the Lago Vista Independent School District (“District”) is undertaking various construction projects identified as the “2021 Bond Projects”; and

**WHEREAS**, Chapter 2258 of the Texas Government Code requires the Board of Trustees (“Board”) of the District to determine the general prevailing wage rate in the locality where the Project will be constructed.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF LAGO VISTA INDEPENDENT SCHOOL DISTRICT AS FOLLOWS:**

1. The Board finds that the foregoing recitals are true and correct, and they are hereby adopted as findings of fact by the Board of Trustees of Lago Vista Independent School District.
2. The Board determines that the prevailing wage rate in the District for the Project is as determined by the United States Department of Labor in its Wage Rate General Decision #TX20210271 for Travis County, Texas and dated January 1, 2021, and incorporated herein as Exhibit “A” to this Resolution.
3. The Board further determines that the prevailing wage rate for the Project for legal holiday and overtime work is the rate of one and one-half times the prevailing wage rate determined above.
4. If the wage rate is updated by the US Department of Labor at <https://www.wdol.gov/dba.aspx> before the publication of the solicitation for any of the above-enumerated 2021 Bond Projects, then the United States Department of Labor Wage Rate Decision for Travis County, Texas is applicable at the time of the initial publication of the solicitation shall be substituted for the above-specified wage rate.
5. This Resolution shall take effect immediately.

PASSED and ADOPTED this 8<sup>th</sup> day of February 2021, by the Board of Trustees of the Lago Vista Independent School District by the following vote:

AYES: 5      NOES: Ø      ABSENT: 2      ABSTAIN: Ø

Resolution of the LVISD Board of Trustees  
Determination of Prevailing Wage Rate  
For 2021 Bond Projects



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President, Board of Trustees

ATTEST:



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Secretary, Board of Trustees



Excludes Installation of Sound and Communication Systems.....	\$ 29.44	11%+5.73
Low Voltage Wiring Only.....	\$ 29.44	11%+5.73

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ELEV0133-002 01/01/2020

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 42.30	34.765

Footnote:

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

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ENGI0450-002 04/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR Cranes.....	\$ 34.85	9.85

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IRON0084-011 06/01/2020

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 25.26	7.13

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PLUM0286-010 06/01/2020

	Rates	Fringes
PIPEFITTER (Including HVAC Pipe Installation).....	\$ 31.00	14.37

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SFTX0669-002 04/01/2020

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 30.64	21.68

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SHEE0067-007 07/06/2020

	Rates	Fringes
SHEET METAL WORKER Excludes HVAC Duct Installation.....	\$ 27.29	15.08
HVAC Duct Installation Only.	\$ 27.29	15.08

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SUTX2014-049 07/21/2014

	Rates	Fringes
BRICKLAYER.....	\$ 20.07	0.00
CARPENTER (Acoustical Ceiling Installation Only).....	\$ 14.00	0.00
CARPENTER (Form Work Only).....	\$ 15.62	0.05
CEMENT MASON/CONCRETE FINISHER....	\$ 15.71	0.00

DRYWALL FINISHER/TAPER.....	\$ 17.06	4.43
DRYWALL HANGER AND METAL STUD INSTALLER.....	\$ 17.47	3.45
ELECTRICAL INSTALLER (Sound and Communication Systems) (Excludes Wiring).....	\$ 18.00	2.30
FLOOR LAYER: Carpet.....	\$ 21.88	0.00
GLAZIER.....	\$ 12.83	0.00
HVAC MECHANIC (HVAC Unit Installation Only).....	\$ 23.78	6.89
IRONWORKER, REINFORCING.....	\$ 12.27	0.00
IRONWORKER, STRUCTURAL.....	\$ 20.73	5.24
LABORER: Common or General.....	\$ 11.44	0.00
LABORER: Mason Tender - Brick...	\$ 12.22	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 11.85	0.00
LABORER: Pipelayer.....	\$ 12.45	0.00
LABORER: Roof Tearoff.....	\$ 11.28	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 19.43	3.49
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 13.00	0.00
OPERATOR: Bulldozer.....	\$ 14.00	0.00
OPERATOR: Drill.....	\$ 14.50	0.00
OPERATOR: Forklift.....	\$ 16.64	6.26
OPERATOR: Grader/Blade.....	\$ 19.30	0.00
OPERATOR: Loader.....	\$ 14.00	0.00
OPERATOR: Mechanic.....	\$ 18.75	5.12
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.03	0.00
OPERATOR: Roller.....	\$ 11.25	0.00



PAINTER (Brush, Roller and Spray), Excludes Drywall Finishing/Taping.....	\$ 18.76	6.35
PLUMBER, Excludes HVAC Pipe Installation.....	\$ 23.57	6.37
ROOFER.....	\$ 12.00	0.00
TILE FINISHER.....	\$ 11.32	0.00
TILE SETTER.....	\$ 16.35	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
WATERPROOFER.....	\$ 16.30	0.06

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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](http://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)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage

determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

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

#### Survey Rate Identifiers

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

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier. A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

-----  
WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

=====  
END OF GENERAL DECISION

"

# Payment Bond

STATE OF TEXAS

Bond No. \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Project No. \_\_\_\_\_

Project Name \_\_\_\_\_

Know All Men By These Presents: That \_\_\_\_\_  
of the City of \_\_\_\_\_, County of \_\_\_\_\_ and  
State of \_\_\_\_\_, as Principal, and \_\_\_\_\_  
a solvent corporation authorized under laws of the State of Texas to act as Surety on bonds for principals, are held and  
firmly bound unto \_\_\_\_\_(Owner), and all Subcontractors, workers,  
laborers, mechanics and suppliers as their interests may appear, all of whom shall have right to sue upon this bond in  
the penal sum of \_\_\_\_\_

\_\_\_\_\_ U.S. Dollars (\$ \_\_\_\_\_ U.S.),  
for payment whereof, well and truly to be made, said Principal and Surety bind themselves and their heirs, administrators, executors,  
successors and assigns, jointly and severally, by these presents:

Conditions of this Bond are such that, whereas, Principal has entered into a certain written contract with Owner; dated  
the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ to which Agreement is hereby referred to and made a part hereof as  
fully and to the same extent as if copied in length herein.

Now, therefore, condition of this obligation is such, that if the said Principal shall well and truly pay all Subcontractors, workers, laborers,  
mechanics, and suppliers, all monies to them owing by said Principals for subcontracts, work, labor, equipment, supplies and materials done  
and furnished for the construction of improvement of said Agreement, then this obligation shall be and become null and void; otherwise to  
remain in full force and effect.

Provided, however, that this bond is executed pursuant to provisions of Chapter 2253, Texas Government Code as amended and all liabilities  
on bond shall be determined in accordance with provisions of said Article to same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that any change in Contract Time or Contract Sum shall not in anywise affect its obligation  
on this bond, and it does hereby waive notice of any such change in Contract Time or Contract Sum.

In witness whereof, said Principal and Surety have signed and sealed this instrument this \_\_\_\_\_  
day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Name and address of the Resident Agent of Surety:

\_\_\_\_\_  
\_\_\_\_\_

Note: Bond shall be issued by a solvent Surety company authorized to do business in Texas, and shall meet any other requirements  
established by law or by Owner pursuant to applicable law. A copy of surety agent's "Power of Attorney" must be attached hereto.

# Performance Bond

STATE OF TEXAS

Bond No. \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Project No. \_\_\_\_\_

Project Name \_\_\_\_\_

Know All Men By These Presents: That \_\_\_\_\_  
of the City of \_\_\_\_\_, County of \_\_\_\_\_, and  
State of \_\_\_\_\_, as Principal, and \_\_\_\_\_,  
a solvent company authorized under laws of the State of Texas to act as Surety on bonds for principals, are held and  
firmly bound unto \_\_\_\_\_ (Owner), in the penal sum of

\_\_\_\_\_ U.S. Dollars (\$ \_\_\_\_\_ U.S.) for payment  
whereof, well and truly to be made, said Principal and Surety bind themselves and their heirs, administrators, executors, successors and  
assigns, jointly and severally, by these presents:

Conditions of this Bond are such that, whereas, Principal has entered into a certain written contract with OWNER, dated  
the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, which Agreement is hereby referred to and made a part hereof as fully and to  
the same extent as if copied at length herein.

Now, therefore, the condition of this obligation is such, that if said Principal shall faithfully perform said Agreement and shall in all respects  
duly and faithfully observe and perform all and singular covenants, conditions and agreements in and by said contract agreed and covenanted  
by Principal to be observed and performed, and according to true intent and meaning of said Agreement hereto annexed, then this obligation  
shall be void; otherwise to remain in full force and effect.

Provided, however, that this bond is executed pursuant to provisions of Chapter 2253, Texas Government Code as amended and all liabilities  
on this bond shall be determined in accordance with provisions of said Article to same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that any change in Contract Time or Contract Sum shall not in anywise affect its obligation  
on this bond, and it does hereby waive notice of any such change in Contract Time or Contract Sum.

In witness whereof, said Principal and Surety have signed and sealed this instrument this \_\_\_\_\_  
day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

By \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Name and address of Resident Agent of Surety:

\_\_\_\_\_

Note: Bond shall be issued by a solvent Surety company authorized to do business in Texas, and shall meet any other requirements  
established by law or by Owner pursuant to applicable law. A copy of surety agent's "Power of Attorney" must be attached hereto.

## **SECTION 01 10 00 – SUMMARY OF WORK**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section Includes:

- 1. Project information.
- 2. Work covered by Contract Documents.
- 3. Access to site.
- 4. Coordination with occupants.
- 5. Work restrictions.
- 6. Miscellaneous provisions.

- B. Related Requirements:

- 1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

#### **1.3 WORK COVERED BY CONTRACT DOCUMENTS**

- A. The Work of Project is defined by the Contract Documents and consists of the following:

- 1. Base Proposal: Roof Areas A01, A02, A04, A05
  - a. Existing Roof System MEP Modifications:
    - 1) Extend all existing plumbing vent penetrations by cutting pipe below deck and installing a new no-hub connection to a new pipe extending 12" minimum above new retrofit roof system.
    - 2) Provide new fully welded curbs with integral upslope crickets at all existing curbed penetrations. Extend existing curbs, ductwork, and wiring as required to ensure minimum specified height above finished roof as identified in the details.
    - 3) Coordinate existing penetrations with sub-purlin system and panel seam layout. Relocate penetrations as required to avoid required subpurlin locations and panel seams.
  - b. Demolition:
    - 1) Remove existing gutters and downspouts, flashings, existing ridge and hip caps.

- 2) Cut back existing roof panels to accommodate new gutter and sheet metal installation.
  - 3) Trim wall panels above new roofs to accommodate new roof system flashings. Install cold galvanizing compound at all cut edges to remain.
  - c. Install new retrofit roof system:
    - 1) Install insulation and underlayment:
    - 2) Install loose laid polyisocyanurate flute filler boards and one (1) additional layer of polyisocyanurate insulation as indicated in the drawings, mechanically fastened to the existing roof panels.
    - 3) Install self-adhered membrane over insulation and subpurlins, ensuring membrane ties into wall and fascia substrates in a continuous manner, fully flashed and sealed around all penetrations through roofing.
    - 4) Install standing seam roof system as specified, securing roof system clips to subpurlins as required by retrofit roof system manufacturer.
    - 5) Provide all wood blocking, sheet metal and flashings as specified.
    - 6) Install new downspouts at existing and new downspout locations, routed into existing or new cast iron downspout boots that have been primed and painted as specified and indicated in the drawings. Provide concrete splash block at downspouts discharging at grade.
  - d. Walls:
    - 1) Routing and sealing of 400 lineal feet of cracks at existing stucco above Roof Area A05.
2. Alternate No. 1: Schedule
    - 1) In lieu of performing base bid work commencing in June of 2021, commence work on August 1, 2021, providing working hours for disruptive operations outside school hours, providing protective measures as required to avoid interference with school traffic patterns and activities. Substantial Completion Date revised to December 1, 2021.
  3. Alternate No. 2: Canopy Roof Areas A03.1, A03.2, A03.3, A03.4
    - 1) Replace existing metal panels with new metal panels to match existing, including all flashings, gutters, and downspouts as specified.
  4. Alternate No. 3: Walls Above Roof Area A05
    - 1) In addition to routing and sealing of cracks specified in Base Bid, install new elastomeric coating system as specified, over all stucco wall surfaces above Roof Area A05.
  5. Alternate No. 4: Roofs: B01, B02, B03
    - 1) Install new retrofit roof system as specified with all associated MEP work indicated, sealants, flashings and sheet metal.
  6. Alternate No. 5: Walls Above Roofs: B01, B03
    - 1) Install, rigid insulation, plywood, underlayment, hat channels, new wall panels and flashings over existing wall panels at areas indicated on the drawings above Roof Areas B01 and B03.
    - 2) Fabricate roof flashings to accommodate increased wall width.

7. Alternate No. 6: Roofs: A01

- 1) In lieu of installing base bid retrofit roof system, replace the existing metal panels with new metal panels to match existing, including all flashings, gutters, and downspouts as specified. Install R-5 thermal blocks and new batt insulation at locations where missing.

1.4 ACCESS TO SITE

- A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- B. Use of Site: Limit use of Project site areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
- C. Contractor shall supply temporary storage required for storage of equipment and materials for duration of Project. Utilize only areas designated by Owner for storage.
  1. Limits: Confine construction operations to staging and parking areas approved by Owner, and areas immediately around the areas included in the scope of work.
  2. Driveways, Walkways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- D. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.5 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
  1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
  2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.



## 1.6 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work on the existing building to occur between 5:00 a.m. to 8:00 p.m., Monday through Friday, Saturday and Sunday.
- C. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner. Notify Engineer and Owner not less than two (2) calendar days in advance of proposed disruptive operations.
- D. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.
- E. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not permitted.

## 1.7 PRE-JOB DAMAGE SURVEY OF FACILITY

- A. Perform a thorough survey of property and all affected areas of the buildings with Owner prior to starting the work in order to document existing damage and operational status of existing equipment. Non-functional or damaged items identified on this list will not be the responsibility of Contractor unless further damaged by Contractor during execution of Project.
- B. Consider any damage to buildings or property not identified in the pre-job damage survey as having resulted from execution of this Contract and correct at no additional expense to Owner.

## PERMITS

- A. Contractor shall provide and coordinate the timely submittal of the Construction Documents to the authorities having jurisdiction to obtain a permit for the Scope of Work.
- B. Engineer will assist with technical responses to Plan Review Comments as necessary.
- C. Pre-Job Submittals:
  - 1. Copy of Permit Application
  - 2. Copy of Permit Approval

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01 22 00 - UNIT PRICES**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.

#### 1.3 DEFINITIONS

- A. Unit price is an amount proposed by Bidders, stated on the Proposal Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by Change Order, if estimated quantities of Work required by the Contract Documents are increased or decreased.

#### 1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of unit prices is included at the end of this Section.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01 25 00 - SUBSTITUTION PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for substitutions.

#### **1.3 DEFINITIONS**

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

#### **1.4 ACTION SUBMITTALS**

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
    - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design

- characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - e. Samples, where applicable or requested.
  - f. Certificates and qualification data, where applicable or requested.
  - g. List of similar installations for completed projects with project names and addresses and names and addresses of Engineers and owners.
  - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
  - i. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
  - j. Cost information, including a proposal of change, if any, in the Contract Sum.
  - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
  - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
2. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within two days of receipt of a request for substitution. Engineer will notify Contractor of acceptance or rejection of proposed substitution within 5 days of receipt of request, or two days of receipt of additional information or documentation, whichever is later.
    - a. Forms of Acceptance: Change Order, Construction Change Directive, or Engineer's Supplemental Instructions for minor changes in the Work.
    - b. Use product specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

## 1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

## PART 2 - PRODUCTS

### 2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than seven days prior to time required for preparation and review of related submittals.
1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - b. Substitution request is fully documented and properly submitted.
    - c. Requested substitution will not adversely affect Contractor's construction schedule.
    - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - e. Requested substitution is compatible with other portions of the Work.
    - f. Requested substitution has been coordinated with other portions of the Work.
    - g. Requested substitution provides specified warranty.
    - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Engineer will consider requests for substitution if received within 30 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Engineer.
1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    - b. Requested substitution does not require extensive revisions to the Contract Documents.
    - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - d. Substitution request is fully documented and properly submitted.

- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. Requests for Information (RFIs).
  - 4. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
  - 1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
  - 2. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

#### **1.3 DEFINITIONS**

- A. RFI: Request from Owner, Engineer, or Contractor seeking information required by or clarifications of the Contract Documents.

#### **1.4 INFORMATIONAL SUBMITTALS**

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
  - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.



- B. Key Personnel Names: Within 15 days of receiving the Notice of Award, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

## 1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's construction schedule.
  - 2. Preparation of the schedule of values.
  - 3. Installation and removal of temporary facilities and controls.
  - 4. Delivery and processing of submittals.
  - 5. Progress meetings.
  - 6. Preinstallation conferences.
  - 7. Project closeout activities.
  - 8. Startup and adjustment of systems.

## 1.6 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
  - 1. Engineer will return RFIs submitted to Engineer by other entities controlled by Contractor with no response.
  - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
  2. Project number.
  3. Date.
  4. Name of Contractor.
  5. Name of Engineer.
  6. RFI number, numbered sequentially.
  7. RFI subject.
  8. Specification Section number and title and related paragraphs, as appropriate.
  9. Drawing number and detail references, as appropriate.
  10. Field dimensions and conditions, as appropriate.
  11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  12. Contractor's signature.
  13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: AIA Document G716 or contractor-generated form with substantially the same content as indicated above, acceptable to Engineer. Attachments shall be electronic files in Adobe Acrobat PDF format.
- D. Engineer's Action: Engineer will review each RFI, determine action required, and respond. Allow three (3) working days for Engineer's response for each RFI. RFIs received by Engineer after 1:00 p.m. will be considered as received the following working day.
1. Engineer's action may include a request for additional information, in which case Engineer's time for response will date from time of receipt of additional information.
  2. Engineer's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
    - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer in writing within three (3) days of receipt of the RFI response.

