

# APS DATA CHARTER SCHOOL REROOF



**April 6, 2020**

**APS DATA CHARTER SCHOOL REROOF**  
Albuquerque, New Mexico

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The technical material and data contained in this Project Manual were prepared under the supervision and direction of the undersigned, whose seal as a Professional Architect, licensed to practice in the State of New Mexico, is affixed below.



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Registered Architect in the State of New Mexico

License No. 3487

6501 Americas Pkwy NE, Suite 300

Albuquerque, New Mexico 87110

505-883-5200

**SECTION 00002 – PROJECT DIRECTORY**

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**PROJECT ARCHITECT**

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Susan Johnson, Principal-Project Manager  
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F: (505) 884-5390

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**STRUCTURAL CONSULTANT**

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**END OF SECTION 00002**



***ALBUQUERQUE PUBLIC SCHOOLS***

**REQUEST FOR PROPOSALS  
FOR CONSTRUCTION**

**RFP NUMBER: 20-047RRR  
Data Charter School Reroof**

**APS PROJECT NO. 393**

**CAPITAL OPERATIONS  
FACILITIES, DESIGN & CONSTRUCTION  
&  
THE PROCUREMENT DEPARTMENT  
6400 UPTOWN BLVD. NE, SUITE 500E  
ALBUQUERQUE, NM 87110**

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## I. OVERVIEW OF RFP & PROJECT

### A. PURPOSE OF THIS REQUEST FOR PROPOSALS

Albuquerque Public Schools (APS) is requesting competitive sealed proposals with the intent of entering into a contract with a general contractor for the purpose of providing the construction services for the project identified in this Request for Proposals (RFP). Any contract awarded as a result of this solicitation will be in effect from date of award until the completion of the project.

All potential Offerors are to read, understand and accept the requirements of this RFP, especially the **mandatory requirements**, shall visit the site of work, shall fully inform themselves as to all existing conditions and limitations, and shall include in the proposal the cost of all items required by the RFP. If the contractor observes that portions of the Contract Documents are at variance with applicable laws, building codes, rules, regulations, or contain obvious erroneous or uncoordinated information, the contractor shall promptly notify the appropriate contact listed herein and the necessary changes shall be accomplished by addendum.

**This is a qualifications-based selection with cost as a consideration.** The Offeror is required to provide, as part of the Technical Proposal, the qualifications and other documents requested in this RFP. The Price Proposal will be evaluated separately from the Technical Proposal.

The award of a contract for construction shall take into consideration certain contractor qualifications and performance factors that add value to a procurement contract. Factors such as contractor's past performance, technical expertise and experience, management capabilities and resources, subcontractor teams and craft personnel resources will form a basis for the criteria to be considered, in addition to the lump sum price to perform the scope of work. Award shall be made in accordance with the terms, conditions, and requirements stated herein.

### B. BACKGROUND – ALBUQUERQUE PUBLIC SCHOOLS

APS is the nation's 28<sup>th</sup> largest school district covering a 1,200 square mile geographical area that encompasses all of the Albuquerque metro area in Bernalillo County and one location in Sandoval County, New Mexico. An elected board governs the district. APS maintains the largest collection of public buildings in the state with approximately 14 million square feet of traditional school buildings, portable classrooms, and administrative offices. The district strives to keep pace with Albuquerque's growth. The approximately 90,000 APS students plus 5,000 charter school students and 13,000 employees require a continuous building program that includes remodeling or refurbishing projects, new additions, and new schools.

### C. PROJECT DESCRIPTION

The Work includes but is not limited to reroof of the DATA Charter School roof. Work includes removal of existing roof down to existing metal deck, removal and salvage for reinstallation of all rooftop equipment, including but not limited to, mechanical units, piping and technology equipment.

### D. PROJECT FUNDING

APS has funds to administer this project and will be referred to throughout the contract documents as the "Owner".

### E. PROJECT MANAGEMENT SOFTWARE

The successful Offeror shall purchase, at the Offeror's expense, one or more seat licenses for APS's Project Management Software, as needed for the General Contractor. Subcontractors are not required

to purchase licenses. APS will provide training on the use of the project management software. Further, the successful Offeror is required to work with the APS Staff Architect and the Design Professional to ensure that all project communication, correspondence, submittals, change orders, pay requests, etc. are submitted, maintained, and managed through APS's web-based Project Management Software.

The current project management software APS utilizes is e-Builder.

**F. NEW MEXICO PREVAILING WAGE RATES**

All work covered by this RFP shall be in accordance with applicable state laws and, if price proposal amount is \$60,000 or greater, is subject to the minimum wage rate determination issued by the office of the NM Workforce Solutions Department and included in the project manual. This determination will become part of the contract by reference and must be posted, per State of New Mexico statutes, in a conspicuous place at the General Contractor's place of business. It is the General Contractor's responsibility to be aware of the applicable State of New Mexico statutes and responsibilities related thereto. Failure by the Owner to physically make such minimum wage rate determinations available to the General Contractor will not relieve the General Contractor from becoming aware of or complying with such determinations.

**G. PERMITS, PLAN CHECKING FEES, OTHER CHARGES**

Offerors shall include as part of the Price Proposal all costs incurred for permits relating to this scope of work, including any Plan Checking Fees as charged by the City of Albuquerque (or any other applicable entity or agency with jurisdiction over the project) for checking Contract Documents prior to obtaining a building permit. Additionally, the Owner will not pay for business licenses, professional affiliations, and similar costs of doing business which are the Offeror's obligation to secure and maintain. The cost of all bonding are to be included in the Offeror's price proposal.

**H. APS BEHAVIORAL POLICIES APPLY TO CONTRACTOR'S PERSONNEL**

All current behavioral policies of the APS Board of Education such as, but not limited to, "no smoking" and "no alcoholic beverages" on APS property, shall be deemed to be in force for the Contractor's work forces when they are on APS property, including the project work site.

## II. CONDITIONS GOVERNING THE PROCUREMENT

This section lists the major events of the Selection Process and specifies general requirements.

### A. SEQUENCE OF SELECTION PROCESS EVENTS

	<b>Event</b>	<b>Responsible Party</b>	<b>Date</b>	<b>Location</b>
1.	Publish RFP	APS Procurement & Design Professional	04/07/2020	Public Advertisement; Web Advertisement; Academy Reprographics
2.	<b>Mandatory Pre-Proposal Conference</b>	<b>FD&amp;C, Design Professional, APS Procurement</b>	<b>04/13/2020@10:00am</b> Due to social distancing, this will need to be done by a video/audio conference. Per APS Procurement,	<b>DATA Charter School – Check in at Admin</b> <a href="https://global.gotomeeting.com/join/843746781">https://global.gotomeeting.com/join/843746781</a> <b>Call:</b> 1(786)535-3211 Access Code 843-746-781 <b>Need to download:</b> <a href="https://global.gotomeeting.com/install/843746781">https://global.gotomeeting.com/install/843746781</a>
3.	Submission of Requests for Prior Approval of Product Substitutions	Potential Offerors	04/16/2020	Sent to Design Professional
4.	Submission of Written Questions	Potential Offerors	04/16/2020	Sent to Design Professional or APS Procurement
5.	Release of Last Addendum	FD&C, Design Professional, APS Procurement	04/17/2020	Web Advertisement; Academy Reprographics
6.	<b>Submission of Price Proposal – Volume I</b>	<b>Offerors</b>	<b>04/20/2020@2:00PM</b>	<b>APS Procurement 6400 Uptown Blvd. NE Suite 500E Albuquerque, NM 87110</b>
7.	<b>Submission of Technical Proposal – Volume II</b>	<b>Offerors</b>	<b>04/21/2020@2:00PM</b>	<b>APS Procurement 6400 Uptown Blvd. NE Suite 500E Albuquerque, NM 87110</b>
8.	Proposal Evaluation	APS Procurement, Evaluation Committee	04/23/2020	FD&C APS 915 Oak Street SE Albuquerque, NM 87106
9.	Professional Courtesy Letter	APS Procurement	04/24/2020	APS
10.	Contract Negotiations	FD&C, APS Procurement	04/24/2020	APS
11.	<b>APS Board Approval</b>	<b>FD&amp;C, APS Procurement</b>	<b>05/18/2020</b>	<b>APS Board Meeting</b>

12.	<b>Notice to Proceed</b>	<b>FD&amp;C, APS Procurement</b>	<b>05/19/2020</b>	<b>APS</b>
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**NOTICE: APS reserves the sole right, without incurring any liability, to change any aspect of the proposed procurement described above, including the right not to proceed with the procurement and/or the right to proceed in a different manner or on a different timeline than as described above.**

## **B. EXPLANATION OF SELECTION PROCESS EVENTS**

### **1. ISSUE RFP & CONSTRUCTION DOCUMENTS MADE AVAILABLE TO POTENTIAL OFFERORS**

This RFP is issued by APS in accordance with the provisions of Sections 13-1-111 and 13-1-117 NMSA 1978.