## 1.7 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Engineer of scheduled meeting dates and times.

- B. Preconstruction Conference: Engineer will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Engineer, but no later than 15 days before commencement of the Work.
1. Review responsibilities and personnel assignments.
  2. Attendees: Authorized representatives of Owner, Engineer, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  3. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Tentative construction schedule.
    - b. Phasing.
    - c. Critical work sequencing and long-lead items.
    - d. Designation of key personnel and their duties.
    - e. Lines of communications.
    - f. Procedures for processing field decisions and Change Orders.
    - g. Procedures for RFIs.
    - h. Procedures for testing and inspecting.
    - i. Procedures for processing Applications for Payment.
    - j. Distribution of the Contract Documents.
    - k. Submittal procedures.
    - l. Preparation of record documents.
    - m. Use of the premises and existing building.
    - n. Work restrictions.
    - o. Working hours.
    - p. Owner's occupancy requirements.
    - q. Responsibility for temporary facilities and controls.
    - r. Procedures for moisture and mold control.
    - s. Procedures for disruptions and shutdowns.
    - t. Construction waste management and recycling.
    - u. Parking availability.
    - v. Office, work, and storage areas.
    - w. Equipment deliveries and priorities.
    - x. First aid.
    - y. Security.
    - z. Progress cleaning.
  4. Minutes: Engineer will record and distribute meeting minutes.
- C. Progress Meetings: Contractor will conduct progress meetings at weekly intervals.
1. Coordinate dates of meetings with preparation of payment requests.
  2. Attendees: In addition to representatives of Owner and Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities

shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

3. Agenda:

a. Contractor shall prepare the meeting agenda and distribute to all invited attendees. Agenda shall include an updated Contractor's schedule with the following information:

- 1) Status of previous scheduled activities
- 2) Delays
- 3) Anticipated activities scheduled for the next two (2) weeks.

b. Review present and future needs of each entity present, including the following:

- 1) Interface requirements.
- 2) Sequence of operations.
- 3) Status of submittals.
- 4) Deliveries.
- 5) Off-site fabrication.
- 6) Access.
- 7) Site utilization.
- 8) Temporary facilities and controls.
- 9) Progress cleaning.
- 10) Quality and work standards.
- 11) Status of correction of deficient items.
- 12) Field observations.
- 13) Status of RFIs.
- 14) Status of proposal requests.
- 15) Pending changes.
- 16) Status of Change Orders.
- 17) Pending claims and disputes.
- 18) Documentation of information for payment requests.

4. Minutes:

a. Contractor shall record significant discussions and agreements achieved and distribute the meeting minutes to everyone concerned, including Owner and Engineer, within three days of the meeting.

b. Minutes shall include the following information in addition to the recorded discussions:

- 1) Project Name and Number
- 2) List of Attendees
- 3) Project Start Date
- 4) Project Substantial Completion Date
- 5) Time Extension Request days to be submitted to Owner

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Startup construction schedule.
  - 2. Contractor's construction schedule.
  - 3. Construction schedule updating reports.
  - 4. Daily construction reports.
- B. Related Requirements:
  - 1. Section 013300 "Submittal Procedures" for submitting schedules and reports.
  - 2. Section 014000 "Quality Requirements" for submitting a schedule of tests and inspections.

#### **1.3 INFORMATIONAL SUBMITTALS**

- A. Format for Submittals: Submit required submittals in PDF or paper copy format.
- B. Startup construction schedule.
- C. Construction Schedule Updating Reports: Submit with Progress Meeting Agenda.
- D. Daily Construction Reports: Submit at weekly intervals.

#### **1.4 COORDINATION**

- A. Coordinate Contractor's construction schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from entities involved.
  - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

## **PART 2 - PRODUCTS**

### **2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL**

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial Completion.
  - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
  - 1. Work Restrictions: Show the effect of the following items on the schedule:
    - a. Coordination with existing construction.
    - b. Limitations of continued occupancies.
    - c. Uninterruptible services.
    - d. Partial occupancy before Substantial Completion.
    - e. Use of premises restrictions.
    - f. Provisions for future construction.
    - g. Seasonal variations.
    - h. Environmental control.
  - 2. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
    - a. Subcontract awards.
    - b. Submittals.
    - c. Purchases.
    - d. Fabrication.
    - e. Deliveries.
    - f. Installation.
    - g. Tests and inspections.

### **2.2 REPORTS**

- A. Daily Construction Reports: Prepare a daily construction report with photographs incorporated into the report to document progress.

## **PART 3 - EXECUTION**

### **3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE**

- A. Contractor's Construction Schedule Updating: At weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one at each regularly scheduled progress meeting.
1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  3. As the Work progresses, indicate final completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Engineer, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
  2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

### **3.2 WEATHER DELAYS**

- A. "Normal rainfall" compiled by the State climatologist, based on U.S. Weather Bureau Records for Lago Vista, Texas, is considered a part of the Calendar Day Contract, and is not a justification for an extension of time. Listed below are the number of days in each month for which no compensatory days for rainfall events ("Rain Days") in such months may be claimed:
1. January..... 8 days
  2. February ..... 8 days
  3. March..... 7 days
  4. April. .... 7 days
  5. May..... 9 days
  6. June..... 6 days
  7. July ..... 5 days
  8. August ..... 5 days
  9. September ..... 7 days
  10. October..... 7 days
  11. November ..... 7 days
  12. December ..... 7 days

**END OF SECTION**



## **SECTION 01 33 00 - SUBMITTAL PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
  - 1. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.

#### **1.3 DEFINITIONS**

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

#### **1.4 ACTION SUBMITTALS**

- A. Submittal Schedule: Submit a schedule of submittals on form provided at the end of this Section or on electronic form provided by Engineer. Submittal Schedule will be updated and included with all submittals.

#### **1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS**

- A. Engineer's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Engineer for Contractor's use in preparing submittals.

1. Engineer will, upon request, furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings and Project record drawings. Engineer makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 4 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow 4 days for review of each resubmittal.
- D. Format:
1. Submittal Log: Update to reflect current submittals attached and include with each submittal.
  2. Cover Page: Use the Submittal Cover Sheet included with this section as the front page for each submittal package. A separate submittal cover sheet shall be used for each specification section. Use as many submittal cover sheets as needed to complete the submittal package.
    - a. Indicate name of firm or entity that prepared each submittal on label or title block.
    - b. Provide a space on label or beside title block to record Contractor's review and approval markings and action taken by Engineer.
    - c. Include the following information for processing and recording action taken:
      - 1) Project name.
      - 2) Date.
      - 3) Name of Engineer.
      - 4) Name of Contractor.

- 5) Name of subcontractor.
  - 6) Name of supplier.
  - 7) Name of manufacturer.
  - 8) Submittal number or other unique identifier, including revision identifier. Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
  - 9) Number and title of appropriate Specification Section.
  - 10) Drawing number and detail references, as appropriate.
  - 11) Location(s) where product is to be installed, as appropriate.
  - 12) Other necessary identification.
3. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Engineer observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
- E. Options: Identify options requiring selection by Engineer.
- F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Engineer on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
  2. Note date and content of revision in label or title block and clearly indicate extent of revision.
  3. Resubmit submittals until they are marked with approval notation from Engineer's action stamp.
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Engineer's action stamp.

## **PART 2 - PRODUCTS**

### **2.1 SUBMITTAL PROCEDURES**

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Submit electronic submittals via email as PDF electronic files or as a minimum of three (3) paper copies. Engineer will return annotated documents in the same format received. Annotate and retain one copy of returned submittals in the Project record document file.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
  2. Mark each copy of each submittal to show which products and options are applicable.
  3. Include the following information, as applicable:
    - a. Manufacturer's catalog cuts.
    - b. Manufacturer's product specifications.
    - c. Standard color charts.
    - d. Statement of compliance with specified referenced standards.
    - e. Testing by recognized testing agency.
    - f. Application of testing agency labels and seals.
    - g. Notation of coordination requirements.
    - h. Availability and delivery time information.
  4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams showing factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  5. Submit Product Data before or concurrent with Samples.
  6. Submit Product Data in the following format:
    - a. PDF electronic file, OR
    - b. Three (3) paper copies of Product Data. Engineer will return two copies.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer if specified.

2. Submit Shop Drawings in the following format:
  - a. PDF electronic file; OR
  - b. Three (3) opaque copies of each submittal. Engineer will retain one copy and issue one copy to Owner; remainder will be returned.
  
- D. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
  
- E. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."
  
- F. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
  
- G. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of Engineers and owners, and other information specified.
  
- H. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
  
- I. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
  
- J. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
  
- K. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
  
- L. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
  
- M. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
  
- N. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
  
- O. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

- P. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- Q. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- R. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

### **PART 3 - EXECUTION**

#### **3.1 CONTRACTOR'S REVIEW**

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017700 "Closeout Procedures."

#### **3.2 ENGINEER'S ACTION**

- A. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or revisions required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- B. Informational Submittals: Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Engineer.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may be returned by the Engineer without action.

**END OF SECTION**

## **SECTION 013300 - SUBMITTAL PROCEDURES**

### **SUBMITTAL PROJECT FORMS SUPPLEMENT**

The Submittal Cover Sheet in this supplement to the Submittal Procedures are part of the Contract Documents and are to be used as required by these Documents. The submittal cover sheet must be included with all submittals in the format provided, all other formats will be rejected.





## **SECTION 01 42 00 - REFERENCES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 DEFINITIONS**

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Engineer's action on Contractor's submittals, applications, and requests, "approved" is limited to Engineer's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Engineer. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

#### **1.3 INDUSTRY STANDARDS**

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and

effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
  - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

#### 1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AABC	Associated Air Balance Council www.aabc.com	(202) 737-0202
AAMA	American Architectural Manufacturers Association www.aamanet.org	(847) 303-5664
ACI	American Concrete Institute (Formerly: ACI International) www.concrete.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org	(205) 257-2530
AF&PA	American Forest & Paper Association www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association www.aga.org	(202) 824-7000

AI	Asphalt Institute www.asphaltinstitute.org	(859) 288-4960
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300
AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
ANSI	American National Standards Institute www.ansi.org	(202) 293-8020
APA	APA - The Engineered Wood Association www.apawood.org	(253) 565-6600
ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org	(202) 207-0917
ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASHRAE	American Society of Heating, Refrigerating and Air- Conditioning Engineers www.ashrae.org	(800) 527-4723 (404) 636-8400
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9500
AWPA	American Wood Protection Association (Formerly: American Wood-Preservers' Association) www.awpa.com	(205) 733-4077
CISCA	Ceilings & Interior Systems Construction Association www.cisca.org	(630) 584-1919
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(404) 622-0073
CRRC	Cool Roof Rating Council www.coolroofs.org	(866) 465-2523 (510) 485-7175
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
FM Approvals	FM Approvals LLC	(781) 762-4300

	www.fmglobal.com	
FM Global	FM Global (Formerly: FMG - FM Global) www.fmglobal.com	(401) 275-3000
GA	Gypsum Association www.gypsum.org	(301) 277-8686
ICC	International Code Council www.iccsafe.org	(888) 422-7233 (202) 370-1800
ICRI	International Concrete Repair Institute, Inc. www.icri.org	(847) 827-0830
NAIMA	North American Insulation Manufacturers Association www.naima.org	(703) 684-0084
NCMA	National Concrete Masonry Association www.ncma.org	(703) 713-1900
NFPA	NFPA (National Fire Protection Association) www.nfpa.org	(800) 344-3555 (617) 770-3000
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
NSPE	National Society of Professional Engineers www.nspe.org	(703) 684-2800
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association www.smacna.org	(703) 803-2980
SPIB	Southern Pine Inspection Bureau www.spib.org	(850) 434-2611
SPRI	Single Ply Roofing Industry www.spri.org www.tiaonline.org	(781) 647-7026
TRI	Tile Roofing Institute www.tilerroofing.org	(312) 670-4177
UBC	Uniform Building Code (See ICC)	
UL	Underwriters Laboratories Inc. www.ul.com	(877) 854-3577

WSRCA Western States Roofing Contractors Association (800) 725-0333  
www.wsrca.com (650) 938-5441

WWPA Western Wood Products Association (503) 224-3930  
www.wwpa.org

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

IAPMO International Association of Plumbing and Mechanical Officials (909) 472-4100  
www.iapmo.org

ICC International Code Council (888) 422-7233  
www.iccsafe.org

ICC-ES ICC Evaluation Service, LLC (800) 423-6587  
www.icc-es.org (562) 699-0543

D. Standards and Regulations: Where abbreviations and acronyms are used in

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 UTILITIES**

- A. Provide power and water as necessary to complete the Work. Utilities will be provided and paid for by Owner.

#### **1.3 TEMPORARY ELECTRICITY**

- A. Connect to existing power service at locations approved by Owner's representative. Power consumption shall not disrupt Owner's need for continuous service.
- B. Provide temporary electric feeder from existing building electrical service at location as directed by Owner.
- C. Exercise measures to conserve energy.
- D. Provide power outlets for construction operations, with branch wiring and distribution boxes located at each roof area. Provide flexible power cords as required. All such devices shall be GFCI.
- E. Provide main service disconnect and over-current protection at convenient location.
- F. Permanent convenience receptacles may not be utilized during construction.

#### **1.4 TEMPORARY WATER SERVICE**

- A. Contractor is responsible for connecting to existing water source for construction operations, at location as directed by Owner.
- B. Exercise measures to conserve water.

#### **1.5 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain enclosed portable self-contained units or temporary water closets and urinals, secluded from public view, in location approved by Owner. Keep units locked at all times. Provide access to Contractor's employees only.

- B. Existing facilities shall not be used.
- C. Maintain daily in clean and sanitary condition.

#### 1.6 TEMPORARY FIRE PROTECTION

- A. Maintain a minimum of two, 30-pound fire extinguishers at each area where work is in progress at all times.

#### 1.7 BARRIERS

- A. Provide barriers around trees and plants that are within thirty feet of the building. Protect lawns and landscape. Replace trees, plants, lawns and landscaped areas that are damaged by Contractor.
- B. Protect vehicular traffic and pedestrians from damage or injury, as applicable, which may arise out of the Work.
- C. Protect buildings, equipment, sidewalks, etc. Contractor is responsible for cleaning or repairing any surfaces which are marked or otherwise damaged as a result of the Work to the satisfaction of Owner to the extent that it is returned to its original condition.
- D. Provide ground and parking lot protection under heavy equipment (i.e., lifts), to allow for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- E. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- F. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

#### 1.8 STORMWATER CONTROL

- A. Contractor shall ensure that stormwater drains properly from the roof during construction. The building shall be kept watertight throughout the construction process.
- B. Protect site storage areas from ponding or running water. Provide water barriers as required to protect products from drainage.

#### 1.9 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification Sections.

- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits or openings.
- D. Prohibit traffic or storage upon new roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from roofing material manufacturer.

#### 1.10 PARKING

- A. Arrange for temporary parking areas to accommodate construction personnel as approved by Owner. Parking will be allowed in staging areas only and no parking will be allowed for employees' personal vehicles.

#### 1.11 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly fashion on a daily basis.
- B. Remove debris and rubbish from closed or remote spaces prior to enclosing the space.
- C. Remove waste materials, debris, and rubbish from site daily and dispose off-site.

#### 1.12 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary equipment, facilities and materials, prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

**END OF SECTION**



## **SECTION 01 51 23 - TEMPORARY HEATING, COOLING, AND VENTILATING**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 DESCRIPTION

- A. For those Projects or Repair/Maintenance Work requiring incidental Mechanical Work; includes installation of temporary mechanical work, disconnects, reconnects, and other incidental mechanical and plumbing work, not specified herein but necessary for the successful execution of the Work as set forth in the Contract Documents.

### **PART 2 - PRODUCTS**

#### 2.1 MATERIAL AND WORKMANSHIP

- A. All materials and equipment required shall be:
  - 1. Installed by mechanics skilled in their trades, working under the direct supervision of competent experienced foremen or superintendents.
  - 2. Installed in compliance with all applicable Occupational Safety and Health Administration Rules and Regulations.
  - 3. Installed in compliance with all applicable City of Lago Vista Ventilating, Air Conditioning, and Plumbing Codes.
- B. Prior to conducting any mechanical work, perform a complete survey of all roof top mechanical equipment with the Owner's representative to verify the functional condition of the equipment. Document the survey in writing, signed by the Owner's representative and the Contractor. Provide a copy to the Engineer.

#### 2.2 TIMELY PLACEMENT OF MATERIALS AND EQUIPMENT

- A. Coordinate work operations with other trades as necessary.

## **PART 3 - EXECUTION**

### **3.1 GENERAL**

- A. Install temporary mechanical work necessary to comply with the work of other Sections.
- B. Remove temporary mechanical work necessary to comply with other Sections at completion of Project and correct any damage to property.
- C. At the end of the Project, any non-functional mechanical equipment (not noted on the survey list) will be the responsibility of the Contractor to restore to functional working order.

**END OF SECTION**

## **SECTION 01 51 13 - TEMPORARY ELECTRICITY**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 DESCRIPTION

- A. For those Projects or Repair/Maintenance Work requiring incidental Electrical Work: Included installation of temporary power, disconnects, reconnects and other incidental electrical work necessary to perform the Work of the Contract Documents.

### **PART 2 - PRODUCTS**

#### 2.1 MATERIALS AND WORKMANSHIP

- A. All materials and equipment required shall be:
  - 1. Approved by Underwriters Laboratories and so labeled.
  - 2. For wire and cable, marked as required by Article 310-1- National Electrical Code.
  - 3. Installed by mechanics skilled in their trades, working under the direct supervision of competent experience foremen or superintendents.
  - 4. Installed in compliance with all applicable Occupational Safety and Health Administration and the 2014 National Electrical Code (NFPA 70) as adopted and modified by the City of Lago Vista.
- B. Prior to conducting any electrical work, perform a complete survey of all roof top electrical lines and service with the Owner's representative to verify the functional condition of the electrical service. Document the survey in writing, signed by the Owner's representative and the Contractor. Provide a copy to the Engineer.

#### 2.2 TIMELY PLACEMENT OF MATERIALS AND EQUIPMENT

- A. Coordinate work operations with other trades as necessary.

## **PART 3 - EXECUTION**

### **3.1 GENERAL**

- A. Provide temporary electrical power as required to perform the Work of the Contract Documents.
- B. Remove all temporary electrical items at completion of Project and correct any damage to property.
- C. At the end of the Project, any non-functional electrical service (not noted on the survey list) will be the responsibility of the Contractor to restore to functional working order.

**END OF SECTION**

## **SECTION 01 60 00 - PRODUCT REQUIREMENTS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 012100 "Allowances" for products selected under an allowance.

#### **1.3 DEFINITIONS**

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
  - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

#### **1.4 QUALITY ASSURANCE**

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
  - 1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
  - 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Engineer will determine which products shall be used.

## 1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
  - 1. Store products to allow for inspection and measurement of quantity or counting of units.
  - 2. Store materials in a manner that will not endanger Project structure.
  - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  - 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  - 6. Protect stored products from damage and liquids from freezing.
  - 7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

## 1.6 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
  - 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
  - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

## **PART 2 - PRODUCTS**

### **2.1 PRODUCT SELECTION PROCEDURES**

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Engineer will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications name single or multiple manufacturers or sources, provide a product by the named manufacturers or sources that comply with the requirements.

### **2.2 COMPARABLE PRODUCTS**

A. Conditions for Consideration: Engineer will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Engineer may return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of Engineers and owners, if requested.
5. Samples, if requested.

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION**



## **SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
  - 1. Disposing of nonhazardous demolition and construction waste.

#### 1.3 DEFINITIONS

- A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.
- C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner's property.

#### 1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition and construction waste becomes property of Contractor.

#### 1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with transportation and disposal regulations of authorities having jurisdiction.

### **PART 2 - PRODUCTS (Not Used)**

## **PART 3 - EXECUTION**

### **3.1 DISPOSAL OF WASTE**

- A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
  - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.

**END OF SECTION**

## **SECTION 01 77 00 - CLOSEOUT PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
  - 5. Repair of the Work.

#### **1.3 CLOSEOUT SUBMITTALS BY CONTRACTOR**

- A. Project Specific Documents:
  - 1. Product Warranties
  - 2. Operations and Maintenance Manuals
  - 3. As-Built Documents (1 copy of Drawings and Specifications)
  - 4. Consent of Surety to Final Payment
  - 5. Certificate of Satisfaction of Bills
  - 6. Final Payment Application
  - 7. Permit Closeout Documentation

#### **1.4 PROJECT RECORD DOCUMENTS**

- A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
  - 1. Contract Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change orders and other modifications to the Contract.
  - 5. Reviewed shop drawings, product data, and samples.
- B. Store record documents separate from documents used for construction.

- C. Record information concurrent with construction progress. The Contractor will allow Engineer to review record documents for current change documentation at each pay request.
- D. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
  - 1. Manufacturer's name and product model and number.
  - 2. Product substitutions or alternatives utilized.
  - 3. Changes made by Addenda and Modifications.
- E. Record documents and Shop Drawings: Legibly mark each item to record actual construction including:
  - 1. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the work.
  - 2. Field changes of dimension and detail.
  - 3. Details not on original Contract Drawings.

#### 1.5 WARRANTIES AND GUARANTEES

- A. Provide two original, notarized copies of all warranties and guarantees.

#### 1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
  - 1. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  - 2. Complete final cleaning requirements, including touchup painting.
  - 3. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- C. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer, that must be completed or corrected before certificate will be issued.

## 1.7 FINAL COMPLETION PROCEDURES

- A. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Final Completion for entire Project :
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Remove snow and ice to provide safe access to building.
    - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

- g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
  - h. Sweep concrete floors broom clean in unoccupied spaces.
  - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
  - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
  - k. Remove labels that are not permanent.
  - l. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  - m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  - n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
- C. Construction Waste Disposal: Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls."

### 3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
  - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
  - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
    - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
  - 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

**END OF SECTION**

## **SECTION 02 41 19 - SELECTIVE DEMOLITION**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Existing materials for removal include:
  - 1. Base Proposal and Alternate No. 4:
    - a. Existing gutters and downspouts, flashings, existing ridge and hip caps.
    - b. Abandoned penetrations, as indicated on the Drawings.
    - c. Roof system MEP items to be modified as specified.
    - d. Cut back existing roof panels to accommodate new gutter and sheet metal installation.
  - 2. Alternate No. 2:
    - a. Existing metal panels at Roof Areas A03.1 – A03.4.
  - 3. Alternate No. 4:
    - a. Trim wall panels above new roofs to accommodate new roof system flashings. Install cold galvanizing compound at all cut edges to remain.
  - 4. Alternate No. 6:
    - a. Existing metal panels at Roof Area A01.
- B. Existing materials to remain in scope of work area include:
  - 1. Existing metal roof system at retrofit areas.
  - 2. Existing stucco and metal panel walls above roofs.
  - 3. Existing cast iron downspout boots.
- C. Related Requirements:
  - 1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.

#### 1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- C. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

#### 1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

## 1.4 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.
1. Inspect and discuss condition of construction to be selectively demolished.
  2. Review structural load limitations of existing structure.
  3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
  5. Review areas where existing construction is to remain and requires protection.

## 1.5 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property. Indicate proposed locations and construction of barriers, and methods to be used for containment of dust and debris.

- B. Schedule of Selective Demolition Activities:

Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's and tenants' on-site operations are uninterrupted.
  2. Interruption of utility services. Indicate how long utility services will be interrupted.
  3. Coordination for shutoff, capping, and continuation of utility services.
  4. Use of elevator and stairs (as applicable).
  5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- C. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations. Submit before Work begins.

## 1.6 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
1. Coordinate work activities daily with Owner so Owner can place protective dust and water-leakage covers over sensitive equipment and furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below work area.



2. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below affected area. Verify that occupants below work area have been evacuated before proceeding with work over impaired deck area.
- B. Protect building, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from demolition operations.
- C. Protect existing roofing system that is not to be reroofed.
1. Loosely lay 1-inch minimum thick, expanded polystyrene (EPS) insulation over existing roofing in areas indicated. Loosely lay 15/32-inch plywood or OSB panels over EPS. Extend EPS past edges of plywood or OSB panels a minimum of 1 inch.
  2. Limit traffic and material storage to areas of existing roofing that have been protected.
  3. Maintain temporary protection and leave in place until replacement roofing has been completed. Remove temporary protection on completion of reroofing.
- D. Maintain roof drainage components in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
1. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding. Do not permit water to enter into or under existing roofing system components that are to remain.
- E. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- F. Conditions existing at time of inspection for bidding are maintained by Owner as far as practical.
1. Construction Drawings and Project Manual for existing roofing system are provided for Contractor's convenience and information, but are not a warranty of existing conditions. They are intended to supplement rather than serve in lieu of Contractor's own investigations. Contractor is responsible for conclusions derived from existing documents.
- G. Weather Limitations: Proceed with demolition only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
1. Do not proceed with removal of existing roofing on days where the chance of precipitation is equal to or exceeds thirty percent (30%). Document inclement weather days in Time Extension Request submitted with Pay Applications.
  2. Remove only as much roofing in one day as can be made watertight in the same day.

3. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- H. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- I. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
1. Maintain fire-protection facilities in service during selective demolition operations.

## 1.7 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements:
1. Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
  2. Comply with all applicable OSHA regulations regarding demolition and handling of Portland cement based materials. Provide HEPA filter equipped vacuums to contain dust caused by demolition operations.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Coordinate the work of this Section with the requirements of other Sections. Do not remove roofing materials that cannot be made watertight by the end of the same day. Do not remove roofing materials when inclement weather
- B. Verify that utilities have been disconnected and capped before starting selective demolition operations.

- C. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- D. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- E. Survey of Existing Conditions: Record existing conditions by use preconstruction photographs or video.
  - 1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
  - 2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

### 3.2 UTILITY SERVICES

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services serving areas to be selectively demolished.
  - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
  - 2. Arrange to shut off utilities with utility companies.
  - 3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  - 4. Disconnect, demolish, and remove equipment and components indicated on Drawings to be removed.
    - a. Equipment to Be Removed and Replaced: Disconnect and temporarily cap services and remove equipment. Install new equipment to connect to existing services as specified in other Sections.

### 3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.

3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 01 50 00 "Temporary Facilities and Controls."
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

### 3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  6. Dispose of demolished items and materials promptly.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.

4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Engineer, items may be removed to a suitable, protected storage location during selective demolition, cleaned and reinstalled in their original locations after selective demolition operations are complete.

### 3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site.
1. Do not allow demolished materials to accumulate on-site.
  2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  3. Comply with requirements specified in Section 01 74 19 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.

### 3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

**END OF SECTION**

## **SECTION 05 31 45 - STRUCTURAL RETROFIT ROOF SUB-FRAMING SYSTEM**

### **PART 1 - GENERAL**

#### **1.1 DESCRIPTION**

- A. The structural retrofit roof sub-framing system shall provide support for a new roof system constructed over the existing building roof and shall accommodate the irregularities of the existing roof to form a structural framework for supporting the new roof assembly at the specified slope. It shall be engineered in accordance with the specified code and design loading and shall transfer positive acting loads at each attachment location into an existing structural member.
- B. Furnish all labor, material, tools, equipment and services for the fabrication of retrofit roof sub-framing as indicated, in accordance with provisions of the Contract Documents.
- C. Completely coordinate work with of other trades.
- D. Although such work is not specifically indicated, the contractor/installer shall coordinate with the metal roof system supplier to furnish and install supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation.

#### **1.2 RELATED WORK**

- A. Section 07 22 00 - Roof and Deck Insulation.
- B. Section 07 61 00 – Sheet Metal Roofing.
- C. Section 07 62 00 – Sheet Metal Flashing and Trim.

#### **1.3 QUALITY ASSURANCE**

- A. Applicable Standards: All following referenced publications shall be the most current edition in effect on the date of solicitation.
  - 1. American Institute of Steel Construction (AISC)
    - a. AISC - Specification for Structural Steel for Buildings
  - 2. American Society of Civil Engineers (ASCE)
    - a. ASCE-7 - Minimum Design Loads for Buildings and other Structures
  - 3. American Society for Testing and Materials (ASTM) (As Applicable)
    - a. ASTM A 446 - Steel Sheet, Zinc Coated (Galvanized) By The Hot-Dip Process
    - b. ASTM A 653/A 653M – Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy - Coated (Galvannealed) By Hot-Dip Method
    - c. ASTM E 1592 - Structural Performance Test for Metal Panel and Siding Systems by Uniform Static Air Pressure Difference
  - 4. Underwriters Laboratories, Inc. (UL)
    - a. UL 580 - Tests for Uplift Resistance of Roof Assemblies

5. American Society Of Heating, Refrigerating And Air-Conditioning Engineers (ASHRAE)
  - a. ANSI/ASHRAE Standard 90.1, Energy Standard for Buildings

B. Manufacturer Qualifications:

1. Manufacturer shall have a minimum of 5 years' experience in manufacturing and fabrication of retrofit sub-framing systems of this nature, and be approved by metal roof panel manufacturer.
2. Light-gauge steel sub-framing components specified in this section shall be produced in a factory environment by roll forming and press-brake equipment assuring the highest level of quality control.

C. Installing Contractor Qualifications:

1. Installer shall be experienced in installation of structural light-gage retrofit framing systems for a minimum of two (2) years prior to bid date, and shall meet the following minimum criteria:
  - a. Provide evidence of certification by the manufacturer, trained in the installation of the retrofit framing system specified.
  - b. Provide minimum of 5 project references of similar use and size listing the Architect, owner, location, scope and name of project as provided by the manufacturer
  - c. Provide name and training certification for at least 1 full-time project foreman/superintendent at the jobsite by the metal retrofit roofing system manufacturer.

#### 1.4 SUBMITTALS

A. The following shall be submitted by the retrofit framing system manufacturer for approval in a timely manner after award of contract.

1. Product Data: Manufacturer's product literature for retrofit framing system components including purlins and supports, clips, bracing and connection fasteners.
2. Shop Drawings:
  - a. Roof Plans: indicating dimensioned layout of sub-purlin system and dimensions of perimeter and field zones.
  - b. Details: include catalog cuts, design and installation drawings and other data necessary to clearly describe design, materials, gages, sizes, layouts, construction details, fasteners and erection.
3. Engineering design calculations for the structural properties of the retrofit framing components and metal roof panel system, which shall bear the seal and signature of a Professional Engineer registered to practice in the State of Texas.
4. Obtain approval of all submittals prior to fabrication and installation.

B. Design Data: Submit design data from independent engineering firm indicating table of wind uplift capacity of sub-purlins.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened bundles, containers, and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage:
  - 1. Store materials in accordance with manufacturer's instructions.
  - 2. Protect sub-purlins from corrosion, deformation, and other damage.
  - 3. Store sub-purlins off ground, with 1 end elevated to provide drainage.
- C. Handling: Protect materials during handling and installation from corrosion, deformation, and other damage.

## 1.6 EXISTING CONDITIONS

- A. Refer to Roof System Log in the Drawings.
- B. The Contractor shall perform a detailed survey of the existing roof(s) and confirm all measurements, quantities, and conditions.
  - 1. Information provided in the Drawings shall be field verified by the Contractor prior to submittal and procurement of materials.
    - a. The Contractor shall obtain field measurements on the existing roof geometry including seam height, width, length, eave height, roof pitch, bar joist spacing, and penetration types.
    - b. This information is to be forwarded to the retrofit sub-framing system manufacturer for coordination and integration into the design and installation documents.
  - 2. The contractor shall conduct field pullout testing for evaluation and selection of framing system anchors to attach the new retrofit framing base members to the existing roof support system.
    - a. The testing will be conducted at multiple locations of the existing roof area using a calibrated pullout tester. Pullout values shall be recorded at each location for each specific anchor used.
    - b. All anchors shall penetrate and attach to existing structural support members.
    - c. The contractor shall have the attachment connection designed to satisfy wind uplift values, as provided by the retrofit system manufacturer, multiplied by a safety factor of 2.5. This analysis shall be submitted for review and approval.

## 1.7 DESIGN REQUIREMENTS

- A. General



1. Design for approval and installation in accordance with the Drawings, this Section, and applicable specification sections, a complete retrofit sub-framing and roof assembly as a structural package, engineered and factory fabricated in accordance with all referenced and applicable Codes.
2. The sub-framing system may be designed by the retrofit sub-framing manufacturer and the roof system may be designed by the roof manufacturer. However, both systems are to be designed to perform as one engineered structural package where the roof system controls the placement of sub-framing members.
3. Any additions/revisions to sub-framing members as a result of field conditions and/or demands, shall be the contractor's responsibility, and shall be submitted for review and approval by the manufacturer.
4. Wind Load Design: The assembly shall withstand a wind load as required by the code and indicated below.
  - a. The roof assembly, which includes portions of the retrofit framing system, must be tested in accordance with the UL-580 test procedure and the ASTM E 1592 Structural Performance Test for Metal Roof and Siding Systems by Uniform Static Air Pressure. The roof system shall be classified as a FM 1-90 rated assembly.
5. Live and Snow Load Design: Horizontal Assemblies shall withstand minimum live and snow loads as required by the code plus the weight of the retrofit framing and metal roof panel assembly.
  - a. The retrofit framing system shall transfer loads from the new roof system to the existing roof structure in such a manner as to not overload the existing roof's structural support members as well as the substrate and membrane assembly.
  - b. Horizontal deflection shall be  $L/180$  of span after installation of equipment and vertical deflection in framing members shall not exceed  $H/60$ th of their length.

B. Engineering Design Criteria:

1. Building Code: IBC 2015/ASCE7-2010.
2. Additional Requirements: None.
3. Occupancy Group: Educational-E
4. Occupancy Category: III
5. Importance Factor: 1.0
6. Minimum Roof Snow Load: 5 PSF
7. Wind Speed: 120MPH, 3 Second Gust
8. Exposure Category: C
9. Enclosure: Enclosed

## PART 2 - PRODUCTS

### 2.1 RETROFIT STEEL SUB-PURLINS

- A. Standard Retrofit Factory-notched Sub-Purlins: one-piece, custom-notched and punched, Z-shaped section. Pre-punched to nest over existing roof panel seams for low-profile attachment. Integrally formed Anti-Rotational Arm as required for high clip standing seam panels. Fastens directly into existing purlins, joists or structural decking with fasteners.
1. "Roof Hugger"
  2. Equivalent sub-purlin system by others and approved by metal roof panel system manufacturer, or manufactured by metal roof panel manufacturer.
- B. Material:
1. Galvanized steel, ASTM A 653 or A 1011, G-90, yield strength 50 KSI.
  2. Thickness: 0.060" minimum, 16-Gauge, increase as required for engineered design
  3. Web Height: manufacturer's standard, refer to the Drawings.
  4. Base Flange Width: Pre-punch base flange to manufacturer's standard unless otherwise specified.
  5. Top Flange Width: Nominally 2" with 0.25" minimum stiffening lip unless otherwise specified.
  6. Length: Nominally 10'-0" long, plus an additional +/- 1" top flange extension for part lap or per manufacturer's recommendations.
- C. Attachment Fasteners/Anchorage: All anchors shall attach directly into existing structural members. A minimum of three (3) anchors shall be used for base clips and channels. Fasteners used for the retrofit framing system shall be a minimum ¼" diameter with 14 threads per inch, having a stress relief head and a corrosion resistant coating.
1. "Standard Sub-Purlin:
    - a. Attachment to Existing Joists: Typical 2- ¼"-14 or #12-14 threads per inch, DP3 self- drilling fastener per L.F., or as specified.
    - b. Existing Purlin Strengthening, Top Flange Lap Connection: Typical 4-#10-16 x 1" pancake head fasteners through overlapping Hugger top flanges, joining them into a continuous member, per lap connection or as specified.
    - c. Mid-Span Sub-Purlin to Sub-Rafter: Typical 1 #10-16x1" pancake head installed through Hugger top flange, into sub-rafter.
    - d. Mid-Span Sub-Purlin to Existing Panel: Typical #17-14 fasteners shall be installed through the mid-span sub-purlin into the existing roof panels as specified or per standard details (over-drilling of pre-punched hole will be required).
    - e. Fastener Length: As required to penetrate existing purlins in accordance with fastener attachment standards.
  2. Sub-Purlin w/ Anti-Rotational Arm:
    - a. Attachment to Existing Purlins/Joist/Decking: Typical 1 ¼ - 14 X 2.375" DP3 self-drilling fastener with 1.375" standoff.
    - b. Attachment of Anti-Rotational Arm to Existing Panel: #17-14 fastener or as specified.