The RFP documents consist of all the documents listed in the Table of Contents and all documents incorporated in this RFP by reference, including the complete Project Manual, Technical Specifications, and Construction Drawings.

Proposal Documents (RFP, construction drawings, specifications, etc.) may be obtained at Academy Reprographics upon payment of **\$50.00** for each complete set. CHECKS SHOULD BE MADE PAYABLE TO ALBUQUERQUE PUBLIC SCHOOLS. Incomplete sets will not be issued. A compact disc containing the RFP documents only is available for a fee of ten dollars (\$10) at Academy Reprographics. The successful Offeror will receive a refund of his deposit, and any unsuccessful Offeror who returns the Proposal Documents in good and complete condition within fifteen (15) days of the Proposal Opening will also receive a refund of this deposit. No deposits will be returned after the fifteen-day period.

RFP & Construction Documents may be reviewed at the following locations:

**Design Professional of Record:** FBT Architects AIA Ltd – 6501 Americas Parkway NE Suite 300 Albuquerque, NM 87106. (505) 883-5200

1. Dodge Reports, Telephone: (505) 565-2440
2. Construction Reporter, 1609 2<sup>nd</sup> St. NW, Albuquerque, NM 87102, T: (505) 243-9793
3. Academy Reprographics, website: www.academyplans.com, Telephone: (505) 821-6666

### **2. MANDATORY PRE-PROPOSAL CONFERENCE**

**Attendance at the pre-proposal meeting is mandatory. The pre-proposal meeting will be conducted via GOTO Meeting. Attendees to acknowledge during roll call. All prime contractors who intend to submit a proposal for this project, MUST attend this meeting.**

This meeting provides potential Offerors an opportunity to request clarification about the procurement process and discuss the intent of the project with FD&C and the user. A representative from each interested prime contractor is required to attend. Subcontractors and suppliers are invited to attend this meeting, but it is not mandatory for them.

**THE PRIME CONTRACTOR'S ABSENCE FROM THE MANDATORY PRE-PROPOSAL MEETING PRECLUDES PARTICIPATIONS AS AN OFFEROR ON THIS PROJECT.**

During the meeting a presentation will be made to describe the overall scope of work and intended schedule. ~~This meeting will include a tour of the project site and existing facilities in addition to the pre-proposal meeting. Participants will be required to attend this meeting and understand the local conditions and restrictions under which the work will be performed.~~

During this meeting, arrangements will be discussed for access to the site.

To arrange for access to the project site, contact the APS Staff Architect/Engineer:

**Ben Harris, APS Facilities Design & Construction**

**Phone: 505-848-8708**

**Email: [benjamin.harris@aps.edu](mailto:benjamin.harris@aps.edu)**

**3. SUBMISSION REQUESTS FOR PRIOR APPROVAL OF PRODUCT SUBSTITUTIONS**

Requests for prior approval of product substitutions shall follow the requirements of Project Manual Section 01 6300-1 Product Substitution Procedures, including submitting the Prior Approval Substitution Request Form 01 6310-1. The deadline for requests is set at least 10 calendar days prior to the Proposal Submission date to allow the Design Professional to evaluate the request and respond in an addendum.

**4. SUBMISSION OF WRITTEN QUESTIONS**

This deadline for the submission of written questions is set at least 7 calendar days prior to the Proposal Submission to allow the APS Procurement Contact and the Design Professional to respond in an addendum.

**All questions, both those regarding the selection process and those regarding technical construction issues, shall be submitted in writing to the Design Professional, who will route them to the APS Procurement Contact or APS FD&C as required. Responses to all questions will be incorporated into an addendum issued subsequently by the Design Professional.**

**Design Professional:**

Susan Johnson, Principal  
FBT Architects AIA Ltd  
6501 Americas Parkway NE Suite 300  
Albuquerque, NM 87110  
505-883-5200 [bj@fbtarch.com](mailto:bj@fbtarch.com)

**APS Procurement Contact:**

Robert Rodarte – Senior Buyer (Construction)  
6400 Uptown Blvd. NE  
Suite 500E  
Albuquerque, NM 87110  
505-878-6125 / [Robert.rodarte@aps.edu](mailto:Robert.rodarte@aps.edu)

**5. LAST ADDENDUM PRIOR TO SUBMISSION OF PROPOSALS**

This is the deadline by which the Design Professional must issue all addenda for the project so that Offerors have time to finalize their proposals and is set at least 4 calendar days prior to the Proposal Submission. The only exception to this deadline is the issuance of an addendum that postpones the date for the Submission of Proposals.

By this deadline, the Design Professional (in consultation with APS Procurement and FD&C) shall have responded by addendum to all properly submitted Request for Prior Approval of Product Substitutions and all properly submitted written questions.

All addenda shall become part of the RFP and any information required shall be included in each Offeror's proposal.



**6. SUBMISSION OF PRICE PROPOSALS, AND**  
**7. SUBMISSION OF TECHNICAL PROPOSALS**

**Receipts of Proposals:**

Each proposal will consist of Volume I – Price Proposal (one original) and Volume II – Technical Proposal (one original plus five copies). These two volumes shall be submitted in two separate sealed envelopes or packages. Clearly label each envelope or package with the RFP number, volume number & name, Offeror’s name, address, and date of submittal.

**Deliver Proposals to:**

**Albuquerque Public Schools  
Procurement Department  
6400 Uptown Blvd. NE  
Suite 500E  
Albuquerque, NM 87110**

**For US Postal Service:**

**Albuquerque Public Schools  
Procurement Department  
P.O. Box 25704  
Albuquerque, NM 87125-0704**

APS Procurement will time stamp proposals upon arrival at the Procurement Office and hold them until the evaluation. A public log will be kept of the names and submittal times of all proposals. **Proposals delivered after the deadline will be deemed non-responsive.** It is solely the Offeror’s responsibility to ensure the proposals arrive at the appointed date, time, and location. Proposals may be delivered early to avoid any possible delay of the submissions.

Proposals may be hand carried/delivered or shipped/mailed by common carrier, courier of the US Postal Service. **No other method of delivery will be allowed (i.e., telephone, telegraphic, facsimile, e-mail, etc.).**

**8. PROPOSAL EVALUATION**

The Evaluation Committee will meet and review all proposals.

**9. PROFESSIONAL COURTESY LETTER**

APS may send a Courtesy Letter to all Offerors stating which Offeror is being recommended to the Board of Education.

**10. CONTRACT NEGOTIATIONS**

The Owner reserves the right to enter into negotiations with apparent successful Offeror per 13-1-115 NMSA 1978.

**11. APS BOARD APPROVAL**

The successful Offeror shall be recommended to the Board of Education for their approval.

**12. NOTICE OF AWARD**

APS may send a Notice of Award to the selected Offeror.

## **C. STANDARD CONDITIONS GOVERNING THE PROCUREMENT**

This section contains guidelines under which this RFP is issued, and conditions concerning how the project will be completed.

The Owner may evaluate the Proposals based on the anticipated completion of all or any portion of the project. The Owner reserves the right to divide the project into multiple parts, to reject any and all proposals and re-solicit for new proposals, or to reject any and all proposals and temporarily or permanently abandon the project, should the need arise. The Owner makes no representations, written or oral, that it will enter into any form of agreement with any Contractor.

### **1. PROTESTS**

In accordance with Section 13-1-172 NMSA 1978, any Offeror who is aggrieved in connection with a solicitation or the award of a contract may protest to the Procurement Director. The protest must be submitted in writing within fifteen (15) calendar days after knowledge of the facts or occurrences that give rise to the protest. Protests must be submitted in written form to:

Rennette Apodaca, MPA, CPPO  
Executive Director – Procurement  
6400 Uptown Blvd. NE, Suite 500E  
P.O. Box 25704  
Albuquerque, NM 87125

The protest letter shall include the name and address of the protestant, the solicitation number, and a statement of the grounds for protest, including appropriate supporting exhibits.

### **2. INCURRING COST**

Any cost incurred by the Offeror in preparation, transmittal, or presentation of any proposal or material in response to this RFP shall be borne solely by the Offeror.

### **3. THIRD-PARTY OR SUBCONTRACTING GC CONTRACT RESPONSIBILITIES**

Direction of all work that may result from this procurement must be performed by the Offeror and payments will only be made to the Offeror. Use of consultants identified in the proposal is permitted, but since the award is made of a quality-based evaluation process, reassignment of GC duties and responsibilities to a third party is not acceptable.

### **4. AMENDMENTS OR MODIFICATIONS TO A PROPOSAL BY OFFEROR**

An Offeror may submit an amended proposal prior to the deadline for receipt of proposals. Such an amended proposal must be a complete replacement for a previously submitted proposal and must be clearly identified as such in the transmittal letter. Owner personnel will not collate or assemble proposal materials for the Offeror.

### **5. OFFEROR'S RIGHTS TO WITHDRAW PROPOSAL**

No Offeror may withdraw their proposal for **45 days** after the actual date of the receipt thereof (Proposal Due Date).

**6. DISCLOSURE OF PROPOSAL CONTENTS**

Proposal contents will be kept confidential until conclusion of successful contract negotiations. At that time, all proposals will be open to the public, except for the material which has clearly been noted and determined by the APS Procurement Department to be proprietary or confidential as noted by the Offeror.

**7. CONFIDENTIAL DATA**

Confidential data is normally restricted to confidential financial information concerning the Offeror's organization and data that qualifies as trade secret under the Uniform Trade Secrets Act, 57-3A-7 NMSA 1978. Any pages of a proposal on which the Offeror has stamped or imprinted "proprietary" or "confidential" must be readily separable from the proposal in order to facilitate public inspection for the non-confidential portion of the qualifications-based proposal.

**8. TERMINATION OF RFP**

This RFP may be canceled at any time and any and all proposals may be rejected in whole or in part when the Owner determines such action to be in the best interest of APS. The RFP process may be terminated at any time if sufficient appropriations or authorizations do not exist. Such termination will be affected by sending written notice to the Offeror. APS's decision as to whether sufficient appropriations and authorizations are available will be accepted by the Offeror as final.

**9. SUFFICIENT APPROPRIATION**

Any contract awarded as a result of this RFP process may be terminated if sufficient appropriations or authorizations do not exist. Such termination will be effected by sending written notice to the contractor. The Owner's decision as to whether sufficient appropriations and authorizations are available will be accepted by the contractor as final.

If the determination is made that there is insufficient funding to continue or finalize a project, the successful Offeror will be compensated to the level of effort performed, as authorized by the Owner prior to that determination.

**10. OFFEROR QUALIFICATIONS**

The Evaluation Committee may consider any relevant information or data, from any reliable source (references) relating to the RFP evaluation factors and the Offeror's ability to successfully perform the project. Such information may be obtained from the Offeror's prior customers, commercial and public databases, or other reliable sources. The Offeror shall furnish to the Owner all such information and data for this purpose as the Owner may request including but not limited to: proof of financial resources, production or service facilities, personnel and experience adequate to complete the project, etc. The Owner reserves the right to reject any Proposal if the evidence submitted by, or investigation of, such Offeror fails to satisfy the Owner that such Offeror is qualified to carry out the obligations of the Contract and to complete the work described therein.

The Evaluation Committee may reject the proposal of any Offeror who is not a responsible Offeror or fails to submit a responsive offer as defined in 13-1-83 and 13-1-85 NMSA 1978.

**11. RIGHT TO WAIVE TECHNICAL IRREGULARITIES**

APS reserves the right to waive technical irregularities, (see “Technical Irregularities” in the Definitions and Terminology section below). APS also reserves the right to waive mandatory requirements provided that all of the otherwise responsive proposals failed to meet the same mandatory requirements and the failure to do so does not otherwise materially affect the procurement.

**12. POTENTIAL CIVIL AND CRIMINAL PENALTIES**

The Procurement Code, 13-1-28 through 13-1-199 NMSA 1978, imposes civil and misdemeanor criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for bribes, gratuities, and kickbacks.

**13. RELEASE OF INFORMATION**

Only the Owner and the Design Professional when acting as the Owner’s representative, are authorized to release information about the project(s) covered by this RFP. The Offeror must refer to the Owner any requests to release any information that pertains to the work or activities covered by any action or award related to this RFP.

**14. CLARIFICATIONS FROM OFFERORS**

The Evaluation Committee, after review of the proposals and/or interviews may request clarifications on information submitted by any and all Offerors in a written format, with a specified deadline for response.

**15. LICENSING REQUIREMENTS**

The Contractor and subcontractors shall comply with all licensing laws and regulations. The Contractor shall, as part of the proposal, provide copies of all the Contractor’s valid licenses necessary to perform the work in the State of New Mexico. Copies of the subcontractors’ licenses need by provided only if requested by the Owner.

**16. SUBCONTRACTORS**

The Subcontractors Fair Practices Act applies to this procurement. Therefore, any request for substitution on the part of the Owner or the Offeror shall comply with this section.

Since the award is made on a qualification-based evaluation process, replacement of subcontractors after award and prior to contract execution may cause the Offeror to be disqualified.

**17. OBJECTION TO PRE-LISTED SUBCONTRACTORS**

Prior to the award of the Contract, the Design Professional will notify the Offeror, in writing, if either the Owner or the Design Professional, after due investigation, has reasonable and substantial objection to any person or organization on such list, and refuses in writing to accept such person or organization, the Offer may, at their option, (1) withdraw their proposal, or (2) submit an acceptable substitute subcontractor with no increase in the proposal price. In the event of withdrawal under this paragraph, Bid Security will not be forfeited, notwithstanding anything to the contrary elsewhere in this RFP.

## **18. NON-CONFORMING PROPOSALS**

Proposals will be reviewed, for completeness, format, and compliance with the requirements of the RFP. Incomplete proposals will be considered non-responsive and subject to rejection.

Proposals that are qualified with conditional clauses, alterations, items not called for in the RFP documents, or irregularities of any kind are subject to rejection by the Owner, at its option.

If any proposal is deemed non-responsive by the Evaluation Committee, the Offeror will be notified in writing of such determination.

## **D. DEFINITIONS AND TERMINOLOGY**

This section contains definitions that are used throughout this RFP, including appropriate abbreviations.

**“Albuquerque Public Schools”**: Board of Education, Albuquerque Municipal School District Number 12, Bernalillo and Sandoval Counties, New Mexico (Also called **“APS”**).

**“Architect”**: shall mean a member of the project team who is a New Mexico licensed architect and is responsible for the architectural services.

**“Award of Contract”**: shall mean a formal written notice by APS that a firm has been selected to enter into negotiations for a contract for construction services.

**“Construction Contractor”**: shall mean the successful Offeror awarded the contract that holds a current State of New Mexico general contractor license designation of GB-98

**“Contract”**: shall mean an agreement between APS and a New Mexico licensed contractor for the work covered by this RFP.

**“Contract Documents”**: shall mean any one or combination of the following documents: RFP, Addenda, Agreement Between the Owner and the General Contractor for Construction, General Conditions of the Contract for Construction, and the drawings and specifications.

**“Design Professional”**: shall mean an architect or engineer

**“Determination”**: shall mean the written documentation of a decision made the APS Procurement Department including findings of fact required to support a decision. A determination becomes part of the procurement file to which it pertains.

**“Engineer”**: shall mean a member of the project design team who is a New Mexico licensed engineer and is responsible for the engineering services.

**“Evaluation Committee”**: shall mean a body constituted to evaluation proposals and make a selection recommendation.

**“Facilities, Design & Construction”**: shall mean a department of APS requesting proposals for the work covered by this RFP. (Also called **“FD&C”**)

**“Firm”**: shall mean the company or other business entity referenced for the purpose of identifying, individually or collectively, a general contractor, a prime contractor, or a subcontractor of any tier, whether basic trade subcontractor, subcontractor, or other.

**“General Provisions”**: shall mean the terms **“can”, “may”, “should”, “preferable”, or “prefers”** identifies a desirable or discretionary item of the RFP. Failure to comply with such an item will not result in the rejection of the Offeror’s proposal.

**“LEED®”** (Leadership in Energy and Environmental Design): shall mean the Green Building Rating System™ that is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings, created and administered by the U.S. Green Building Council.

**“Mandatory Requirements”**: shall mean the terms **“must”, “shall”, “will”, “is required”, or “are required”** identify a mandatory requirement of this RFP. Failure to comply with such a mandatory factor may result in the rejection of the Offeror’s proposal. Rejection of the proposal will be subject to review by the APS Procurement Department and a final decision on rejection will be made by the APS Procurement Director.

**“Offeror”**: shall mean any person, corporation, or partnership who chooses to submit a proposal in response to this RFP, with the intent of providing construction services for this project.

**“Owner”**: shall mean APS

**“Owner’s Project Team”**: shall mean FD&C and others in the APS District, FD&C Construction Staff Architect, Construction Manager, representatives of the school or district facility, and the Design Professional’s design team.