3. Integral Sub-Rafters (sub-rafters that fit beneath the rib cut out in the sub-purlin):
  - a.  $\frac{1}{4}$ "-14 threads per inch, DP3 self-drilling fasteners install through the sub-purlin, through the integral sub-rafter, through the existing panel and into the existing purlin, rafters or joist; quantity as specified by design (typically 4 per intersection)
4. Sub-Rafter Hat Channels for designated high load areas:
  - a. Attachment to Existing Purlins, Trusses, Rafters or Joist:  $\frac{1}{4}$ inch-14 threads per inch DP3 self-drilling screws.
  - b. Length as required for minimum required penetration into truss, rafter or joist.
5. Sub-Purlin Hat Channels: Attachment to installed sub-rafters:  $\frac{1}{4}$  inch-14 threads per inch, DP3 self-drilling fasteners, quantity as specified.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine existing roof areas to receive sub-purlins. Notify Engineer if areas are not acceptable or structurally adequate. Do not begin installation until unacceptable conditions have been corrected.
- B. Verify existing purlins and eave struts are in good serviceable condition, without rust-thru of flanges.
- C. Field Verify Before Ordering of and Installation of Sub-Purlins:
  1. Existing panel profile and panel rib dimensions.
  2. Existing panel run-out by measuring roof over several 20-foot areas to confirm panels were installed on module and in-square. Note variations.

#### **3.2 INSTALLATION OF SUB-FRAMING AND OTHER ROOFTOP APPURTENCES**

- A. Install sub-purlins in accordance with manufacturer's instructions at locations indicated on the standard details or Engineered Drawings if provided.
- B. Limit installation of sub-purlins to amount that can be roofed over each day.
- C. Install 3 fasteners per linear foot or as directed by Manufacturer.
- D. Install sub-purlins directly over existing purlins and fasten to existing purlin through existing panel pan section.
- E. If integral sub-rafters are used, loosely lay sub-rafters over the existing panel high ribs and between the existing purlins. Sub-rafter spacing and number of fasteners shall be as specified on the engineered drawings.
  1. Press the sub-purlins over the sub-rafters on the existing purlin lines in areas where they are specified and install #12-14 DP3 fasteners (or as specified) through the base flange of the sub-purlin, through the sub-rafter and then into the existing purlins being careful to maintain the alignment of the sub-rafters.

2. Install sub-purlins onto the integral sub-rafter between the existing purlins as specified with #12-14 threads per inch, DP3 fasteners, typically one fastener on each side of the sub-rafter unless otherwise specified.
3. Where the sub-purlin passes over the fitted sub-rafter a #10-16 pancake head fastener should be installed through the top flange of the sub-purlin into the top of the new fitted sub-rafter.
4. Where the sub-purlin passes over the fitted sub-rafter, fasten through the top flange of the sub- purlin with a #10-16 pancake head fastener into the top of the new fitted sub-rafter.
5. Removal of Existing Roof Fasteners: Do not remove existing roof fasteners unless installation of sub-purlins over fasteners causes sub-purlins to “roll” or “porpoise”. Some distortion of base flange of sub-purlins caused by existing roof fasteners is normal.

**END OF SECTION**

## **SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY**

### **PART 1 - GENERAL**

#### 1.1 DESCRIPTION

- A. All materials and labor for work requiring new plywood and lumber will be provided and installed by Contractor.

#### 1.2 QUALITY ASSURANCE

- A. Rough Carpentry Lumber: Visible grade stamp of agency certified by SFPA.
- B. Provide Underwriters' Laboratories (UL) approved identification for fire resistant treated materials.

#### 1.3 REGULATORY REQUIREMENTS

- A. Conform to applicable building code, latest edition, for fire retardant requirements of wood.
- B. Conform to FM Loss Data Bulletin I-49 for securement requirements.

#### 1.4 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Division 1.
- B. Indicate materials, fastening methods, accessories, and locations.
- C. Submit manufacturer's certifications under provisions of Division 1 that wood treatment is in accordance with applicable requirements.

### **PART 2 - PRODUCTS**

#### 2.1 MATERIALS

- A. Lumber and Wood Cants: No. 2 Grade Yellow Pine, Standard Douglas Fir., kiln dried to 19% (KD).
- B. Curbs and curb extensions: No. 2 grade yellow pine, standard Douglas Fir., kiln dried to 19% (KD).
- C. Plywood: Exterior Grade CDX or better, APA grade marked, 3/4" thickness unless otherwise noted in the drawings, minimum span rating 48/24.
- D. All composite wood materials shall be provided with no added formaldehyde.

#### 2.2 FASTENERS

- A. General: Fasteners compatible to all materials to which they come in contact so that dielectric corrosion does not occur.
- B. Wood Nailer Fasteners:
  - 1. Wood Substrate: #10 Type 305 stainless steel flat head screws, length as necessary to penetrate underlying wood support members a minimum of 1-1/4 inch. Each fastener to have a minimum pull out resistance of 100 pounds.

2. Metal Substrate: #15 diameter, fluorocarbon coated roofing screw. Install 5/8-inch stainless steel washer under screw heads. Each fastener to have a minimum embedment of 3/4-inch, and minimum pull out resistance of 300 pounds in the existing metal roof panel.
3. Structural Steel Substrate: Powder actuated fastener, universal knurled shank, Hilti X-U or approved equivalent. Length as required to provide 1/2-inch of point penetration.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that surfaces are ready to receive work.
- B. Verify mechanical, electrical, and building items affecting work of this Section are placed and ready to receive this work.
- C. Beginning of installation means acceptance of existing conditions.

### **3.2 INSTALLATION**

- A. Set and secure materials and components in place, plumb, and level. Cut, rip, and plane wood as required for proper installation.
- B. Stagger nailer end joints a minimum of 24 inches from subsequent layers. End joints shall not line up when installing multiple layers.
- C. Pre-drill holes to ensure no splitting of lumber occurs during installation of anchors and screws. Provide routed holes in lumber installed over existing fasteners to ensure bottom nailers sit flush on existing metal panel surface.
- D. Install components with approved fasteners suited to materials including frequency, pattern, and size to meet federal and local codes, FM Global, ANSI/SPRI ES-1, and this Section.
- E. Plywood Fastener Spacing:
  1. Wood, Light Gauge Steel, Structural Steel: 12-inches on center maximum, or as shown in Drawings.
  2. Concrete, Masonry: 12-inches on center each direction maximum, or as shown in Drawings.
- F. Wood Nailer Installation:
  1. Wood, Light Gauge Steel: Two rows of appropriate fasteners on 12-inch centers, or as shown in Drawings.
  2. Concrete, Masonry, Structural Steel: two rows on 24-inch centers and 12-inch centers 8-feet from corners, or as shown in Drawings.
  3. Stagger bolts if nailer is wider than 6-inches.
  4. Offset fasteners from underlying wood nailer fasteners.

**END OF SECTION**

## **SECTION 072200 - ROOF AND DECK INSULATION**

### **PART 1 - GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Roof and deck insulation.

#### **1.2 RELATED WORK**

- A. Section 05 3145 – Retrofit Roof Sub-Framing System
- B. Section 07 6100 – Sheet Metal Roofing
- C. Section 07 6200 - Sheet Metal Flashing and Trim

#### **1.3 SYSTEM DESCRIPTION**

- A. Roof System R100, R101 (refer to Drawings):
  - 1. Loose laid polyisocyanurate insulation flute fillers, fabricated to fit existing standing seam profile, approximately 2” height by 16” width.
  - 2. Mechanically attached 3/4” polyisocyanurate flat insulation boards.
- B. Roof System R102 (refer to Drawings):
  - 1. Loose laid polyisocyanurate insulation flute fillers, fabricated to fit existing trapezoidal standing seam profile, approximately 3” height by 24” width.
  - 2. Mechanically attached 1.5” polyisocyanurate flat insulation boards.

#### **1.4 SUBMITTALS**

- A. Submit manufacturer's installation instructions, samples and product data, in accordance with the provisions of Section 013300, Submittals.
- B. Submit manufacturer's certificate, in accordance with the provisions of Section 013300, Submittals, that products meet or exceed specified requirements.
- C. Submit certification from roof manufacturer that board insulation materials are acceptable for use with roof materials.
- D. Submit insulation fastening patterns for field, perimeter, and corner zones.

#### **1.5 REGULATORY REQUIREMENTS**

- A. Conform to applicable local building codes for roof assembly requirements.

#### **1.6 DELIVERY, STORAGE AND HANDLING**

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture,

approval or listing agency markings, and directions for storing and mixing with other components.

1. Inspect for damage.
  2. Store products in weather protected environment, clear of ground and moisture.
  3. Deliver materials in quantities to allow continuity of application throughout the Project.
  4. Coordinate shipment receipt as necessary to cause Owner least amount of interference in Owner's operations. Owner will not take responsibility for product deliveries.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling and other sources.
1. Store materials subject to water damage in fully enclosed, watertight storage trailers.
  2. Do not store insulation materials on the roof overnight.
- D. Handle materials in a manner precluding damage and contamination by moisture or other harmful/foreign matter.
- E. Promptly mark, remove from the site, and discard any materials contaminated by moisture.

## **PART 2 - PRODUCTS**

### **2.1 INSULATION MATERIALS**

- A. Insulation Board: Polyisocyanurate, complying with ASTM C1289, Type II, Class 1.
- B. Filler Insulation:
1. Closed cell polyurethane spray foam, equivalent to GREAT STUFF Gaps and Cracks Insulating Foam Sealant.
  2. Fiberglass batts, equivalent to JM Formaldehyde-free, unfaced fiberglass batt insulation.



## 2.2 FASTENERS

- A. General: Provide fasteners approved by insulation manufacturer, meeting wind uplift requirements as specified.
- B. Metal Decks: No. 12 hex-head fastener with coating which exceeds F.M. Specification No. 4470; with Galvalume metal plates, minimum 3-inch by 3-inch, as recommended by insulation board manufacturer.

## **PART 3 - EXECUTION**

### 3.1 PREPARATION

- A. Verify that:
  - 1. Roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set and comply with specified minimum height requirements.
  - 2. Under deck conditions are clear for fastener installation.
- B. Installation of roofing means acceptance of conditions of substrate.

### 3.2 INSTALLATION

- A. Retrofit System Metal Roofs:
  - 1. Loose lay flute filler boards between sub-purlin system. Install foam or fiberglass insulation at accessible voids under sub-purlins and panels at rake conditions as indicated in the Drawings.
  - 2. Mechanically fasten top layer of insulation in the pattern recommended by the manufacturer to achieve wind uplift resistances in the field, perimeter, and corner zones, calculated in accordance with specified requirements.
  - 3. Butt edges for snug contact. Fill all gaps greater than 1/4-inch width with low rise foam.
  - 4. Stagger end joints in adjacent boards 12 inches minimum horizontally and vertically.

**END OF SECTION**

## **SECTION 074213 – FORMED METAL WALL PANELS**

### **PART 1 - GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Exposed fastener metal wall panels, with related metal trim and accessories.
- B. Substrate materials, to include high temperature underlayment and subframing. Refer to 061053, Miscellaneous Rough Carpentry (Roofing) for plywood sheathing.

#### **1.2 REFERENCES**

- A. American Architectural Manufacturer's Association (AAMA): [www.aamanet.org](http://www.aamanet.org):
  - 1. AAMA 621 - Voluntary Specifications for High Performance Organic Coatings on Coil Coated Architectural Hot Dipped Galvanized (HDG) & Zinc-Aluminum Coated Steel Substrates.
  - 2. AAMA 809.2 - Voluntary Specification Non-Drying Sealants.
- B. American Society of Civil Engineers (ASCE): [www.asce.org/codes-standards](http://www.asce.org/codes-standards):
  - 1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
- C. ASTM International (ASTM): [www.astm.org](http://www.astm.org):
  - 1. ASTM A 653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - 2. ASTM A 755 - Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
  - 3. ASTM A 792/A 792M - Standard Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
  - 4. ASTM C 645 - Specification for Nonstructural Steel Framing Members.
  - 5. ASTM C 920 - Specification for Elastomeric Joint Sealants.
  - 6. ASTM D 4214 - Test Methods for Evaluating Degree of Chalking of Exterior Paint Films.
- D. International Accreditation Service (IAS):
  - 1. IAS AC 472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems, Part B.

#### **1.3 QUALITY ASSURANCE**

- A. Manufacturer/Source: Provide metal panel assembly and accessories from a single manufacturer providing fixed-base roll forming, and accredited under IAS AC 472 Part B.

- B. Manufacturer Qualifications: Approved manufacturer listed in this Section with minimum five (5) years' experience in manufacture of similar products in successful use in similar applications.
  - 1. Approval of Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:
    - a. Product data, including certified independent test data indicating compliance with requirements.
    - b. Sample warranty.
  - 2. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.
  - 3. Approved manufacturers must meet separate requirements of Submittals Article.
- C. Installer Qualifications: Experienced Installer with minimum of five (5) years' experience with successfully completed projects of a similar nature and scope.
  - 1. Installer's Field Supervisor: Experienced mechanic, able to communicate with Owner, Architect, and installers, supervising work on site whenever work is underway.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: Manufacturer's data sheets for specified products.
- B. Shop Drawings: Show layouts of metal panels. Include details of each condition of installation, panel profiles, and attachment to building. Provide details at a minimum scale 1-1/2-inch per foot of edge conditions, joints, fastener and sealant placement, flashings, openings, penetrations, and special details. Make distinctions between factory and field assembled work.
  - 1. Indicate points of supporting structure that must coordinate with metal panel system installation.
  - 2. Include data indicating compliance with performance requirements.
  - 3. Include structural data indicating compliance with requirements of authorities having jurisdiction.
- C. Samples for Initial Selection: For each exposed product specified including sealants. Provide representative color charts of manufacturer's full range of colors.
- D. Samples for Verification: Provide 12-inch long section of each metal panel profile. Provide color chip verifying color selection.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: Indicating compliance of products with requirements, witnessed by a professional engineer.
- B. Qualification Information: For Installer firm and Installer's field supervisor.

- C. Manufacturer's Warranty: Sample copy of manufacturer's standard warranty.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Maintenance data.
- B. Manufacturer's Warranty: Executed copy of manufacturer's standard warranty.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Protect products of metal panel system during shipping, handling, and storage to prevent staining, denting, deterioration of components or other damage. Protect panels and trim bundles during shipping.
  - 1. Deliver, unload, store, and erect metal panel system and accessory items without misshaping panels or exposing panels to surface damage from weather or construction operations.
  - 2. Store in accordance with Manufacturer's written instructions. Provide wood collars for stacking and handling in the field.

#### 1.8 WARRANTY

- A. Special Manufacturer's Warranty: On manufacturer's standard form, in which manufacturer agrees to repair or replace metal panel assemblies that fail in materials and workmanship within one year from date of Substantial Completion.
- B. Special Panel Finish Warranty: On Manufacturer's standard form, in which Manufacturer agrees to repair or replace metal panels that evidence deterioration of factory-applied finish within 20 years from date of Substantial Completion, including:
  - 1. Fluoropolymer Two- Coat System:
    - a. Color fading in excess of 5 Hunter units per ASTM D 2244.
    - b. Chalking in excess of No. 8 rating per ASTM D 4214.
    - c. Failure of adhesion, peeling, checking, or cracking.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURER

- A. Basis of Design Manufacturer: MBCI Metal Roof and Wall Systems, Division of NCI Group, Inc.; Houston TX. Tel: (877)713-6224; Email: [info@mbci.com](mailto:info@mbci.com); Web: [www.mbci.com](http://www.mbci.com).
  - 1. Provide basis of design product, or comparable product approved by Engineer prior to bid.

## 2.2 PERFORMANCE REQUIREMENTS

- A. General: Provide metal wall panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on manufacturer's standard assemblies.
- B. Thermal Movements: Allow for thermal movements from variations in both ambient and internal temperatures. Accommodate movement of support structure caused by thermal expansion and contraction. Allow for deflection and design for thermal stresses caused by temperature differences from one side of the panel to the other.
- C. Structural Performance: Provide metal panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated:
  - 1. Wind Loads: Determine loads based on uniform pressure, importance factor, exposure category, and basic wind speed indicated on drawings.
  - 2. Deflection Limits: Withstand inward and outward wind-load design pressures in accordance with applicable building code with maximum deflection of 1/120 of the span with no evidence of failure.
- D. Recycled Content: Panels shall contain a minimum of 50% recycled content.
- E. Wall Panel Air Infiltration, ASTM E283:
  - 1. No air infiltration at static-air-pressure difference of 1.57 lbf/sq. ft. (75 Pa).
- F. Wall Panel Water Penetration Static Pressure, ASTM E331: No uncontrolled water penetration at a static pressure of 6.24 lbf/sq. ft. (300 Pa).

## 2.3 FORMED METAL WALL PANELS

- A. Panel Material: Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A792/A792M, structural quality, Grade 50, Coating Class AZ50 (Grade 340, Coating Class AZM150), prepainted by the coil-coating process per ASTM A755/A755M.
- B. Tapered-Rib-Profile, Exposed Fastener Metal Panels: Structural metal panel consisting of formed metal sheet with trapezoidal ribs, installed by lapping edges of adjacent panels.
  - 1. Basis of Design: MBCI, PBU Panel.
  - 2. Coverage Width: 36 inches (914 mm).
  - 3. Continuous Rib Spacing: 6 inches (152 mm) on center.
  - 4. Rib Height: 3/4 inch (19.0 mm).
  - 5. Nominal Coated Thickness: 24 gage.
  - 6. Panel Surface: Smooth.
  - 7. Exterior Finish: Fluoropolymer two-coat system.
  - 8. Color: As selected by Owner from manufacturer's standard colors.
  - 9. Interior Finish: 0.5 mil total dry film thickness consisting of primer coat and wash coat of manufacturer's standard light-colored acrylic or polyester backer finish.