**“Pre-Listed Subcontractors”**: shall mean subcontractors, of any tier, that the Offeror is required to list, at the time they submit their proposal in response to this RFP.

**“Prime Contractor”**: shall mean the New Mexico licensed contractor selected for this project.

**“Project Design Team or Contract Architect or Engineer Design Team”**: shall mean all members of the Design Professional’s firm, including its consultants who are responsible for the design of and who will be participating in the construction and completion of the project.

**“Proposal”**: shall mean the Offeror’s response to this RFP.

**“Request for Proposals”**: shall mean this document, any attachments incorporated by reference, and any addenda issued for use in soliciting proposals for construction of this project. (Also called **“RFP”**)

**“Resident Business” or “Resident Contractor” or “Veteran Resident Contractor”**: shall mean an entity that has applied for and received a valid resident preference certificate issued by the New Mexico Taxation and Revenue department pursuant to 13-1-21 or 13-1-22 NMSA 1978.

**“RFP Documents”**: shall mean any on or any combination of the following documents: RFP, technical proposal, price proposal, financial proposal, contractor’s qualifications statement, and subcontractor’s qualifications statement, contracts or agreements.

**“Responsive Offer” or “Responsive Proposal”**: shall mean an offer or proposal which conforms in all material respects to the requirements set forth in the RFP as determined by the APS Procurement Department. Material respects of an RFP include, but are not limited to, quality, quantity or delivery requirements.

**“Responsible Offeror”**: shall mean an Offeror who submits a responsive proposal and who has furnished, when required, information and data to prove that his financial resources, production or service facilities, personnel, service reputation and experience are adequate to make satisfactory delivery of the services described in the proposal.

**“Staff Architect” or “Construction Manager”**: shall mean the person designated as the point of contact by FD&C to act on its behalf, concerning the scope of work and requirements of the contract documents for the project.

**“Statement of Qualifications Forms”**: shall mean the forms included as part of this RFP, which all Offerors shall complete, including the qualifications for the team member or partners and subcontractor proposed for the project.

**“Technical Irregularities”**: shall mean matters of form rather than of substance evident from the proposal document, or insignificant mistakes that can be waived or corrected without prejudice to other Offerors; that is, when there is no effect on price, quality, or quantity. APS Procurement may waive such irregularities, or allow an Offeror to correct them, if either is in the best interest of APS. Examples include the failure of an Offeror to:

- a) Submit the number of signed proposals required by the RFP
- b) Sign the proposal, but only if the unsigned proposal is accompanied by other material indicating the Offeror’s intent to be bound; or
- c) Acknowledge receipt of an addendum to the RFP, but only if:
  - a. It is clear from the proposal that the Offeror received the addendum and intended to be bound by its terms; or
  - b. The addendum involved had no effect on price, quality or quantity.

**“User”**: shall mean the school or district staff occupying the facility for which a project is being designed.

**“User Contact”**: shall mean the person designated by the district to speak on behalf of the staff concerning the scope of work and programming requirements for the project.

### III. CONTRACTUAL AGREEMENT AND BONDS

#### 1. **FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

The agreement for the work shall be the most current version of the APS Standard Form of Agreement between the Owner and Contractor and the most current version of the General Conditions with the basis of payment as a stipulated sum. The most current version of all aforementioned documents are printed in their entirety in the Project Manual and is also available on the APS FD&C website at <http://www.apsfacilities.org/facilities> under “Contracts”.

#### 2. **COMPLETION TIME AND LIQUIDATED DAMAGES**

The Project Proposal Documents contain a time for completion of the work and impose liquidated damages for failure to complete the work within the stated time period. These items are stated in Appendix D, Proposal for Lump Sum Contract.

#### 3. **TIME OF DELIVERY AND FORM OF BONDS**

- a) The Offeror will, prior to award of contract/commencement of work, furnish a 100% Performance Bond and a 100% Payment and Materials Bond executed by a surety company authorized to do business in the State of New Mexico. The amount of the Bonds shall be the proposal price exclusive of gross receipts tax.
- b) Refer to Document #00 6000-1 – Bonds and Insurance, included in the Project Manual.
- c) The bonds will be written on the AIA Document A312, Performance Bond and Labor and Materials Payment Bond.
- d) The AIA A312 1984 Labor and Materials Payment Bond shall be in effect, limit the time line Surety has to respond. Bond shall be modified as follows:

**Paragraph 6 of this Payment Bond is deleted in its entirety and replaced with the following provision:** Within 45 days (1) after the claimant has satisfied the conditions of Paragraph 4 and (2) after the Surety has received at its home office all supporting documentation it requested to substantiate the amount of the claim, the Surety shall pay or arrange for payment of any undisputed amounts. Failure of the Surety to satisfy the above requirements shall not be deemed a forfeiture or waiver of the Surety's or the Contractor's defenses under this Bond or their right to dispute such claim. However, in such event the claimant may bring suit against the surety as provided under this bond.

#### 4. **SUBCONTRACTOR BONDING**

Each subcontractor shall provide a performance and payment bond on a public works construction project if the subcontractor's contract (to the Contractor) for work to be performed on a project is one-hundred twenty-five thousand dollars (\$125,000) or more. Failure of a Subcontractor to provide required bond shall not subject the Owner to any increase in cost due to approved substitution of Subcontractor.



## IV. PROPOSAL RESPONSE FORMAT AND ORGANIZATION

### A. **NUMBER OF PROPOSALS**

Each Offeror's proposal shall be submitted in two parts:

**Volume I – Price Proposal**

**Volume II – Technical Proposal**

Each volume has its own deadline for submission. Volume I on one day, and Volume II on the following day. Of course, the Offeror may choose to meet these deadlines by submitting both volumes at the same time by the deadline for Volume I. Only one (1) complete original proposal may be submitted by each Offeror for this project.

### B. **SUBMISSION OF PRICE PROPOSAL – VOLUME I**

By the date and time of the Submission of Price Proposals, the Offeror shall submit one (1) original copy and one (1) digital copy on a flash drive each of the following documents:

**Original Price Proposal, sealed in a separate envelope, to include:**

#### Item 1 Price Proposal Form

1. Price Proposals shall be presented in the form of a total Base Bid under a Lump Sum Contract (using the Price Proposal Form provided in the Project Manual) plus any additive or deductive alternates selected by the Owner per Allowances (Section 01 2100), Alternates (Section 01 2300) and/or (Section 01 23 01) Bid Lots. A proposal must be submitted on all proposal items, allowances and alternates; segregated or partial proposals will not be accepted.
2. The proposal, bearing original signatures, must be typed or hand-written in ink on the Price Proposal Form.
3. Proposal price shall not include gross receipts or local options taxes. Taxes will be included in the Contracted Amount at prevailing rates as a separate item to be paid by the Owner.
4. If a joint proposal is being submitted, be sure to state the percentage of the work/services to be executed by each proposing firm, based on the dollar amount of the fee proposed in the Price Proposal, so that the resident contractor preference or veteran resident contractor preference can be applied in proportion to the value of the work being performed by each contractor.

#### Item 2 Proposal Security (Bond or Cash), Agent's Affidavit

Proposal security in the form of a surety bond executed by a surety company authorized to do business in the State of New Mexico in the amount of **5%** of the total price proposal, or the equivalent in cash by means of a cashier's check, or in a form satisfactory to the Owner must accompany the Offeror's price proposal.

#### Item 3 Notarized Declaration Letter from Surety

The Offeror will provide, with the price proposal, a notarized declaration letter from a bonding company licensed to do business in the State of New Mexico confirming the Offeror's ability to obtain a Performance Bond, and a Labor and Materials Payment Bond in an amount not less than 100% of the Price Proposal.

\_\_\_ **Item 4 Certificate of Insurance**

Offeror shall provide a Certificate of Insurance that meets the requirements listed in Project Manual Section 00 6000 Bond and Insurance.

\_\_\_ **Item 5 Subcontractors Listing Forms (including (1) Subcontractor Listing Requirements and Assignment of Antitrust Claims Form & (2) Form 00 4334)**

This RFP includes two Subcontractor Listing Forms, each with its own value threshold and separate meaning.

**Subcontractor Listing Form 1:**

The “Combined List of Subcontractors and Assignment of Anti-Trust Claims” is included as Appendix C and must be completed and included in both the Price Proposal & the Technical Proposal. The Offeror shall provide a list of all subcontractors that will perform work on the project above the threshold indicated on the List of Subcontractors. The Offeror and their subcontractors and suppliers, at the time the Agreement between the Owner and Contractor is signed, shall complete the Assignment of Antitrust Claims Form.