## 2.4 MISCELLANEOUS MATERIALS

- A. General: Provide complete metal panel assemblies incorporating trim, copings, fasciae, gutters and downspouts, and miscellaneous flashings. Provide required fasteners, closure strips, and sealants as indicated in manufacturer's written instructions.
- B. Subframing: 7/8" depth, 18 gauge, hot dip galvanized G90 hat channels with 12-14 x 1" HWH TEK screws, Stalguard Dril-Flex or approved equivalent for attachment to existing aluminum framing.
- C. Flashing and Trim: Match material, thickness, and finish of metal panels.
- D. Panel Fasteners: Self-tapping screws and other acceptable fasteners recommended by metal panel manufacturer. Where exposed fasteners cannot be avoided, supply corrosion-resistant fasteners with heads matching color of metal panels by means of factory-applied coating, with weathertight resilient washers.
- E. Panel Sealants:
  - 1. Factory-Applied Seam Sealant: Manufacturer's standard hot-melt type.
  - 2. Concealed Joint Sealants: Non-curing butyl, AAMA 809.2.
  - 3. Elastomeric Joint Sealants: Urethane sealant, single-component, ASTM C920 Type S, Grade NS, Class 25, Use NT, A, M, G, O.
  - 4. Foam Tape: Manufacturer's standard self-adhering type.
- F. High Temperature Rated Underlayment:
  - 1. Sheet Material: Carlisle Coatings and Waterproofing, WIP 300HT white membrane, rated for 120 day exposure, or approved equivalent.
  - 2. Primers, mastics, and accessories: provide by sheet material manufacturer.

## 2.5 FABRICATION

- A. General: Provide factory fabricated and finished metal panels and accessories meeting performance requirements, indicated profiles, and structural requirements.
- B. Panel Lengths: Form panels in continuous lengths for full length of detailed runs, except where otherwise indicated on approved shop drawings.
- C. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions, approved shop drawings, and project drawings. Form from materials matching metal panel substrate and finish.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine metal panel system substrate and supports with Installer present. Inspect for erection tolerances and other conditions that would adversely affect installation of metal panel installation.

1. Inspect metal panel support substrate to determine if support components are installed as indicated on approved shop drawings. Confirm presence of acceptable supports at recommended spacing to match installation requirements of metal panels.
  2. Panel Support Tolerances: Confirm that panel supports are within tolerances acceptable to metal panel system manufacturer but not greater than the following:
    - a. 1/4 inch in 20 foot in any direction.
- B. Correct out-of-tolerance work and other deficient conditions prior to proceeding with metal panel system installation.

### 3.2 PREPARATION

- A. Underlayment: Install high temperature rated underlayment materials to clean, primed (if required) substrate, in accordance with manufacturer instructions, recommendations, and requirements. Install accessory materials per manufacturer details.
- B. Miscellaneous Supports:
1. Install subframing, girts, furring, and other miscellaneous panel support members with a continuous strip of butyl tape applied at surface in contact with air barrier, according to ASTM C 754 and manufacturer's written instructions.
  2. Use gasketed, hot-dip galvanized or stainless steel screws for attachment of support members through air barrier system.
- C. Flashings: Install flashings to cover exposed underlayment per Section 07 62 00 "Sheet Metal Flashing and Trim."

### 3.3 METAL PANEL INSTALLATION

- A. Concealed-Fastener Formed Metal Panels: Install metal panel system in accordance with manufacturer's written instructions, approved shop drawings, project drawings, and referenced publications. Install metal panels in orientation, sizes, and locations indicated. Anchor panels and other components securely in place. Provide for thermal and structural movement.
- B. Fasten metal panels to supports with fasteners at each location indicated on approved shop drawings, at spacing and with fasteners recommended by manufacturer. Fasten panel to support structure through leading flange. Snap-fit back flange of subsequent panel into secured flange of previous panel. Where indicated, fasten panels together through flush-fitted panel sides.
1. Cut panels in field where required using manufacturer's recommended methods.
  2. Dissimilar Materials: Where elements of metal panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by metal panel manufacturer.

- C. Attach panel flashing trim pieces to supports using recommended fasteners and joint sealers.
- D. Joint Sealers: Install liquid sealants where indicated and where required for weatherproof performance of metal panel assemblies.
  - 1. Seal panel base assembly, openings, panel head joints, and perimeter joints using joint sealers indicated in manufacturer's instructions.
  - 2. Seal perimeter joints between window and door openings and adjacent panels using elastomeric joint sealer.

### 3.4 ACCESSORY INSTALLATION

- A. General: Install metal panel trim, flashing, and accessories using recommended fasteners and joint sealers, with positive anchorage to building, and with weather tight mounting. Coordinate installation with flashings and other components.
  - 1. Install components required for a complete metal panel assembly, including trim, copings, flashings, sealants, closure strips, and similar items.
  - 2. Comply with details of assemblies utilized to establish compliance with performance requirements and manufacturer's written installation instructions.
  - 3. Set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently weather resistant.

### 3.5 CLEANING AND PROTECTION

- A. Remove temporary protective films immediately in accordance with metal panel manufacturer's instructions. Clean finished surfaces as recommended by metal panel manufacturer.
- B. Replace damaged panels and accessories that cannot be repaired to the satisfaction of the Engineer.

**END OF SECTION**



## **SECTION 074213 – FORMED METAL WALL PANELS**

### **PART 1 - GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Exposed fastener metal wall panels, with related metal trim and accessories.
- B. Substrate materials, to include high temperature underlayment and subframing. Refer to 061053, Miscellaneous Rough Carpentry (Roofing) for plywood sheathing.

#### **1.2 REFERENCES**

- A. American Architectural Manufacturer's Association (AAMA): [www.aamanet.org](http://www.aamanet.org):
  - 1. AAMA 621 - Voluntary Specifications for High Performance Organic Coatings on Coil Coated Architectural Hot Dipped Galvanized (HDG) & Zinc-Aluminum Coated Steel Substrates.
  - 2. AAMA 809.2 - Voluntary Specification Non-Drying Sealants.
- B. American Society of Civil Engineers (ASCE): [www.asce.org/codes-standards](http://www.asce.org/codes-standards):
  - 1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
- C. ASTM International (ASTM): [www.astm.org](http://www.astm.org):
  - 1. ASTM A 653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - 2. ASTM A 755 - Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
  - 3. ASTM A 792/A 792M - Standard Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
  - 4. ASTM C 645 - Specification for Nonstructural Steel Framing Members.
  - 5. ASTM C 920 - Specification for Elastomeric Joint Sealants.
  - 6. ASTM D 4214 - Test Methods for Evaluating Degree of Chalking of Exterior Paint Films.
- D. International Accreditation Service (IAS):
  - 1. IAS AC 472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems, Part B.

#### **1.3 QUALITY ASSURANCE**

- A. Manufacturer/Source: Provide metal panel assembly and accessories from a single manufacturer providing fixed-base roll forming, and accredited under IAS AC 472 Part B.

- B. Manufacturer Qualifications: Approved manufacturer listed in this Section with minimum five (5) years' experience in manufacture of similar products in successful use in similar applications.
  - 1. Approval of Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:
    - a. Product data, including certified independent test data indicating compliance with requirements.
    - b. Sample warranty.
  - 2. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.
  - 3. Approved manufacturers must meet separate requirements of Submittals Article.
- C. Installer Qualifications: Experienced Installer with minimum of five (5) years' experience with successfully completed projects of a similar nature and scope.
  - 1. Installer's Field Supervisor: Experienced mechanic, able to communicate with Owner, Architect, and installers, supervising work on site whenever work is underway.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: Manufacturer's data sheets for specified products.
- B. Shop Drawings: Show layouts of metal panels. Include details of each condition of installation, panel profiles, and attachment to building. Provide details at a minimum scale 1-1/2-inch per foot of edge conditions, joints, fastener and sealant placement, flashings, openings, penetrations, and special details. Make distinctions between factory and field assembled work.
  - 1. Indicate points of supporting structure that must coordinate with metal panel system installation.
  - 2. Include data indicating compliance with performance requirements.
  - 3. Include structural data indicating compliance with requirements of authorities having jurisdiction.
- C. Samples for Initial Selection: For each exposed product specified including sealants. Provide representative color charts of manufacturer's full range of colors.
- D. Samples for Verification: Provide 12-inch long section of each metal panel profile. Provide color chip verifying color selection.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: Indicating compliance of products with requirements, witnessed by a professional engineer.
- B. Qualification Information: For Installer firm and Installer's field supervisor.

- C. Manufacturer's Warranty: Sample copy of manufacturer's standard warranty.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Maintenance data.
- B. Manufacturer's Warranty: Executed copy of manufacturer's standard warranty.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Protect products of metal panel system during shipping, handling, and storage to prevent staining, denting, deterioration of components or other damage. Protect panels and trim bundles during shipping.
  - 1. Deliver, unload, store, and erect metal panel system and accessory items without misshaping panels or exposing panels to surface damage from weather or construction operations.
  - 2. Store in accordance with Manufacturer's written instructions. Provide wood collars for stacking and handling in the field.

#### 1.8 WARRANTY

- A. Special Manufacturer's Warranty: On manufacturer's standard form, in which manufacturer agrees to repair or replace metal panel assemblies that fail in materials and workmanship within one year from date of Substantial Completion.
- B. Special Panel Finish Warranty: On Manufacturer's standard form, in which Manufacturer agrees to repair or replace metal panels that evidence deterioration of factory-applied finish within 20 years from date of Substantial Completion, including:
  - 1. Fluoropolymer Two- Coat System:
    - a. Color fading in excess of 5 Hunter units per ASTM D 2244.
    - b. Chalking in excess of No. 8 rating per ASTM D 4214.
    - c. Failure of adhesion, peeling, checking, or cracking.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURER

- A. Basis of Design Manufacturer: MBCI Metal Roof and Wall Systems, Division of NCI Group, Inc.; Houston TX. Tel: (877)713-6224; Email: [info@mbci.com](mailto:info@mbci.com); Web: [www.mbci.com](http://www.mbci.com).
  - 1. Provide basis of design product, or comparable product approved by Engineer prior to bid.

## 2.2 PERFORMANCE REQUIREMENTS

- A. General: Provide metal wall panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on manufacturer's standard assemblies.
- B. Thermal Movements: Allow for thermal movements from variations in both ambient and internal temperatures. Accommodate movement of support structure caused by thermal expansion and contraction. Allow for deflection and design for thermal stresses caused by temperature differences from one side of the panel to the other.
- C. Structural Performance: Provide metal panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated:
  - 1. Wind Loads: Determine loads based on uniform pressure, importance factor, exposure category, and basic wind speed indicated on drawings.
  - 2. Deflection Limits: Withstand inward and outward wind-load design pressures in accordance with applicable building code with maximum deflection of 1/120 of the span with no evidence of failure.
- D. Recycled Content: Panels shall contain a minimum of 50% recycled content.
- E. Wall Panel Air Infiltration, ASTM E283:
  - 1. No air infiltration at static-air-pressure difference of 1.57 lbf/sq. ft. (75 Pa).
- F. Wall Panel Water Penetration Static Pressure, ASTM E331: No uncontrolled water penetration at a static pressure of 6.24 lbf/sq. ft. (300 Pa).

## 2.3 FORMED METAL WALL PANELS

- A. Panel Material: Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A792/A792M, structural quality, Grade 50, Coating Class AZ50 (Grade 340, Coating Class AZM150), prepainted by the coil-coating process per ASTM A755/A755M.
- B. Tapered-Rib-Profile, Exposed Fastener Metal Panels: Structural metal panel consisting of formed metal sheet with trapezoidal ribs, installed by lapping edges of adjacent panels.
  - 1. Basis of Design: MBCI, PBU Panel.
  - 2. Coverage Width: 36 inches (914 mm).
  - 3. Continuous Rib Spacing: 6 inches (152 mm) on center.
  - 4. Rib Height: 3/4 inch (19.0 mm).
  - 5. Nominal Coated Thickness: 24 gage.
  - 6. Panel Surface: Smooth.
  - 7. Exterior Finish: Fluoropolymer two-coat system.
  - 8. Color: As selected by Owner from manufacturer's standard colors.
  - 9. Interior Finish: 0.5 mil total dry film thickness consisting of primer coat and wash coat of manufacturer's standard light-colored acrylic or polyester backer finish.

## 2.4 MISCELLANEOUS MATERIALS

- A. General: Provide complete metal panel assemblies incorporating trim, copings, fasciae, gutters and downspouts, and miscellaneous flashings. Provide required fasteners, closure strips, and sealants as indicated in manufacturer's written instructions.
- B. Subframing: 7/8" depth, 18 gauge, hot dip galvanized G90 hat channels with 12-14 x 1" HWH TEK screws, Stalguard Dril-Flex or approved equivalent for attachment to existing aluminum framing.
- C. Flashing and Trim: Match material, thickness, and finish of metal panels.
- D. Panel Fasteners: Self-tapping screws and other acceptable fasteners recommended by metal panel manufacturer. Where exposed fasteners cannot be avoided, supply corrosion-resistant fasteners with heads matching color of metal panels by means of factory-applied coating, with weathertight resilient washers.
- E. Panel Sealants:
  - 1. Factory-Applied Seam Sealant: Manufacturer's standard hot-melt type.
  - 2. Concealed Joint Sealants: Non-curing butyl, AAMA 809.2.
  - 3. Elastomeric Joint Sealants: Urethane sealant, single-component, ASTM C920 Type S, Grade NS, Class 25, Use NT, A, M, G, O.
  - 4. Foam Tape: Manufacturer's standard self-adhering type.
- F. High Temperature Rated Underlayment:
  - 1. Sheet Material: Carlisle Coatings and Waterproofing, WIP 300HT white membrane, rated for 120 day exposure, or approved equivalent.
  - 2. Primers, mastics, and accessories: provide by sheet material manufacturer.

## 2.5 FABRICATION

- A. General: Provide factory fabricated and finished metal panels and accessories meeting performance requirements, indicated profiles, and structural requirements.
- B. Panel Lengths: Form panels in continuous lengths for full length of detailed runs, except where otherwise indicated on approved shop drawings.
- C. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions, approved shop drawings, and project drawings. Form from materials matching metal panel substrate and finish.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine metal panel system substrate and supports with Installer present. Inspect for erection tolerances and other conditions that would adversely affect installation of metal panel installation.

1. Inspect metal panel support substrate to determine if support components are installed as indicated on approved shop drawings. Confirm presence of acceptable supports at recommended spacing to match installation requirements of metal panels.
  2. Panel Support Tolerances: Confirm that panel supports are within tolerances acceptable to metal panel system manufacturer but not greater than the following:
    - a. 1/4 inch in 20 foot in any direction.
- B. Correct out-of-tolerance work and other deficient conditions prior to proceeding with metal panel system installation.

### 3.2 PREPARATION

- A. Underlayment: Install high temperature rated underlayment materials to clean, primed (if required) substrate, in accordance with manufacturer instructions, recommendations, and requirements. Install accessory materials per manufacturer details.
- B. Miscellaneous Supports:
1. Install subframing, girts, furring, and other miscellaneous panel support members with a continuous strip of butyl tape applied at surface in contact with air barrier, according to ASTM C 754 and manufacturer's written instructions.
  2. Use gasketed, hot-dip galvanized or stainless steel screws for attachment of support members through air barrier system.
- C. Flashings: Install flashings to cover exposed underlayment per Section 07 62 00 "Sheet Metal Flashing and Trim."

### 3.3 METAL PANEL INSTALLATION

- A. Concealed-Fastener Formed Metal Panels: Install metal panel system in accordance with manufacturer's written instructions, approved shop drawings, project drawings, and referenced publications. Install metal panels in orientation, sizes, and locations indicated. Anchor panels and other components securely in place. Provide for thermal and structural movement.
- B. Fasten metal panels to supports with fasteners at each location indicated on approved shop drawings, at spacing and with fasteners recommended by manufacturer. Fasten panel to support structure through leading flange. Snap-fit back flange of subsequent panel into secured flange of previous panel. Where indicated, fasten panels together through flush-fitted panel sides.
1. Cut panels in field where required using manufacturer's recommended methods.
  2. Dissimilar Materials: Where elements of metal panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by metal panel manufacturer.

- C. Attach panel flashing trim pieces to supports using recommended fasteners and joint sealers.
- D. Joint Sealers: Install liquid sealants where indicated and where required for weatherproof performance of metal panel assemblies.
  - 1. Seal panel base assembly, openings, panel head joints, and perimeter joints using joint sealers indicated in manufacturer's instructions.
  - 2. Seal perimeter joints between window and door openings and adjacent panels using elastomeric joint sealer.

### 3.4 ACCESSORY INSTALLATION

- A. General: Install metal panel trim, flashing, and accessories using recommended fasteners and joint sealers, with positive anchorage to building, and with weather tight mounting. Coordinate installation with flashings and other components.
  - 1. Install components required for a complete metal panel assembly, including trim, copings, flashings, sealants, closure strips, and similar items.
  - 2. Comply with details of assemblies utilized to establish compliance with performance requirements and manufacturer's written installation instructions.
  - 3. Set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently weather resistant.

### 3.5 CLEANING AND PROTECTION

- A. Remove temporary protective films immediately in accordance with metal panel manufacturer's instructions. Clean finished surfaces as recommended by metal panel manufacturer.
- B. Replace damaged panels and accessories that cannot be repaired to the satisfaction of the Engineer.

**END OF SECTION**

## **SECTION 07 61 00 - SHEET METAL ROOFING**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. This Section includes preformed metal roof systems, including underlayment, clips, perimeter and penetration flashing, closures, and fasteners.

#### **1.3 GENERAL**

- A. Furnish all labor, material, tools, equipment and services for all preformed roofs as indicated, in accord with provisions of Contract Documents.
- B. Completely coordinate with work of all other trades.
- C. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a watertight, sound, secure and complete installation.

#### **1.4 REFERENCES**

#### **1.5 Applicable Standards:**

1. SMACNA: "Architectural Sheet Metal Manual", Sheet Metal and Air Conditioning Contractors National Association, Inc., latest edition.
2. AISI S-100 – North American Specification for the Design of Cold-Formed Steel Structural Members.
3. ASCE-7: American Society of Civil Engineers -Minimum Design Loads for Buildings and Other Structures; version adopted by local Building Code authority having jurisdiction.
4. ASTM A792 - Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
5. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding System by Uniform Static Air Pressure Difference
6. ASTM E1646 - Standard Test Method for Rate of Water Penetration Through Exterior Metal Roof Panel Systems By Uniform Static Air Pressure Difference.
7. ASTM E1680 - Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems.
8. ASTM E2140 - Standard Test method for water penetration of metal roof panel systems by static water pressure head.
9. Factory Mutual 4471 Appendix G - Susceptibility to Leakage Test Procedure for Class 1 Panel Roofs.
10. UL 580 - Tests for Uplift Resistance of Roof Assemblies.
11. UL 1897 - Uplift Tests for Roof Covering Systems.