**Subcontractor Listing Form 2:**

The “Listing Form 00 4334 for Submission of Subcontractor Qualifications Questionnaires” is included as Appendix I and must be completed and included in both the Price Proposal & the Technical Proposal. For each subcontractor that meets one or both of the following criteria: (NOTE: Only the Form 00 4334 should be included in both proposals, the Statement of Subcontractor Qualifications and necessary attachments only need to be included in the Technical Proposal.)

1. Where the value of the subcontract is fifty thousand dollars (\$50,000) or five percent (5%) of the estimate, whichever is greater?
2. The subcontractor performing the trades listed below, regardless of the value of the subcontract (If the Offeror is to self-perform the work, then the Offeror is to complete the forms.):
  - HVAC
  - Electrical
  - Plumbing
  - Concrete
  - Masonry

**NOTE:** For both Subcontractor Listings, the Offeror may not change any of the firms listed without the Owner’s consent. The Owner will consider any request for a change in the listed firms in conformance with the New Mexico “Subcontractors Fair Practices Act” (13-4-31 through 13-4-43 NMSA 1978).

\_\_\_ **Item 6 Resident Contractor (or Veteran Resident Contractor) Preference Certificate**

It will be the sole responsibility of any Potential Offeror claiming a Resident Contractor Preference or Veterans Resident Contractor Preference to apply to the State of New Mexico Taxation & Revenue Department for the proper certification and to receive approval, a certification number, and a certificate prior to the date and time for receipt of proposals. Requests for qualifications as a Resident Contractor or a Veteran Resident Contractor after receipt of proposals will not be considered.

1. To receive a resident business preference, a business or contractor shall submit with its bid or proposal a copy of a valid resident business certificate or valid resident contractor certificate issued by the NM Taxation & Revenue Department. When a public body awards a contract using a formal RFP process, a resident contractor shall be awarded the equivalent of five percent of the total possible points to be awarded based on the resident contractor possessing a valid resident contractor certificate.
2. To receive a veteran resident contractor preference, a contractor shall submit with its bid or proposal a copy of a valid veteran resident contractor certificate issued by the NM Taxation & Revenue Department. Through either an RFP process or an ITB process, the qualified veteran resident contractor shall receive 10% preference if their annual revenues are less than \$3,000,000. The preference is limited in any calendar year to an aggregate of \$10,000,000 in purchases by public bodies from all resident veteran businesses receiving preferences. In addition to the veteran resident preference certificate, the veteran resident contractor shall provide any additional documentation required to validate the percentage of preference to be awarded.
3. The preferences do not apply when the expenditure includes federal funds for a specific purchase.
4. If there is a joint bid or joint proposal by a combination of resident veteran, resident, or nonresident businesses, the preference shall be calculated in proportion to the percentage of the contract, based on the dollar amount of the goods or services provided under the contract, that will be performed by each business as specified in the joint bid or proposal.

\_\_\_ **Item 7 Campaign Contribution Disclosure Form**

The blank form is included in an Appendix of this RFP. This form must be filed by a prospective contractor whether or not they, their family member, or their representative has made any contributions subject to disclosure.

\_\_\_ **Item 8 Conflict of Interest and Debarment/Suspension Certification Form**

Each Offeror shall complete this form (which is provided in the Appendix of this RFP) and include it in their proposal.

\_\_\_ **Item 9 Contractor's State of New Mexico W-9 Form**

Each Offeror shall complete and provide a State of New Mexico W-9 Form.

\_\_\_ **Item 10 Offeror's Contractor's License(s)**

Each Offeror shall provide a photocopy of their Contractor's License(s).

**C. SUBMISSION OF TECHNICAL PROPOSALS – VOLUME II**

Proposals shall be submitted in a spiral or three-ring binder. Page format shall be 8-1/2” x 11” with foldout sheets (if any) allowed up to 11” x 17” in size. Foldout pages shall be counted as two pages **and shall be numbered as such**. Text size will be no small than 10 point. **No information shall be submitted on electronic media that is not also printed as part of the technical proposal.**

**Proposals shall not exceed 30 pages total for all of the tabbed sections listed below. Each sheet face that is printed with text or graphics counts as one page. Tab Dividers do not count as pages provided the only text or graphics on the dividers are the tab numbers and section titles:**

- Tab 1 – Letter of Submittal**
- Tab 4 – Past Performance**
- Tab 5 – Project Staffing**
- Tab 6 – Management Plan**
- Tab 7 – Health and Safety**
- Tab 8 – New Mexico Produced Work**

**Any response that exceed the referenced page limitation shall be considered non-responsive and will not be considered for evaluation.** If there are any questions regarding format requirements, please contact the APS Procurement Contact prior to submission of documents.

All sections shall be separated by numbered tabs that correspond to the Submission Requirements and Evaluation Categories, 1 through 8, as shown below. Within Tab 3, provide sub-tabs to separate and label each Subcontractor’s Statement of Qualifications. Pages within each tab shall be numbered consecutively.

**By the date and time of submission of technical proposals, OFFEROR SHALL SUBMIT ONE (1) ORIGINAL, PLUS SIX (6) PHOTOCOPIES, AND ONE (1) DIGITAL COPY ON A FLASH DRIVE EACH OF THE FOLLOWING DOCUMENTS:**

**Tab 1 Letter of Submittal**

Each proposal must be accompanied by a submittal letter. **Any submittal letter that omits any of the following information may be deemed non-responsive.** The submittal letter shall include acknowledgement and, where appropriate, certification of the following:

1. Identify the name(s), title(s), telephone number(s), fax number(s), and e-mail address(es) of the person(s) who have authority to contractually obligate the Offeror for the purposes of this RFP and who has sufficient knowledge to fully address all matters and respond to all inquiries included in the RFP submittal. The Letter of Submittal shall be signed by one of the persons so identified.
2. If a joint proposal is being submitted, identify the firms, and disclose the percentage of the work/services to be executed by each firm, based on the dollar amount of the fee proposed in the Price Proposal, so that the resident contractor preference or veteran resident contractor preference can be applied in proportion to the work done by each contractor.
3. Acknowledge acceptance of all conditions that govern this procurement. Acknowledge that the information provided in the proposal is truthful, accurate, complete, and that the firm is bound by all information, data, certifications, disclosures, and attachments submitted.
4. Acknowledge that the omission of any material fact concerning requested information, or the submission of any material false or misleading statement, or misrepresentation of a material fact concerning any requested or submitted information, may lead to the disqualification of the proposal as non-responsive.
5. Acknowledge that the Owner has a right to obtain relevant information from other sources (references) to determine that the Offeror is “responsible”.
6. Acknowledge that if awarded the contract, the RFP documents, and all terms and conditions stated therein, and all information, data, certifications, disclosures, and addendum shall be incorporated as part of the contract.
7. Acknowledge the receipt of all addenda to this RFP and list them by number.
8. Provide certification and/or documentation that the firm possesses the necessary equipment, financial resources, technical resources, management, professional and craft personnel resources and other required capabilities to successfully perform the contract or will achieve same through its prelisted subcontractors.

**Tab 2 General Contractor Statement of Qualifications and Attachments**

Completely fill out the attached General Contractor Statement of Qualifications form and its associated attachments, providing all required information.

NOTE: Offeror should submit only one (1) copy of Attachment F – Firm’s Written Safety Plan, bound separately from the rest of the Technical Proposal.

**Tab 3 Subcontractors Listing Forms (including (1) Subcontractor Listing Requirements and Assignment of Antitrust Claims Form & (2) Form 00 4334) & Subcontractor Statement of Qualifications**

See Section IV. Proposal Response Format, B. Submission of Price Proposal, Item 5. A duplicate of those forms should be provided here in the Technical Proposal.

Additionally, completely fill out the Subcontractor Statement of Qualifications form (See Appendix for form) and its associate attachments, providing all requested information for each subcontractor that is listed on Form 00 4334.

**Tab 4 Past Performance**

Provide the following information:

- a. Past performance summary and past capability to meet schedules, meet budgets and meet project administration requirements for comparable projects. Specifically, in the last five (5) projects you have completed for APS (or similar organizations), please answer the following:
  1. Was the project completed early? If yes, how was that accomplished?
  2. Was the project completed late? If yes, how many days and why?
  3. How many days after Substantial Completion were required to complete the punch list items?
  4. Were you or your subcontractors called back to the job for any reason during the warranty period? After the warranty period?
  5. Were there any outstanding issues remaining after the warranty inspection?
  6. Did your firm refuse to do any additional work requested by the owner? If yes, why?
  7. What was your company's process for vetting the pricing from your subcontractors and suppliers on change orders in order to ensure fair pricing to the owner?
  8. What was the dollar threshold below which your firm absorbed additional cost changes in order to avoid disproportionate administrative costs for all parties? Give examples of the changes on this project for which your firm absorbed the costs.
- b. Describe the role of each teaming partner on the contract.
- c. Evidence of past performance quality and overall customer satisfaction
- d. Record of compliance with applicable laws and regulations on past projects.
- e. Past record of achievement of health and safety targets.
- f. Firm's experience in delivering LEED-rated or equivalent green/sustainable buildings.