12. International Building code, latest edition, as adopted by the local authorities having jurisdiction, with local amendments.
13. NRCA: National Roofing Contractors Association, Manual of Roofing and Waterproofing, 6th Edition, Architectural Sheet Metal and Metal Roofing Vol. 2.

## 1.6 PRE-INSTALLATION CONFERENCE

- A. Prior to installation of roofing system, conduct a pre-installation conference at the project site.
  1. Attendance: Owner, Architect, Contractor, Project Superintendent, Certified Roof Installer, Technical Representative of Panel Manufacturer, and Architect's Roof Consultant.
  2. Minimum Agenda:
    - a. Designation of personnel representing the parties in Contract. Provide phone numbers including pagers and other 24-hour communication.
    - b. Procedures and processing of field decisions, submittals, applications for payments, proposal request, Change Orders and Contract Closeout procedures.
    - c. Construction schedule, including sequence of critical work and review of phasing plan.
    - d. Inspection sequencing schedule. (Manufacturer and Architect's Roof Consultant)
    - e. Owner's requirements.
    - f. Temporary utilities provided by Owner.
    - g. Site layout.
    - h. Review installation procedures and coordination required with related work.
    - i. Review guarantees by manufacturer, warranties by Contractor, and coordination of trades.
    - j. Review property and affected areas of work for protection of installed roof and location for job set-up.
    - k. Review Submittals and Shop Drawings

## 1.7 SUBMITTALS

- A. Product Data:
  1. Provide submittals indicating product data for all materials specified in Part 2 of this specification, including but not limited to panels, clips, fasteners, support angles/plates, underlayment, and sealants.
- B. Shop Drawings by manufacturer, including the following:
  1. Submit roof plan showing panel layout, profiles, components, accessories, finish colors, gutters and downspouts as applicable.
    - a. Indicate layout of roofing panels and roof panel sizes, including custom fabricated roofing panels if indicated, indicate each trim condition.
    - b. Include details of each condition of installation, including the locations and types of fasteners, sealants and accessories. Indicate locations, gauges, shapes, and methods of attachment of all panels, accessories and trim.

- c. Indicate products/materials required for construction activities of this section not supplied by manufacturer of products of this section.
  - d. Indicate locations of field applied sealant.
  - e. Indicate locations of field worked conditions.
2. Roof Panel Attachment:
- a. Roof plan with wind uplift pressure calculations at field, corner and perimeter areas according to version of ASCE-7 referenced by locally-adopted Building Code and the authority having jurisdiction.
  - b. Roof plan indicating roof clip spacing pattern at field, corner, perimeters and where panels are to be fixed from thermal movement.
  - c. Roof panel attachment plan must be stamped by licensed engineer in State in which project is constructed, certifying roof attachment meets local Building Code requirements for wind uplift.
3. Thermal Movement
- a. Metal Roofing system, including flashing, shall accommodate thermal movement without buckling or excess stress on the structure.
  - b. All panel and trim attachments will be designed to specifically satisfy the requirements of the roof design (shown in shop drawings).
4. Do not proceed with ordering or manufacture of roofing materials prior to Architect's approval of shop drawings and Contractor's field verification of all dimensions. Do not use schematic drawings or details prepared by the architect for shop or erection drawings.
- C. Warranties: Contractor shall submit samples of all of the following required project warranties, and written evidence of application for warranty and manufacturer's acceptance of applicator and warranty conditions prior to commencing work:
- 1. Installer's Warranty - form provided at the end of this Section shall be used, submit document executed by roofing contractor.
  - 2. Manufacturer Warranties:
    - a. Panel Coating: Manufacturer's 30 Year Finish/Substrate Warranty, covering cracking, checking, crazing, peeling, chalking, fading, and adhesion.
    - b. Panel Material: Manufacturer's 25 Year Panel Warranty, covering the panel against rupture, structural failure, or perforation.
    - c. Manufacturer's 20 Year Weathertightness Warranty, non-prorated, single source warranty, covering repair and/or replacement of roof system due to leaks.
      - 1) Warranty term: 20 years commencing on date of substantial completion.
      - 2) Total manufacturer's liability: No Repair Limit.
      - 3) Warranty must cover: Pipe and Curb Penetrations; Wind Speeds up to 75 mph
      - 4) Submit written evidence to Owner of Manufacturer's financial ability to meet Warranty Liability (Insurance Certificate or Financial Statement).
- D. Certificates:

1. Submit roof panel manufacturer's certification that fasteners, clips, backup plates, closures, roof panels and finishes meet the specification requirements.
  2. Submit roof panel manufacturer's certification that installer meets requirements to install roof system and is qualified to obtain required warranties.
- E. Delegated Design Submittals: Submit engineering calculations indicating wind uplift pressure calculations according to local building code for project location with respect to appropriate Importance Factor, Exposure category and Safety Factor. Calculations shall be sealed by a professional engineer licensed to practice structural engineering in the state in which project is located.
- F. Test and Evaluation Reports - Certified test results that indicate roof system meets or exceeds design and performance criteria. Testing to include:
1. Air infiltration: Maximum 0.06 cfm per lineal foot (0.33 m<sup>3</sup>/hr per linear meter) of seam at static pressure of 6.24 psf (3.0 kPa) when tested per ASTM E1680.
  2. Water penetration: No uncontrolled water penetration through the joints at a static pressure of 6.24 psf (3.0 kPa) when tested in accordance with ASTM E1646.
- G. Qualification Statements: For Manufacturer and Installer.

## 1.8 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Manual indicating requirements and recommendations, to maintain the roof system, in good working condition.
- B. Warranty Documentation: Submit final warranties required in this section.

## 1.9 QUALITY ASSURANCE

- A. Qualifications:
1. Manufacturer Qualifications: Manufacturer shall have a minimum of 10 years experience in the manufacturing of metal roof systems similar to those required for this project. Manufacturer must have a current installer training program.
    - a. Manufacturer shall submit, in writing, that their metal roof system and associated assembly components comply in every respect with the specified assembly.
  2. Installer Qualifications: Installer ("roofer") to perform the work of this section, shall have no fewer than 5 years of successful experience with the installation of metal roof systems similar to those required for this project. The installer shall be qualified by the roof panel manufacturer for installation of manufacturer-warranted systems a minimum of 5 years prior to bid.
    - a. Has no viable claim(s) pending regarding negligent acts or defective workmanship on previously performed or current projects.
    - b. Has not filed for protection from creditors under any state or federal insolvency or debtor relief statutes or codes.

- c. Project Foreman for the installation contractor is the person having received specific panel manufacturer's training in the proper installation of the specified metal roof system and will be present, full time, to supervise material being installed.
  - d. Provide 5 references from five different architects or building owners (contact name/phone number) for projects of similar scope and size that have been in service for a minimum of 2 years, stating satisfactory performance of the roof panel system and workmanship by the installation contractor.
  - e. Provide certification letter that installation contractor has a minimum of 5 years of metal product installation experience immediately preceding the date upon which work is to commence.
3. Roofer shall have a full-time, non-working, English-speaking superintendent onsite at all times Work of this Section is being performed.
  4. Panels specified in this section shall be produced in a factory environment (not job site roll formed) with fixed-base roll forming equipment assuring the highest level of quality control.
  5. Field Measurements: Prior to fabrication of panels, take field measurements of structure or substrates to receive panel system. Allow for trimming panel units, where final dimensions cannot be established prior to fabrication.
  6. Mock-Ups: Install a 30 foot wide, quality control area of metal roofing, for review by the Architect. The Architect shall approve the quality of installation for the roof, prior to installing additional metal panels.

#### 1.10 DELIVERY, STORAGE AND HANDLING

##### A. Delivery:

1. Deliver metal roof system to job site properly packaged to provide protection against transportation damage. Panels too long to ship shall be site formed onto the roof by manufacturer's factory personnel using manufacturer's factory roll forming equipment.

##### B. Handling:

1. Exercise extreme care in unloading, storing and erecting metal roof system to prevent bending, warping, twisting and surface damage.

##### C. Storage:

1. Store all material and accessories above ground on well skidded platforms. Store under waterproof covering. Provide proper ventilation of metal roof system to prevent condensation build-up between each panel. Do not store panels in contact with other materials that might cause staining, denting or other surface damage. Panels exhibiting "white rust" will be rejected.
2. Storing of the materials on the roof overnight is prohibited. Storage of materials while work is in progress shall be such that loads do not exceed 20 pounds per square foot.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

#### **A. Manufacturers and Products:**

1. McElroy Metals, 238T panel
2. Petersen Aluminum, PAC T-250
3. Tremco, TremLock T-238 panel
4. Substitutions:
  - a. Requests for approval must be submitted in writing at least ten (10) days prior to bid date and must be accompanied by all related product data, manufacturer qualifications, sample warranties, and test reports certifying compliance with applicable requirements in this Section.
  - b. Substitute manufacturers will be approved by written addendum to all bidders. Voluntary alternates will not be considered. Substitutions will not be permitted after the bid date of this project.
  - c. Roof panels proposed for substitution shall fully comply with specified requirements in appearance, assembly, and performance.

#### **B. Panels:**

1. Width: 24"
2. Seam Height: 2-3/8"
3. Seam Type: Symmetrical, mechanically seamed. Integral seam, double lock and snap together type panels are not acceptable.
  - a. Seam cap matching panel finish with two rows of integral factory hot applied sealant. Sealant should not come in contact with clip, and clip should not require sealant to maintain a weathertight condition.
  - b. Roof panel system must allow individual roof panel removal and replacement from any point on the roof without damage to adjacent roof panel(s).
4. Gauge: 24 gauge
5. Texture: Striations
6. Roof panel system must be approved by manufacturer to be installed on slopes as low as 1/2:12.
7. Panels must be furnished and installed in continuous lengths from ridge to eave with no overlaps. Panels too long to ship will be manufactured on site using manufacturer's employees and equipment. No panel end laps will be accepted.
8. Butyl sealant shall be applied during roll forming by manufacturer.

#### **C. Material: Galvalume Steel, Type AZ-50, Grade 50 as described in ASTM A792.**

- D. Finish: Galvalume Plus.

## 2.2 PERFORMANCE/DESIGN CRITERIA

- A. Thermal Movement: Metal Roofing system, including flashing, shall accommodate unlimited thermal movement without buckling or excess stress on the structure.
- B. Roof panel and trim attachments will be designed to satisfy the requirements of the roof design (shown in shop drawings).
- C. Maximum wind uplift capacity of roof system shall be determined using ASTM E 1592 test results, with an appropriate Factor of Safety in accordance with AISI S-100.
- D. Panel system shall be designed in accordance with the local building code and ASCE7 for project location with respect to appropriate Exposure category, Importance Factor and Factor of Safety in accordance with AISI S-100.
- E. Tested and listed by Underwriters Laboratories to comply with UL 580 for wind uplift Class 90 rating.

## 2.3 MISCELLANEOUS MATERIALS

- A. Panel Clip Screw: Screw required in wind uplift rating requirements and design specification for application, with corrosion-resistant coating, in length necessary to penetrate substrate minimum 3/4 inch, as supplied by roof panel manufacturer.
- B. Roof Panel Clip: As required by manufacturer to meet project specific loading and substrate conditions.
  - 1. Intermittent Clip: 16 gauge galvanized steel, one-piece, designed to allow roof panel thermal movement and not contact roof panel cap, as supplied by roof panel manufacturer, meeting wind uplift requirements and design criteria of this section.
  - 2. Intermittent Clip Bearing Plate: If required, in gauge, size and finish as supplied by and approved by roof panel manufacturer for use in roof panel manufacturer's full assembly warranted systems.
  - 3. Multi-Span Clip: as provided by roof panel manufacturer for full assembly warranted systems.
- C. Trim and flashing will be of the same gauge and finish unless approved otherwise by the metal roof system manufacturer.
  - 1. Ridge closures, consisting of metal channel surrounding factory precut closed cell foam, will not be secured through the field of the panel.
  - 2. Trim will be installed specifically as displayed in the manufacturer provided shop drawings. Proposed changes must be approved in writing by the metal roof system manufacturer.
- D. Concealed supports, angles, plates, accessories and brackets: gauge and finish as recommended, and furnished by manufacturer.

- E. Accessory Screw: Size and screw type as provided by panel manufacturer for each use, with prefinished hex washer head in color to match panels where exposed to view.
- F. Rivets: full stainless steel, including mandrel, in size to match application.
- G. Field Sealant:
  - 1. Exposed Sealant: Color coordinated urethane or polymer sealant as supplied by panel manufacturer.
  - 2. Non-exposed Sealant: Non-curing, non-skinning, butyl tape or tube sealant as supplied by manufacturer.
- H. Sealant Tape: non-drying, 100 percent solids, high grade butyl tape, as supplied by panel manufacturer, in sizes to match application.
- I. Abandoned Penetration Repairs:
  - 1. Penetrations equal to or less than 12"x12": 20 gauge galvanized steel metal sheet, sized to extend 4" minimum beyond abandoned opening in existing metal roof panel.
  - 2. Penetrations greater than 12"x12": Provide new roof panel, profile to match existing, sized to extend 12" minimum beyond adjacent joists.
  - 3. Fasteners: # 12 hot dip galvanized TEK screws
  - 4. Polyurethane sealant, BASF MasterSeal NP 1 or approved equivalent.
- J. Plumbing Vent Modifications:
  - 1. Pipe: PVC, Schedule 40 Pipe: ASTM D 1785.
  - 2. No-Hub Coupling: Standard No-Hub Coupling, conforming to CISPI 310. Couplings comply with ASTM C 1277. Gaskets made from an elastomeric compound that meets the requirements of ASTM C 564.
- K. Pipe Penetration Flashings:
  - 1. Flashing Boot: 20 year warranted flexible rubber boot type, with stainless steel compression ring. Use silicone type at pipes/flues with service temperature exceeding rating for rubber type.
  - 2. Umbrella Flashing: 26 gauge stainless steel Type 304, SBC Industries BELL-CAP or approved equivalent.
- L. Metal Roof Curbs with Integral Cricket: designed to fit roof panel module, sized to meet application.
  - 1. Material: 0.080 minimum thickness welded aluminum, or 18 gauge minimum welded stainless steel

2. Insulation: factory-insulated with 1.5" fiberglass insulation with 3 lb. density.
  3. Internally reinforce curbs with steel angle on any side exceeding 3'-0".
  4. Minimum height above finished roof 8 inches, minimum width of cricket at peak 6 inches.
  5. Curb shall be installed with non-exposed fasteners.
- M. High Temperature Underlayment Waterproof Membrane: A self-adhered, high temperature, minimum 50 mil thickness, rubberized asphalt roofing underlayment membrane with non-slip surfacing, meeting ASTM D-1970.

## 2.4 FABRICATION

- A. Material shall be in-line tension leveled prior to roll forming panel profile.
- B. Where possible, roll form panels in continuous lengths, full length of detailed runs.
- C. Fabricate trim/flashing and accessories to detailed profiles as shown on approved shop drawings and details or approved by Architect.
- D. Fabricate trim/flashing from same material as panel.

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examination:
  1. Inspect installed work of other trades and verify that such work is complete to a point where this work may proceed.
  2. The metal roof panel system manufacturer shall conduct inspections of the retrofit framing system prior to metal roof panel installation, to ensure straightness, alignment, and that system components have been installed in accordance with the installation documents.
  3. Verify that installation may be made in accordance with approved shop drawings and manufacturer's instructions. This specifically includes verifying that secondary structural members, decking, and substrate system components are installed to meet UL and International Building Code - 2015 (IBC) requirements. Coordinate with metal roof system manufacturer to ensure that reduced clip spacings at eave, rake, ridge and corner areas are accommodated.
- B. Discrepancies:
  1. In event of discrepancy, notify the Architect.
  2. Do not proceed with installation until discrepancies have been resolved and documented in writing.



### 3.2 PREPARATION

- A. Install substrate boards, hat channels, purlins, or furring channels in accordance with manufacturer's recommendations.
- B. Coordinate Work, with installation of other associated Work, to ensure quality application.
  - 1. Coordinate Work with installation of associated metal flashings and building walls.
  - 2. Coordinate Work to minimize foot traffic and construction activity on installed finished surfaces.
  - 3. Coordinate location of pipe penetrations to allow centering of pipe in panel.
  - 4. Coordinate location of roof curbs, to allow proper integration with roof panel seams.

### 3.3 INSTALLATION

- A. Install system components in accord and with manufacturer's instruction, approved submittals, and shop drawings.
  - 1. Repairs at Abandoned Penetrations:
    - a. Install sheet metal or panel patch over hole in existing roof panel.
    - b. Set metal in a continuous bead of sealant around edges and fasten to existing roof panel with screws at 6" o.c. maximum, minimum 3 fasteners per side.
  - 2. Modification of Existing Materials:
    - a. Cut existing plumbing vents below the roof deck and install pipe extension with no-hub connection, to provide finished vent height of 12" above the new roof system. Use of elbow fittings shall be used as required to redirect the pipe to locate the penetration between the metal roof panel seams.
  - 3. Curbs:
    - a. Provide new metal curbs at all existing curb locations and penetrations exceeding 8 inches in diameter.
      - 1) The contractor shall construct new ductwork from the existing roof penetration to the new roof curb.
      - 2) Ductwork joints shall be sealed tight to provide a leak-proof assembly and shall be made with material of like composition and gauge of the ductwork being extended.
    - b. When mechanical equipment locations conflict with retrofit roof sub-framing components, the contractor will provide additional framing that accommodates the relocation, replacement or re-flashing of the equipment. Contractor shall submit construction details for this condition to the Architect.
  - 4. Attachment:
    - a. Install intermittent clips with bearing plates, if required, and continuous clips, if required, according to the engineered design pattern in the field, perimeter, and corner areas of the roof.
    - b. Fix panels at location depicted on reviewed shop drawing(s).