Offerors are cautioned that the Evaluation Committee will use data provided by teaming partners as well as data obtained from other sources (such as references) in the evaluation of past performance.

\_\_\_ **Tab 5 Project Staffing**

Provide the following:

- a. Brief resume (to include: education, professional certification(s), years with firm, total years of experience, and a brief description of experience supporting the proposed role) for each key project personnel.
- b. Address the extent to which key personnel have worked together as a team on projects of similar or greater magnitude and on projects of the same nature. To this end, provide a matrix that lists key staff members' names across the top of the matrix and lists past projects down the side of the matrix. The project list should begin with all of the projects that appear in item 3a. of the General Contractor's Statement of Qualifications. The project list may also include up to five (5) additional projects that demonstrate how the key personnel have worked together as a team. At each intersection within the field of the matrix, list the role that the person filled on that particular project (such as Project Manager, Site Superintendent, Safety Manager, QA/QC Manager, Estimator, etc.)
- c. Describe Contractor's and subcontractors' participation in skill training.
- d. Address reliable staffing sources/project staffing.

\_\_\_ **Tab 6 Management Plan**

Provide the following:

- a. Management Team: provide an organizational chart of the Management Team and address how critical subcontractors were selected and will be managed.
- b. Describe how the construction will be organized, managed, and administered to meet the project requirements, including security and safety controls, staging areas, delivery routes, crane locations, and interfaces required at the site with the using agency.
- c. Describe the technical approach to the project that is intended to ensure that tasks are executed within cost, schedule, and quality goals.
- d. Address protocol to support optimization of sustainability principles.
- e. Provide proposed project schedule. Indicate critical dates and other information in sufficient detail for the Evaluation Committee to determine if time frames are reasonable.
- f. Describe the firm's ability to deliver the project within the construction time.

\_\_\_ **Tab 7 Health and Safety**

Provide the following information:

- a. Provide a summary description of the General Contractor's Health and Safety management system. (One copy of the full General Contractor's written safety plan is required as Attachment F of the General Contractors Statement of Qualifications.)
- b. Identify the competent person responsible for, and capable of, implementing the safety and health program/plan.
- c. Address project specific health and safety risks that have been identified by the RFP and additional risks that the Offeror's team has identified. Describe processes to minimize risk and to ensure that health and safety issues are clearly communicated with the contractors, subcontractors, and the owner.

**Tab 8 New Mexico Produced Work**

One of APS's goals is to support New Mexico owned businesses and New Mexico based workers. Indicate the volume of work, by percentage, to be produced by New Mexico firms using New Mexico based employees on this project. Indicate the number of New Mexico based employees that will be part of the Project Team.

**IMPORTANT NOTE ON THE TECHNICAL PROPOSAL'S CONTENTS**

**Regarding the apparent duplication of required information between certain Attachments of the General Contractor's Statement of Qualifications and the other sections of the Technical Proposal:**

**The intention of Tabs 4, 5, 6, 7, & 8 of the Technical Proposal is to provide a place for the proposer to make a concise presentation of the strength of the proposed team in the exact categories that the committee will be scoring, unencumbered by the format of the Statement of Qualifications Forms. If the proposer so chooses, other sections of the Technical Proposal may be referenced within these tabs without wholly duplicating that information. Also, information presented elsewhere may be summarized or condensed within these tab sections to make the proposer's presentation more clear.**



## V. PROPOSAL EVALUATION

### A. EVALUATION CRITERIA

The rubric to be used by the Evaluation Committee for each criteria are as follows:

#### **Volume 2 – Technical Proposal**

Past Performance.....	17 points
Project Staffing.....	13 points
Management Plan.....	15 points
Health & Safety.....	12 points

#### Detailed Scoring Guidelines for “Health & Safety”:

a.1 Summary Description of Health & Safety Plan.....	0.6
a.2 One full copy of Written Safety Plan.....	0.6
b. Competent Person Responsible/Capable of Implementing.....	0.6
c.1 Project Specific Health/Safety Risks.....	2.4
c.2 Describe Processes to Clearly Communicate Issues.....	0.6

#### Statement of Qualifications for General Contractors

a. Copy of Written Safety Program Compliant.....	1.2
b. List of Key Safety Personnel/Safety Manage.....	0.6
c. Experience Modification Rate for Past 5 Years.....	1.2
d. Recordable Incident Rate (Calendar Yr.) OSHA 300 Log.....	1.2
e. Free from Committing Violations of Laws.....	1.2

#### Statement of Qualifications for Subcontractors

a. Copy of Written Safety Program Compliant.....	0.6
b. Experience Modification Rate Past 5 Years.....	0.48
c. Recordable Incident Rate (Calendar Yr.) OSHA 300 Log.....	0.48
d. Free from Committing Violations of Laws.....	0.24

Total Possible Points.....12.0

NM Produced Work.....	3 points
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#### Detailed Scoring Guidelines for “NM Produced Work”:

Based on the submitted Subcontractor Listing Form.

If all listed subcontractors are NM Firms.....	3 pts
If all accept one of the listed subcontractors are NM Firms.....	2 pts
If all accept two of the listed subcontractors are NM Firms.....	1 pts
If all accept three (or more) of the listed subs are NM Firms.....	0 pts

**Subtotal.....60 points**

#### **Volume 1 – Price Proposal**

Price Proposal.....	40 points
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**TOTAL.....100 points**

Interviews (if held).....	50 points
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**TOTAL.....150 points**

*APS intends to award this project to the Offeror whose proposal receives the highest number of points. APS reserves the right to reject any and all proposals, to waive technical irregularities, and to award the contract to the Offeror whose proposal APS deems to be in the best interest of APS.*

**APPENDICES: FORMS**

- A. General Contractor's Statement of Qualifications Form w/Attachment Forms A - K**
- B. Subcontractor's Statement of Qualifications Form w/Attachment Forms A - I**
- C. Subcontractor Listing Form (including Subcontractor Listing Requirements and Assignment of Anti-Trust Claims)**
- D. Proposal for Lump Sum Contract**
- E. Bond Review and Approval Form**
- F. Agent's Affidavit**
- G. Campaign Contribution Disclosure Form**
- H. Conflict of Interest Form and Debarment/Suspension Certification Form**
- I. Listing Form 00 4334 – Subcontractor Qualifications Questionnaire**

# Data Charter School Reroof Albuquerque Public Schools

REQUEST FOR PROPOSAL FOR CONSTRUCTION # 20-047RRR

*For the convenience of the contractors, an electronic version of this RFP may be issued for your use. Any changes to the document's questions or language that differs from the wording as issued in the Project Manual dated 01/2020 other than to fill in answers for the questions asked, will constitute a non-responsible proposal.*

## STATEMENT OF QUALIFICATIONS FOR GENERAL CONTRACTORS

**Project Name:**

\_\_\_\_\_

### 1. OFFEROR INFORMATION

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

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

Principal Office: \_\_\_\_\_

Corporation    Partnership    Sole Proprietorship    Joint Venture

Other \_\_\_\_\_

a. How many years has your organization been in business as a Contractor? \_\_\_\_\_

b. How many years has your organization been in business under its present business name?

\_\_\_\_\_

c. Under what other or former names has your organization operated?

\_\_\_\_\_

\_\_\_\_\_

### 2. LICENSING

a. Name of license holder (or qualifying party) exactly as on file with the State of New Mexico Construction Industries Division:

\_\_\_\_\_

b. License Classification: \_\_\_\_\_

c. License Number: \_\_\_\_\_

d. Issue Date: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

- d. Is the firm’s contractor’s license free of ever being suspended or revoked by the CID or by the appropriate licensing agency in any other state?

Yes - free of suspension or revocation       No – Attached explanation

- e. Does your firm hold all applicable Business licenses required by State of New Mexico?

License Number: \_\_\_\_\_ Jurisdiction: \_\_\_\_\_  
 Fill in name of license holder, exactly as it appears on file with jurisdictional authorities:

\_\_\_\_\_  
 (Name)

Issue Date: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

License Number: \_\_\_\_\_ Jurisdiction: \_\_\_\_\_  
 Fill in name of license holder, exactly as it appears on file with jurisdictional authorities:

\_\_\_\_\_  
 (Name)

Issue Date: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

License Number: \_\_\_\_\_ Jurisdiction: \_\_\_\_\_  
 Fill in name of license holder, exactly as it appears on file with jurisdictional authorities:

\_\_\_\_\_  
 (Name)

Issue Date: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

- f. Is your firm free from formal debarment from public works, federal, state or local public works jurisdictions?

Yes       No (Attach explanation)

**3. EXPERIENCE**

- a. Has your firm completed one (1) or more educational facility reroof project(s) of similar complexity totaling **50,000 square feet or more since 2013**, as the proposed project? Complete **Attachment A** for five (5) maximum projects listed:

Yes Number of Projects: \_\_\_\_\_  No

Project 1 Name: \_\_\_\_\_

Project 2 Name: \_\_\_\_\_

Project 3 Name: \_\_\_\_\_

Project 4 Name: \_\_\_\_\_

Project 5 Name: \_\_\_\_\_

- b. State the average annual amount of construction work performed during the past five years:

\$ \_\_\_\_\_

- c. Also, on **Attachment A**, list major construction project your organization has in progress, giving the name of the project, owner, architect, contract amount, percent of completion, and scheduled completion date.
- d. List the categories of work that your organization normally performs with its own forces.

#### 4. **KEY PERSONNEL EXPERIENCE**

**Please note that more consideration will be given to those meeting or exceeding the required qualifications below:**

- a. Does your assigned Project Manager have the following minimum qualifications and experience? (Attach Resume at **Attachment B**)

- (1) At least ten (10) years' experience in the construction industry?

Yes Number of Years: \_\_\_\_\_  No

- (2) Experience on at least one (1) construction type as identified in 3. EXPERIENCE item a

Yes Number of Projects \_\_\_\_\_  No

- (3) Experience as a Project Manager on one (1) or more construction projects totaling **30,000 square feet or more**?

Yes Number of Projects \_\_\_\_\_  No

- b. Does your assigned Project Foreman/Superintendent have the following minimum qualifications and experience? (Attach Resume at **Attachment B**)

- (1) At least ten (10) years' experience in the construction industry?

Yes Number of Years: \_\_\_\_\_  No

- (2) Experience on at least one (1) construction type as identified in 3a.?

Yes Number of Projects \_\_\_\_\_  No

- (3) Experience as a Project Foreman/Superintendent on one (1) or more construction projects totaling **30,000 square feet or more**?

Yes Number of Projects \_\_\_\_\_  No

- c. Does your Safety Program Manager have the following minimum qualifications and experience? (Attach Resume to **Attachment B**)

- (1) At least five (5) years' experience in a safety management role?

Yes Number of Years: \_\_\_\_\_  No

- (2) Experience on at least one (1) construction type as identified in 3a.?

Yes Number of Projects \_\_\_\_\_  No

- d. Does your Quality Assurance/Quality Control (QA/QC) Manager have the following minimum qualifications and experience? (Attach Resume to **Attachment B**)

- (1) At least five (5) years' experience in a safety management role?

Yes Number of Years: \_\_\_\_\_  No

(2) Experience on at least one (1) construction type as identified in 3a.?

( ) Yes Number of Projects \_\_\_\_\_ ( ) No  
\_\_\_\_\_ Years with your firm: \_\_\_\_\_

Present Position/Job Title: \_\_\_\_\_ Years in position: \_\_\_\_\_

List other project(s) this person has had a similar role for the past five (5) years:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Is your QA/QC a Principal or Officer of the firm? ( ) Yes ( ) No

e. Please include an Organizational Chart (**Attachment C**) of the Management Team that will be assigned to this project. Identify relationships, duties and responsibilities and key roles of each individual.

**5. CAPACITY AND CAPABILITY TO PERFORM THE WORK**

a. Resources: Total number of current employees: Project Managers \_\_\_\_\_  
Estimators \_\_\_\_\_  
Superintendents \_\_\_\_\_  
Foremen \_\_\_\_\_  
Tradesmen \_\_\_\_\_  
Administration \_\_\_\_\_  
Other \_\_\_\_\_

b. Does your firm have the immediate capacity to perform the work required for this project:  
( ) Yes ( ) No

c. Please list all projects currently under contract totaling over **20,000** square feet with scheduled completion dates (**Attachment D**)  
( ) See Attachment D ( ) None

**6. SURETY**

a. Firm's current surety company:  
\_\_\_\_\_

Will this surety be used for the construction contract for this project?

( ) Yes ( ) No (attach explanation)

Contact Agent Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Years utilizing this surety: \_\_\_\_\_ Maximum Capacity: \_\_\_\_\_

Aggregate Total of current surety in force: \_\_\_\_\_

b. Is the surety company to be used on this project licensed to do business in the State of New Mexico?

Yes  No (attach explanation)c.

c. Is your firm free of having any construction contracts taken over by a surety for completion in the past five (5) years?

Yes  No (attach explanation)

d. Has your firm used other surety companies since 2001?  Yes (list)  No

\_\_\_\_\_  
Surety Company

\_\_\_\_\_  
Contact

\_\_\_\_\_  
Surety Company

\_\_\_\_\_  
Contact

\_\_\_\_\_  
Surety Company

\_\_\_\_\_  
Contact

e. Is your firm able to obtain bonding in the amount required for the completion of this project? Provide a notarized declaration from the surety identified above, stating the amount of bonding capacity available to your firm for this project at **Attachment E**.

Yes  No (attach explanation)

7. **SAFETY**

a. Does your firm have a written safety program compliant with current State regulations? Provide one (1) copy of your firm’s written safety program at **Attachment F**.

Yes  No (attach explanation)

b. Provide a list of key safety personnel, including the designated safety manager who will be assigned to this project, and list specific duties.

Name and Title

Specific Duties

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name and Title

Specific Duties

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name and Title

Specific Duties

\_\_\_\_\_

\_\_\_\_\_

Name and Title	Specific Duties
_____	_____
_____	_____

c. Provide the Experience Modification Rate for the past five (5) years:

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ /

d. Provide the Recordable Incident Rate for the past calendar year: \_\_\_\_\_

e. Is your firm free of committing serious or willful violations of federal or state safety laws as determined by a final non-appealable decision of a court or government agency?

Yes

No (attach explanation)

**8. INSURANCE & CLAIMS HISTORY**

a. Is your firm free of any court judgments, pending litigation, arbitration and final agency decisions filed within the last five (5) years in a construction related matter in which the contractor, or any officer, is or was a party?

Yes

No (attach explanation)

b. Has your firm during the past five (5) years been free of a determination by a court of competent jurisdiction that is filed a false claim with any federal, state or local government entity?

Yes

No (attach explanation)

c. Does your firm have the ability to provide the required insurance in the limit stated in the project documents (General Liability and Comprehensive Auto at \$1 Million per occurrence and \$1 Million in the aggregate)?

Yes

No (attach explanation)

d. Please provide a notarized declaration from an insurance carrier stating that the firm is able to obtain insurance in the limits stated as **Attachment G**.

**9. QUALITY ASSURANCE – ATTACHMENT H**

a. Does your firm have a written Quality Assurance Program?

Yes

No

Provide one (1) copy of the written Assurance Program for **Attachment H**

**10. PROJECT SCHEDULING**

a. Does your firm use computerized scheduling?  Yes  No

b. If YES, which programs and versions are used? Please list:



---



---



---



---

c. Has the firm been involved with a construction project within the past five (5) years, where the schedule was not met?  Yes  No

d. If YES, please indicate the project (refer to **Attachment A**)

i. Project: \_\_\_\_\_

Reason for Delay: \_\_\_\_\_

ii. Project: \_\_\_\_\_

Reason for Delay: \_\_\_\_\_

iii. Project: \_\_\_\_\_

Reason for Delay: \_\_\_\_\_

e. Has the firm been assessed liquidated damages due to scheduling for any project in the past five (5) years? (Refer to **Attachment A**)  Yes  No

If YES, please list projects

(1) Project: \_\_\_\_\_ Amount \$ \_\_\_\_\_

Reason for assessment \_\_\_\_\_

(2) Project: \_\_\_\_\_ Amount \$ \_\_\_\_\_

Reason for assessment \_\_\_\_\_

(3) Project: \_\_\_\_\_ Amount \$ \_\_\_\_\_

Reason for assessment \_\_\_\_\_

**11. LABOR CODE VIOLATIONS**

a. Has your firm during the past five (5) years, been free of any determinations by a court or an administrative agency of repeated or willful violations of laws and/or regulations pertaining to the payment of prevailing wages or employment of apprentices of public works projects? Refer to **Attachment I**  Yes  No

b. Is the firm free of all Subcontractor Fair Practices Act violations for the past five (5) years?  Yes  No (explain)

**12. JUDGEMENTS, BREACH OF CONTRACT, PROTESTS, MEDIATIONS AND ARBITRATIONS**

- a. List any judgments against the firm during the past 5 years; use **Attachment J**
- b. List any breach of contract other than for cause
- c. If applicable, list any formal bid protests and the outcome, whether denied or upheld
- d. List all mediations/arbitrations in the last 5 years. Who initiated? What was the outcome?