- c. Locate and space fastenings in uniform vertical and horizontal alignment. Predrill panels for fasteners.
5. Panels:
  - a. Remove roof panel and flashing protective film prior to extended exposure to sunlight, heat, and other weather elements.
  - b. Install panels plumb, level and straight with seams and ribs parallel, conforming to design as indicated.
  - c. Do not field cut sheet metal roofing by torch.
  - d. Do not use graphite pencils to mark metal surfaces.
6. Terminations:
  - a. Fold up pan of panel at ridge, hip and headwalls. Commonly referred to as breadpanning.
  - b. Provide metal closures at peaks, rake edges, rake walls, eaves ,and each side of ridge and hip caps.
  - c. Install ridge and hip caps as sheet metal roofing work proceeds.
  - d. Lap metal flashing over sheet metal roofing to direct moisture to run over and off roofing.
7. Penetrations:
  - a. Allow for required panel clearance at penetrations for thermal movement.
  - b. Align pipe penetrations to occur at center of roof panel. Report and have corrected improperly-placed penetrations before proceeding with panel installation. Remove and replace roof panels which have improperly-placed penetration flashings.
  - c. Align roof curbs to fit roof panel module and overlap standing seam(s). Allow for proper drainage on both sides of curb.
8. Flashings and Sealants:
  - a. Install sheet metal flashings according to manufacturer's recommendations, reviewed shop drawings and in accordance with provision of Section 07 62 00.
  - b. Field-apply sealant tape and gun-grade sealant according to reviewed shop drawings and manufacturer's requirements for airtight, watertight installation..
  - c. Ensure sealant beads and tapes are applied prior to sheet metal installation to achieve a concealed bead. Neatly trim exposed portions of sealant without damaging roof panel or flashing finish.
  - d. Flash and seal sheet metal roofing with closure strips at eaves, rakes, and perimeter of all openings. Fasten with self-tapping screws.
9. Roof System:
  - a. Install sheet metal roofing true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of sealant.
  - b. Install metal roof system so that it is weathertight, without waves, warps, buckles, fastening stresses or distortion, allowing for expansion and contraction.

### 3.4 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal roofing within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

### 3.5 FIELD QUALITY CONTROL

#### A. Manufacturer's Field Service:

1. During installation, provide for a minimum of 4 on-site inspections, with detailed written reports of roof application by a qualified technical representative of the manufacturer. Provide copies of written reports, within three (3) days of inspection, through Contractor to the Architect and Architect's Roof Consultant.
2. Upon completion of installation, provide a final inspection, with detailed written reports, by a technical representative of roofing manufacturer to certify that roofing system has been installed in accordance with manufacturer's requirements and in accordance with the Contract Documents.

### 3.6 CLEANING, PROTECTION

- A. Dispose of excess materials and remove debris from site.
- B. Clean work in accordance with manufacturer's recommendations.
- C. Protect work against damage until final acceptance. Replace or repair to the satisfaction of the Architect, Owner, and Roof Consultant, any work that becomes damaged prior to final acceptance.
- D. Touch up minor scratches and abrasions with touch up paint supplied by the metal roof system manufacturer.
- E. Do not allow panels or trim to come in contact with dissimilar metals such as copper, lead or graphite. Water run-off from these materials is also prohibited.

### 3.7 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS **<Insert name>** of **<Insert address>**, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
  1. Owner: **<Insert name>**.
  2. Owner's Address: **<Insert address>**.
  3. Building Name/Type: **<Insert information>**.
  4. Building's Address: **<Insert address>**.
  5. Area of Work: **<Insert information>**.
  6. Acceptance Date: **<Insert date>**.
  7. Warranty Period: **<Insert time>**.
  8. Expiration Date: **<Insert date>**.

- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period Roofing Installer will, at Roofing Installer's own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
    - a. Lightning;
    - b. Peak gust wind speed exceeding 90 mph;
    - c. Fire;
    - d. Failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
    - e. Faulty construction of parapet walls, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
    - f. Vapor condensation on bottom of roofing; and
    - g. Activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
  2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
  3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
  4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
  5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
  6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing

Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.

7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this **<Insert day>** day of **<Insert month>**, **<Insert year>**.

1. Authorized Signature: **<Insert signature>**.
2. Name: **<Insert name>**.
3. Title: **<Insert title>**.

**END OF SECTION**

## **SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM**

### **PART 1 - GENERAL**

#### **1.1 DESCRIPTION**

- A. Install flashing and sheet metal as indicated on Drawings and in these specifications as required for a complete and proper installation. The following items are included:
  - 1. Edge metal and fascia metal.
  - 2. Gutters and downspouts.
  - 3. Sheet metal counterflashing.
  - 4. Termination bars.
  - 5. Expansion joint covers.
  - 6. Painting exterior surfaces of new and existing cast iron downspout boots

#### **1.2 RELATED WORK**

- A. Section 06 10 53 – Miscellaneous Rough Carpentry
- B. Section 07 22 00 – Roof and Deck Insulation
- C. Section 07 61 00 – Sheet Metal Roofing

#### **1.3 SUBMITTALS**

- A. Submit shop drawings and product data under provisions of Division 1.
  - 1. In shop drawings, describe material profile, jointing pattern, jointing details, fastening methods, and installation details.
- B. Submit samples under provisions of Division 1.

#### **1.4 QUALITY ASSURANCE**

- A. Perform work in accordance with SMACNA and NRCA standard details and requirement.
- B. Paint System Limitations:
  - 1. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90 deg F (10 and 32 deg C).
  - 2. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 and 95 deg F (7.2 and 35 deg C).
  - 3. Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

4. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.
- C. Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label.
1. Store paint materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C).
  2. Maintain containers used in storage in a clean condition, free of foreign materials and residue.
  3. Keep storage area neat and orderly. Remove oily rags and waste daily.
  4. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

## 1.5 QUALIFICATIONS

- A. Company specializing in sheet metal flashing work with a minimum of 10-years documented experience.

## 1.6 STORAGE AND HANDLING

- A. Stack pre-formed materials to prevent twisting, bending, or abrasion, and to provide ventilation.
- B. Prevent contact with materials during storage that may cause discoloration, staining, or damage. Materials damaged by improper storage techniques, including "white rust" will be rejected and replaced at Contractor's expense.

## 1.7 WARRANTY

- A. Sheet Metal work and accessories to be included in Two-Year Contractor's Warranty.
- B. Provide pre-finished metal manufacturer's twenty-year coating guarantee.
- C. Provide pre-finished metal manufacturer's twenty-year galvanized steel guarantee.

# **PART 2 - PRODUCTS**

## 2.1 SHEET METALS

- A. Sheet metal flashing: 24-gauge galvanized steel and Series 300 stainless steel.
- B. Pre-finished metal: 24-gauge galvanized steel, Kynar 500.

## 2.2 SHEET METAL COMPONENTS

- A. Receivers and Counterflashing: 24-gauge prefinished galvanized steel.
- B. Expansion Joint Covers, Gutters, and Downspouts: Pre-finished 24-gauge galvanized steel.

- C. Gutter Straps, Brackets, and Downspout Straps: Minimum 1/8-inch by 1-inch galvanized steel. Wrap downspout straps and gutter brackets in prefinished 24-gauge galvanized steel to match gutters/downspouts.
- D. Cleats: 20-gauge galvanized steel.

### 2.3 ACCESSORIES

- A. Solder: ANSI/ASTM B 32 50/50 type.
- B. Blind Pop-Rivets: Stainless steel, with stainless steel mandrels.
- C. Clamping Collar: Stainless steel of size necessary to fit over vent or pipe circumference, as applicable.
- D. Umbrella flashing: 26 gauge stainless steel, premanufactured soldered flashing, Umbrella Bell Cap Model UMB-BELL as manufactured by SBC Industries.
- E. Self-Adhered Membrane Flashing: Refer to Section 07 61 00 for high temperature rated underlayment.
- F. Splash Blocks: Precast concrete splash block, 2'-0" length x 1'-0" width, minimum. Provide at all locations where downspout discharges at non-paved surfaces at ground level.

### 2.4 SEALANT

- A. Type I: Application exposures to sunlight, ASTM C-920-87, Federal Specification TT-S-00230-C one component gun-grade polyurethane sealant suitable for continuous immersion and resistant to asphalt products.
- B. Type II: Applications not exposed to sunlight, butyl rubber based.
- C. Hot vent sealant: A one component neutral moisture curing silicone sealant.

### 2.5 SCHEDULE OF FASTENERS

- A. Exposed fasteners: Shall be stainless steel with stainless steel bonded neoprene or EPDM washers. Fastener heads shall be coated by the manufacturer to match the color of sheet metal.
- B. Concealed fasteners: Shall be stainless steel with flat heads at all surfaces to receive sheet membrane flashings.
- C. Fasteners shall be compatible to all materials to which they come in contact.
- D. Cleat, Counter-flashing, and Surface Fastened Components.
  - 1. Wood Substrate: No. 10 stainless steel wood screws with stainless steel bonded neoprene washers of length necessary to penetrate wood substrate one inch.



2. Metal Substrate: Minimum No. 10 stainless steel sheet metal screws or as necessary to suit application with stainless steel bonded neoprene washers.
3. Concrete or Masonry Substrate:
  - a. Flashings: 3/16" diameter, stainless steel Tapcon Concrete/Masonry Anchors or approved equivalent, length sufficient to provide 1" min. embedment into substrate.

## 2.6 PAINT SYSTEM

### A. Acceptable Manufacturers:

1. Devoe
2. Sherwin-Williams
3. Pittsburgh Paints
4. Approved equivalent.

### B. PAINT MATERIALS

1. Material Compatibility: Provide surface preparation fillers, primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
2. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
3. Provide paint/coating types identified below or an alternate manufacturers equivalent product:
  - a. Paint/Coating: Sherwin-Williams Sher-Cryl HPA or approved equivalent.
  - b. Primer: Kem Kromik Universal Metal Primer or approved equivalent.
4. Color: to match downspouts.

## 2.7 FABRICATION

- A. Form sections to match existing profiles, true to shape, accurate in size, square, and free from distortion or defects.
- B. Fabricate continuous cleats and starter strips of same material as sheet, interlockable with sheet.
- C. Form pieces in longest practical lengths.
- D. Hem exposed edges of metal 1/2-inch; miter and seam corners.
- E. Two-piece fascia extension is required whenever fascia vertical height exceeds 8 inches and coping vertical height exceeds 5 inches.
- F. Fasten and seal metal joints.

- G. Provide 1" standing seam joints at all coping and expansion joint caps.
- H. Fabricate vertical faces with bottom edge formed outward 1/2-inch and hemmed to form drip.
- I. Form edge metal/fascia as existing profiles as specified herein and as shown on Drawings.
- J. Form sections square, true, and accurate in size, in maximum possible lengths and free of distortion or defects detrimental to appearance or performance. Allow for expansion at joints.
- K. Enlarge holes for fastening counter flashing as necessary to allow for thermal expansion and contraction. Cover exposed holes with appropriate washers.
- L. All fabrication and installation of sheet metal shall be in accordance with the latest published SMACNA and NRCA guidelines and recognized roofing and sheet metal industry standards.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Verify substrate materials are in place, sealed, and secure.
- B. Beginning of installation means acceptance of existing conditions.

#### **3.2 PREPARATION**

- A. Field measure site conditions prior to fabricating work.
- B. Apply protective membrane backing on surfaces in contact with dissimilar materials, including between existing steel decks and treated wood.
- C. Tie-ins or contact with dissimilar metals: Install separation layer of elastomeric membrane between metal surfaces.

#### **3.3 INSTALLATION - GENERAL**

- A. Provide flashings of materials indicated on Drawings at all junctures of the roof with perimeters, curbs, mechanical, electrical equipment, etc., that a completely watertight installation is achieved.
- B. Fabricate and install sheet metal work with lines, arises and angles sharp and true, and plane surfaces free from warps and buckles. Bead or return all exposed edges.
- C. Soldering: Tin metal for full area of contact on soldered seams and joints. Do soldering slowly with well heated coppers, thoroughly heating seams and completely filling them with solder.

- D. Prime all sheet metal to receive roofing in accordance with manufacturer's requirements.
- E. Apply bed of water cutoff mastic directly below sheet metal that is set over roofing membrane or in other areas as required by the Drawings, and the manufacturer's specifications.
- F. Submit details not covered in Drawings for approval by Owner or A/E.
- G. Install starter and edge strips, and cleats before starting installation.
- H. Secure flashings in place using concealed fasteners. Use exposed fasteners only in locations approved by A/E.
- I. Lock and seal all joints.
- J. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- K. Fasten sheet metal with approved fasteners at a minimum of 12-inches on centers unless otherwise specified in these Specifications or the Drawings.

#### 3.4 TWO-PIECE COUNTERFLASHING INSTALLATION

- A. Secure counterflashing receiver over base flashing to substrate.
- B. Secure counterflashing to receiver with stainless steel screws with bonded neoprene washers spaced 12-inches on centers, or as noted in the Drawings.
- C. Pop-rivet and solder all seams of galvanized or stainless steel two-piece counterflashings, pop rivet and seal seams of prefinished galvanized steel.

#### 3.5 EDGE FASCIA INSTALLATION

- A. Provide edge fascia flashings at dimensions indicated in the Drawings.
- B. Secure fascia at horizontal leg with appropriate fasteners in two rows, staggered, on three-inch (3") centers.

#### 3.6 CLEAT INSTALLATION

- A. Install continuous cleats for edge/coping flashing with appropriate fasteners on six-inch centers. Fasteners shall be located 1-3/4 inches from bottom of cleat or as required to meet ANSI/SPRI ES-1.

#### 3.7 EXPANSION JOINT INSTALLATION

- A. Fabricate and install these flashings according to the Drawings, latest published SMACNA and NRCA guidelines, and in accordance with recognized roofing and sheet metal industry standards.
- B. All horizontal joints shall have a 1" standing seam as shown in the Drawings.

- C. Vertical flanges shall have a minimum height of three (3) inches. High side (outside) shall be cleated continuously; other side mechanically fastened as shown on the drawings.

### 3.8 UMBRELLA FLASHING INSTALLATION

- A. Install umbrella flashings above all membrane flashings at round penetrations, where penetration extends above flashing. Secure umbrella with clamping ring and silicone sealant applied to the top edges, rivet and seal flashing seam watertight.

### 3.9 GUTTERS AND DOWNSPOUTS

- A. Join components with formed seams sealed watertight.
- B. Flash and seal gutters to downspouts and accessories. Apply sealant between gutter base and downspout flanges prior to securing with stainless steel pop rivets. Do not apply excess/additional sealant on top of downspout flange.
- C. Connect downspouts to existing cast iron downspout where present, or new cast iron downspout locations as indicated in the Drawings. Provide sheet metal downspout transition cap over backer rod and sealant at gaps between downspout and boot.
- D. Set splash blocks under downspouts at all locations discharging at non-paved surfaces.
- E. Seal metal joints watertight for full metal surface contact. Rivet and apply Type II sealant between joints of metal.
- F. Test gutters and downspouts for leaks after full cure of sealants. Repair all leaks at metal joints by cleaning, priming, and reapplication of sealant.
- G. Ponding water inside gutters will be rejected and required to be replaced.
- H. Install stainless steel gutter screens as shown in the Details.

### 3.10 DOWNSPOUT BOOTS – PAINTING EXISTING AND NEW

- A. Cleaning
  - 1. General: Cover and protect from painting all surfaces not scheduled to be painted. Temporarily remove items that are not to be painted and cannot be adequately protected during the painting operations. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
  - 2. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings including all loose and flaking paint. Removal of grease or oil shall be performed by solvent wipe using appropriate solvents or detergents.

- B. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
1. Scrape all areas to remove all loose, blistering, and flaking paint, rust stains, and corrosion using a hand scraper or approved vacuum shrouded power tools.
    - a. All areas with scaling or pack rust shall be cleaned to solid metal with hand or power tools such that no rust scale remains. Cleaning for all steel components shall meet the SSPC-3, "Power Tool Cleaning" standards for preparation.
    - b. Paint chips and dust shall be collected continuously during the paint scraping, as close as practicable to the point of cleaning. All paint chips and dust shall be collected from the general work area on an hourly basis during cleaning operations.
    - c. Once the components meet the SSPC-3 standards, apply the salt sequestering agent to all structural steel in accordance to the manufacturer's recommendations. Remove the agent by pressure washing or as directed by the manufacturer.
    - d. Program cleaning and painting so that contaminants from cleaning process will not fall onto wet, newly-painted surfaces.
    - e. Notify Engineer of completion of preparatory work so that Engineer may observe conditions as well as examine soundness of existing structural steel system.
  2. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
- C. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
1. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
  2. Use thinners only when required by the paint manufacturer. Use only thinners approved by paint manufacturer and only within recommended limits.
- D. Application: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
1. Paint colors, surface treatments, and finishes are indicated in the schedules or as selected during submittal review.
  2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
  3. Provide finish coats that are compatible with primers used.

4. Minimum Coating Thickness:
  - a. Wet mil thickness: 6.0 mils minimum to 10 mils maximum.
  - b. Dry mil thickness: 2.5 mils minimum to 4.0 mils maximum.
5. Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

### 3.11 CLEANING

- A. Remove markings from all exposed sheet metal and painted surfaces, including sealants, adhesive, and any other contaminants. Items not cleaned to the satisfaction of the Owner and Engineer will require to be replaced, at no cost to the Owner.
- B. Remove all packaging, unused fasteners, adhesive and other installation materials from the project site.
- C. Provide protection as required, leaving the work area in undamaged condition at the time of completion of work.

**END OF SECTION**

## **SECTION 07 72 00 - ROOF ACCESSORIES**

### **PART 1 - GENERAL**

#### **1.1 WORK INCLUDED**

- A. Furnishing and installing factory-fabricated double-leaf automatic smoke vents.

#### **1.2 SUBMITTALS**

- A. **Product Data:** Submit for all products proposed for use, describing physical characteristics and method of installation.
- B. **Dimensioned Shop Drawings:** Before beginning fabrication of equipment submit scaled shop drawings showing layout, profiles and product components, including anchorage, accessories and finish, along with general arrangement of the equipment and their working positions.
- C. **Contract Closeout:** Provide applicable manufacturer's warranties prior to the contract closeout.

#### **1.3 QUALITY ASSURANCE**

- A. **Manufacturer Qualifications:** Company specializing in manufacturing specified systems, with a minimum of eight years of documented experience.
- B. **Installer Qualifications:** Company approved by manufacturer with not less than five years of experience in installation of specified systems.
- C. **Source Limitations:** Obtain all accessories from the same manufacturer as the specified products.

#### **1.4 DELIVERY, STORAGE, AND HANDLING**

- A. **Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label.**
- B. **Storage and Protection:** Store components above ground, protected from exposure to the elements and from physical damage caused by other construction activities. Rusted, bent, warped or otherwise damaged units will not be accepted.

#### **1.5 WARRANTY**

- A. **Manufacturer's standard warranty:** Materials shall be free of defects in material and workmanship for a period of five years from the date of purchase. Should a part fail to function in normal use within this period, manufacturer shall furnish a new part at no charge. Electrical motors, special finishes, and other special equipment (if applicable) shall be warranted separately by the manufacturers of those products.

## PART TWO – PRODUCTS

### 2.1 AUTOMATIC SMOKE VENTS

- A. Basis-of-Design Manufacturer: Type DSH Automatic Roof Smoke Vent by The BILCO Company, P.O. Box 1203, New Haven, CT 06505, 1-800-366-6530, Fax: 1-203-535-1582, Web: www.bilco.com.
- B. Furnish and install where indicated on plans metal fire vent Type DSH, size width (4'-0") x length (4'-0"). Length denotes hinge side. The roof fire vent shall be double leaf and preassembled from the manufacturer.
- C. Performance characteristics:
  - 1. Vent shall be UL listed. Comply with UL 793 and UL 790 Class A (burning brand test).
  - 2. Operation: Vent covers shall open simultaneously against a 10 psf (49kg/m<sup>2</sup>) snow/wind load when latch is manually released or when heat breaks the UL listed fusible link. Opening shall be in a controlled manner to avoid damage to surrounding roof surfaces.
  - 3. Latch operation: When heat parts the UL listed fusible link, the latch shall release instantaneously, allowing vent cover to open. The latch shall be designed for easy resetting, after a fire or test, so that the cover cannot be latched closed unless the mechanism has been reset properly. Manufacturer shall provide instructions for resetting the latch with each unit. Latch mechanism shall hold the covers in the closed position without overstressing the fusible link and withstand 90 psf (438kg/m<sup>2</sup>) wind uplift forces acting on the covers.
  - 4. Covers shall be reinforced to support a minimum live load of 40 psf (195kg/m<sup>2</sup>) with a maximum deflection of 1/150th of the span or 20 psf (97kg/m<sup>2</sup>) wind uplift.
  - 5. Entire roof fire vent shall be weather tight with fully welded corner joints on cover and curb.
- D. Covers: Shall be 11 gauge (2.3mm) aluminum with a 3" (76mm) beaded flange with formed reinforcing members.
- E. Cover insulation: Shall be fiberglass of 1" (25mm) thickness, fully covered and protected by a metal liner, 18 gauge (1mm) aluminum.
- F. Curb: Shall be 12" (305mm) in height and of 11 gauge (2.3mm) aluminum. Curb shall be formed with a 3-1/2" (89mm) flange with 7/16" (11mm) holes provided for securing to roof deck. Curb shall be equipped with integral metal cap flashing of the same gauge and material as the curb. Curb shall have a heavy extruded EPDM rubber gasket that is mechanically fastened to the top of the curb to assure a continuous seal when compressed by the covers.
- G. Curb insulation: Shall be rigid, high-density fiberboard of 1" (25mm) thickness on the outside of curb.
- H. Lifting mechanisms: Manufacturer shall provide high performance gas spring operators to open the covers against a snow/wind load. Gas springs shall automatically lock



covers in the fully open position. A release mechanism shall be provided to allow covers to be closed. Gas springs shall have integral dampers to assure a controlled rate of cover opening and have a cyclic durability of 50,000 cycles.

- I. Latch mechanism: Positive hold/release mechanism with a separate latching point for each cover controlled by a single UL listed 165°F (74°C) fusible link. Fusible link shall be curb mounted on a non-hinged end to allow the latching mechanism to be easily reset from the roof level.
- J. Hardware
  - 1. Heavy pintle hinges shall be provided.
  - 2. Gas springs have a powder coated outer tube and chromate plated inner rod. All other hardware is zinc plated/chromate sealed or galvanized steel.
  - 3. Cover hardware shall be bolted into heavy gauge channel reinforcing welded to the underside of the cover and concealed within the insulation space.
- K. Manual pull release cables: Interior and exterior cables with red vinyl grips shall be provided and allow the unit to be opened without disturbing the fusible link.
- L. Finishes: Factory finish shall be mill finish aluminum.

### **PART 3 - EXECUTION**

#### **3.1 INSTALLATION – AUTOMATIC SMOKE VENTS**

- A. Examine substrates and openings for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work.
  - 1. Test units for proper function and adjust until proper operation is achieved.
  - 2. Test fusible link and install replacement fusible link after testing.
  - 3. Repair finishes damaged during installation.
  - 4. Restore finishes so no evidence remains of corrective work.

#### **3.2 CLEANING AND PROTECTION**

- A. Remove all packaging, unused fasteners, adhesive and other installation materials from the project site.
- B. Remove adhesive from exposed surfaces of supports and bases, and leave the work area in clean condition.
- C. Provide protection as required, leaving the work area in undamaged condition at the time of completion of work.

**END OF SECTION**

## **SECTION 07 92 00 - JOINT SEALANTS**

### **PART 1 - GENERAL**

#### 1.1 DESCRIPTION

- A. Base Bid: Silicone joint sealants at cracks in existing stucco walls above Roof A05.
- B. Alternate Bid No. 3: Polyurethane joint sealants at cracks in existing stucco walls above Roof A05, prior to installation of coating system.

#### 1.2 RELATED WORK

- A. Section 09 9953 – High Performance Elastomeric Coatings

#### 1.3 QUALITY ASSURANCE

- A. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.

#### 1.4 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Division 1.

### **PART 2 - PRODUCTS**

#### 2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- C. Colors of Exposed Joint Sealants: As selected by Owner, match existing.

#### 2.2 SILICONE JOINT SEALANTS

- A. Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 100/50, for Use NT.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Dow Corning Corporation; 790.
    - b. GE Advanced Materials - Silicones; SilPruf LM SCS2700.

- c. Tremco Incorporated; Spectrem 1

## 2.3 URETHANE JOINT SEALANTS

- A. Single-Component, Nonsag, Urethane Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, for Use NT.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. BASF Building Systems; Master Seal NP 1.
    - b. As required by elastomeric coating manufacturer.

## 2.4 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound

substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

- a. Concrete.
- b. Masonry.

3. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:

- a. Metal.
- b. Glass.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

D. Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.

2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.

#### 3.4 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

#### 3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

**END OF SECTION**

## **SECTION 09 96 53 –HIGH PERFORMANCE ELASTOMERIC COATINGS**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

**A. Section Includes:**

1. Application of water-based, VOC-compliant, silicone-modified, elastomeric decorative coating for waterproofing exterior, above-grade vertical surfaces.

**B. Related Sections:**

Section 07 92 00 – Joint Sealants.

#### **1.2 SUBMITTALS**

**A. Comply with Section 01 33 00.**

**B. Product Data:** Submit manufacturer's technical data sheets for each product.

**C. Quality Control Submittals:**

Provide protection plan of surrounding areas and non-cementitious surfaces.

#### **1.3 QUALITY ASSURANCE**

**A. Comply with Section 01 40 00.**

**B. Qualifications:**

1. **Manufacturer Qualifications:** Company with minimum 15 years of experience in manufacturing of specified products.
2. **Applicator Qualifications:** Company with minimum of 5 years experience in application of specified products on projects of similar size and scope, and is acceptable to product manufacturer.

**C. Field Sample:**

1. Install at Project site or pre-selected area of building an area for field sample, minimum 4 feet by 4 feet (1.2 m by 1.2 m), using specified material.
2. Apply material in accordance with manufacturer's written application instructions.

3. Manufacturer's representative or designated representative will review technical aspects; surface preparation, repair, and workmanship.
4. Field sample will be standard for judging workmanship on remainder of Project.
5. Maintain field sample during construction for workmanship comparison.
6. Do not alter, move, or destroy field sample until Work is completed and approved by Architect.
7. Obtain Architect's written approval of field sample before start of material application, including approval of aesthetics, color, texture, and appearance.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with Section 01 60 00.
- B. Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- C. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Store tightly sealed materials off ground and away from moisture, direct sunlight, extreme heat, and freezing temperatures.
- E. Do not store below 35 degrees F (2 degrees C).

#### 1.5 PROJECT CONDITIONS

- A. Environmental Requirements:
  1. Ensure that substrate surface and ambient air temperature are minimum of 40 degrees F (4 degrees C) and rising at application time and remain above 40 degrees F (4 degrees C) for at least 12 hours after application. Ensure that frost or frozen surfaces are thawed and dry.
  2. Do not apply material if snow, rain, fog, and mist are anticipated within 12 hours after application. Allow surfaces to attain temperature and conditions specified before proceeding with coating application.
  3. Do not apply over sealant joints.
  4. Do not apply to traffic-bearing or other horizontal surfaces.

## **PART 2 - PRODUCTS**

## 2.1 MANUFACTURERS

- A. Subject to compliance with requirements, provide products from the following manufacturer:

BASF Corporation  
Construction Chemicals  
889 Valley Park Drive  
Shakopee, MN 55379  
Customer Service: 800- 433-9517  
Technical Service: 800-243-6739  
Direct Phone: 952-496-6000  
Internet: [www.master-builders-solutions.basf.us](http://www.master-builders-solutions.basf.us)

- B. Substitutions: Comply with Section 01 60 00.

- C. Specifications and Drawings are based on manufacturer's proprietary literature from BASF Construction Chemicals. Other manufacturers shall comply with minimum levels of material, color selection, and detailing indicated in Specifications or on Drawings. Architect will be sole judge of appropriateness of substitutions.

## 2.2 MATERIALS

- A. Water-based, VOC-compliant, silicone-modified, anti-carbonation, elastomeric waterproof coating.

1. Acceptable Product: MasterProtect EL 850 (formerly Silflex) by BASF.

- B. Performance Requirements: Provide coating complying with the following requirements:

1. Compliance: Federal Specification TT-C-555B, Type II.
2. Weight, pastel base: 10.6 lbs per gal (1.3 kg/L).
3. Solids Content:
  - a. By Weight: 55.1 percent.
  - b. By Volume: 45.7 percent.
4. Viscosity: 131 KU.
5. Elongation at Break, ASTM D2370: 784.5 percent.
6. Tensile Strength, ASTM D2370: 40 psi (0.28 MPa).
7. Wind-Driven Rain, Federal Specification TT-C-555B, 98 mph: Passes.
8. Artificial Weathering, ASTM G155, Xenon Arc, 4,000 hours: No chalking, checking, cracking, or adhesion loss. Color change,  $\Delta E$ : Less than 2.6.
9. CO<sub>2</sub> Diffusion Resistance, Engelfried, at 10 dry mils: 323,000, 8-inch (203-mm) equivalent concrete layer.
10. Water Vapor Transmission, ASTM D1653 and E96:
  - a. Wet: 13 perms.
  - b. Dry: 1.62 perms.
11. Dirt Pick-Up, ASTM D3719, at 2 months: 92.91.



12. Hiding, ASTM D2805, at 6 wet mils (0.15 mm): 99.8 percent opacity.
  13. Low-Temperature Flexibility, ASTM D522: Passes.
    - a. 1/8-inch (3.2-mm) mandrel at minus 30 degrees F (minus 34 degrees C).
  14. VOC Content:
    - a. Maximum 0.7 lbs per gal (84.0 g/L), less water and exempt solvents.
- C. Approximate Coverage Rates:
1. Substrates, square feet per gallon (m<sup>2</sup>/L), per coat:
    - a. Troweled Stucco: 60 to 80 (1.5 to 2.0).
  2. Average Wet Film Thickness: 16 to 33 mils (0.41 to 0.83 mm).
  3. Average Dry Film Thickness: 7 to 15 mils (0.18 to 0.38 mm).
- D. Color: Match existing as closely as possible, within Manufacturer's standard range of colors.
- E. Texture: Smooth.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Comply with Section 01 70 00.

#### **3.2 SURFACE PREPARATION**

- A. Protection: Protect adjacent Work areas and finish surfaces from damage during coating application.
- B. Prepare surfaces in accordance with manufacturer's instructions.
- C. Ensure that substrate is sound, clean, dry, and free of dust, dirt, oils, grease, laitance, efflorescence, mildew, fungus, biological residues, and other contaminants that could prevent proper adhesion.
- D. Ensure concrete substrates have a minimum 28-day cure and are free of bond-inhibiting contaminants.
- E. Clean surface to achieve texture similar to medium-grit sandpaper.
- F. Repair holes and spalled and damaged concrete with repair materials approved by coating manufacturer.
- G. Remove protruding concrete accessories and smooth out irregularities.

- H. When chemical cleaners are used, neutralize compounds and fully rinse surface with clean water. Allow surface to dry before proceeding.
- I. Remove blisters or delaminated areas and sand edges to smooth rough areas and provide transition to existing paint areas.
- J. Check adhesion of existing paint in accordance with ASTM D3359, measuring adhesion by Tape Method A.
- K. Treat cracks greater than 1/32 inch (0.8 mm) with knife-grade or brush-grade patching compound.
- L. Treat cracks greater than 1/4 inch (6 mm) as expansion joints and fill with sealant approved by coating manufacturer.

### 3.3 DETAIL PREPARATION

- A. Apply joint sealant where appropriate on support columns and other details. Inspect expansion joints. Ensure there is no deteriorated sealant, adhesion loss, or non-elastomeric caulking in joints. Replace defective sealant with sealant approved by coating manufacturer.
- B. Apply and tool liberal amount of patching compound or form cant bead of sealant approved by coating manufacturer wherever there is change in direction, where 2 walls abut, and at column and wall intersections.
- C. If movement is anticipated where dissimilar substrates join (for example, stucco and concrete or brick and CMU), properly clean joint and seal with sealant approved by coating manufacturer.
- D. Inspect through-wall penetrations, including electrical, lighting, signage, plumbing, HVAC, and fire-sprinkler piping, for watertight seal. Repair with sealant approved by coating manufacturer.
- E. Cracks smaller than hairline can be bridged with knife-grade or brush-grade patching compounds.
- F. Chip or grind out nonmoving cracks larger than hairline. Remove dust and pack with knife-grade patching compound. Bridge crack with brush-grade patching compound. Brush narrow band directly into crack using brush, sponge, or other means to match substrate texture and reduce telegraphing of patches through finish coat. On textured substrates, use texturized patching compound to minimize telegraphing.

- G. Rout out dynamic or moving cracks to minimum of 1/4 inch by 1/4 inch (6 mm by 6 mm), then fill with sealant approved by coating manufacturer. Once sealant is tooled and cured, proceed with crack repair.
- H. Repair cracks and treat back side of parapets in same manner as exterior walls, terminating at roof counter flashings. If top of parapet wall is exposed masonry, apply coat of patching compound to create smooth, well-draining surface. Recaulking of reglet may be required.
- I. Ensure block and other porous surfaces are clean, dry, and free of contaminants. Fill concrete block faces with 1 nylon brush coat of block filler. Apply by working material into pores, crevices, and voids.

### 3.4 PRIMING

- A. Prime uncoated concrete and masonry substrates, except those treated with block filler, in accordance with manufacturer's instructions.

### 3.5 APPLICATION

- A. Apply coating in accordance with manufacturer's instructions.
- B. Apply coating in pinhole-free, continuous membrane for waterproofing integrity.

### 3.6 PROTECTION

- A. Protect applied coating from damage during construction.

**END OF SECTION**

**March 9, 2021 - Addendum #1**

The **Answers Posted** and the **Deadline for Proposals** dates have changed as noted below in red.

**LAGO VISTA INDEPENDENT SCHOOL DISTRICT**  
**Request For Competitive Sealed Proposals For**  
**Roof Replacement At**  
**Lago Vista Middle School**  
**RFCSP NO. 20210301**

DATE	EVENT
<a href="#"><u>Pre-Proposal Conference (Virtual):</u></a>	<b>March 9, 2021, 9:00 AM (CST)</b>
<b>Pre-Proposal Site Visit:</b>	<b>March 9, 2021, 1:00 PM (CST)</b>
Deadlines for Questions	March 16, 2021, 5:00 PM (CST)
Answers Posted	<b>March 22, 2021, 2:00 PM (CST)</b>
<b>Deadline for Proposals / CSP Opening</b>	<b>March 25, 2021, 2:00 PM (CST)</b>
Evaluation of Proposals	March 26, 2021
LVISD Board Meeting for review/approval	April 12, 2021

**Deliver Sealed Proposals to:**

Lago Vista ISD  
8039 Bar-K Ranch Road  
Lago Vista, TX 78645

**Contact:**

Jason Stoner, Director of Finance  
Business Office  
Phone: 512.267.8300 x1502  
Email: [jason\\_stoner@lagovista.txed.net](mailto:jason_stoner@lagovista.txed.net)

- Questions must be submitted via e-mail to the contact person listed above. In the **e-mail subject line**, reference: **Questions RFCSP No. 20210301**
- Q & A and Addenda will be posted on our website:  
[http://www.lagovistaisd.net/page/business.required\\_postings](http://www.lagovistaisd.net/page/business.required_postings)
- Proposals are due no later than the date and time indicated above. Proposals must be received by U.S. mail, or hand delivery in a **sealed envelope**. Proposals received after the specified time for submission shall not be considered.
- Submit the following:
  - one (1) hard copy stapled or bound together, marked “original” – include signed “required” forms
  - one (1) digital copy on a flash drive – include signed “required” forms
- FAX, e-mail or other electronic proposals **will not be accepted**.
- Proposals must be plainly marked on the cover with:
  - RFP Number and Title
  - Name of the Proposer (“Offeror”)
  - RFCSP number
  - Project name
  - Date and Time of deadline for submission