**THE UNDERSIGNED CERTIFIES THAT ALL OF THE QUALIFICATION INFORMATION  
SUBMITTED WITH THIS FORM IS TRUE AND CORRECT.**

_____ NAME AND TITLE	_____ FIRM NAME
_____ SIGNATURE	_____ ADDRESS OF FIRM
_____ E-MAIL ADDRESS	_____ CITY/STATE/ZIP
_____ TELEPHONE NUMBER	_____ FAX NUMBER _

**END OF GENERAL CONTRACTOR STATEMENT OF QUALIFICATIONS**

**ATTACHMENT A**  
GENERAL CONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 3.a. EXPERIENCE**  
COMPLETE ONE FORM FOR EACH PROJECT LISTED (MAXIMUM 5)

**PROJECT DESCRIPTION**

Project Type: \_\_\_\_\_ Contact Name: \_\_\_\_\_

Project Name: \_\_\_\_\_ Contact Title: \_\_\_\_\_

Owner: \_\_\_\_\_ Contact Phone No.: \_\_\_\_\_

**DESIGN PROFESSIONAL**

Name of Firm: \_\_\_\_\_ Contact Name: \_\_\_\_\_

Contact Phone No.: \_\_\_\_\_ Contact Title: \_\_\_\_\_

Gross Building Area (Sq. Ft.) \_\_\_\_\_  New  Addition  Renovation

Project Start Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

Original Contract Amt.: \$ \_\_\_\_\_ Original No. of Days to Complete: \_\_\_\_\_

Final Contract Amount  
With all Change Orders: \$ \_\_\_\_\_ Final Contract Days to Complete:  
with all Time Extensions: \_\_\_\_\_

**PROJECT EXECUTION**

Were Liquidated Damages assessed on this Project?  No  Yes Days \_\_\_\_ \$ \_\_\_\_\_

Percentage of Work Subcontracted: \_\_\_\_\_ % Contract Type  Competitive Bid Lump Sum  
 Negotiated Lump Sum

Major Subcontractors:  Guaranteed Maximum Price  
 Other (Describe)

Mechanical: \_\_\_\_\_

Electrical: \_\_\_\_\_

Plumbing: \_\_\_\_\_

Roofing: \_\_\_\_\_

**CUSTOMER SATISFACTION**

How was this measured?  Customer Survey  Attached  Yes  No  Other (Describe)

**ATTACHMENT B**  
GENERAL CONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 4 a., b, c, d RESUMES**

ATTACH ONE (1) PAGE RESUMES OF THE PROPOSED  
PROJECT MANAGER  
PROJECT SUPERINTENDENT  
SAFETY PROGRAM MANAGER  
OTHER KEY PERSONNEL (OPTIONAL)

**1. EDUCATION**

High School, College, Trade Schools, Trade Seminars, Trade/Management Specialized Courses, Etc.

**2. RELATED EXPERIENCE**

Related experience should include the following:

- a. Position Title
- b. Duties and Responsibilities
- c. Major accomplishments
- d. Number of personnel supervised

**3. PROJECT EXPERIENCE**

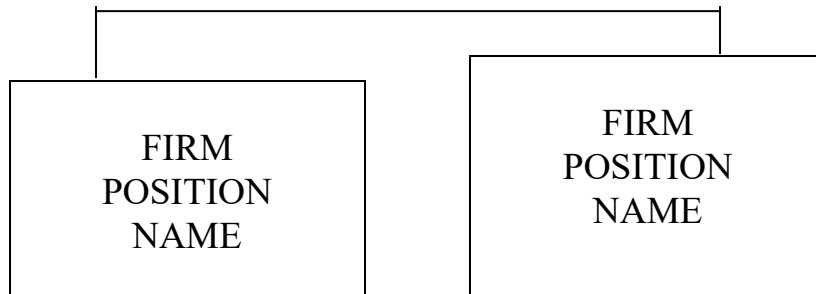
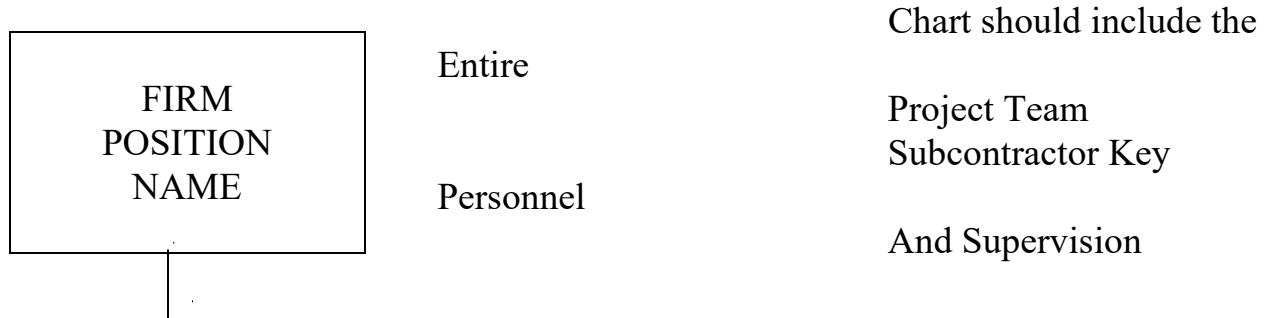
Identify project experience requested in the Statement at 4.a. (2) (3), 4.b. (2) (3), and 4.c. (2). Include the project Title and Location.

**4. Other information that demonstrates the individual's strengths for this project.**

**5. Project Professionals and Project Owner Reference may be included.**

**ATTACHMENT C**  
GENERAL CONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 4.e. ORGANIZATIONAL CHART OF PROJECT  
MANAGEMENT TEAM**



1. Indicate the relationship between PM/Supt. of the Subcontractors and the General Contractor's PM/SUPT.
2. Indicate the relationship of the Safety Manager of the Subcontractors and General Contractor, and the relationship of the Safety Manager with others on the job site.
3. Indicate the relationship between the QA/QC Manager with other personnel on the job site.



**ATTACHMENT E**  
GENERAL CONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 6.d. NOTARIZED DECLARATION OF SURETY**

**DOCUMENTATION FROM SURETY**

**ATTACHMENT F**  
GENERAL CONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 7.a. COPY OF FIRM'S WRITTEN SAFETY PLAN**

SUBMIT ONLY ONE (1) COPY OF SAFETY PLAN WITH SUBMITTAL PACKET

Include Work Loss Incidents and History



**ATTACHMENT G**  
GENERAL CONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 8.d. LETTER FROM INSURANCE CARRIER**

DOCUMENTATION OF INSURABILITY

**ATTACHMENT H**  
GENERAL CONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 9.b. WRITTEN QUALITY ASSURANCE PROGRAM**

SUBMIT ONLY ONE (1) COPY WITH SUBMITTAL PACKET

**ATTACHMENT I**  
GENERAL CONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 11.a. AFFIDAVIT**  
**OF NON-VIOLATION OF LABOR CODES**

**Name of Firm:**

**Address:**

**Project**

**Reference:** (Name of Owner & Project)

**Request for Proposal #** \_\_\_\_\_  
**Affidavit of Non-violation of Labor Codes**

**To:** The Board of Education  
School District

The undersigned officer of \_\_\_\_\_ hereby states that  
\_\_\_\_\_ has, during the past five (5) years, been free of any  
determinations by a court or an administrative agency, of repeated or willful violations of laws and/or  
regulations pertaining to the payment of prevailing wages or employment of apprentices of public works  
projects.

\_\_\_\_\_  
**Name**

\_\_\_\_\_  
**Title**

\_\_\_\_\_  
**Signature**

**NOTARY**

State of \_\_\_\_\_ )

County of \_\_\_\_\_ )

Signed or attested before me on \_\_\_\_\_ by \_\_\_\_\_

Seal

\_\_\_\_\_

My Commission Expires: \_\_\_\_\_

**ATTACHMENT J**  
GENERAL CONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 12.a.b.c. JUDGMENTS, BREACH OF CONTRACT,  
PROTESTS**

- a. List any judgments against the firm during the past 5 years.**
- b. List any breach of contract other than for cause.**
- c. If applicable, list any formal bid protests and the outcome, whether denied or upheld.**
- d. List all mediations/arbitrations in the last 5 years. Who initiated? What was the outcome?**

# Data Charter School Reroof Albuquerque Public Schools

REQUEST FOR PROPOSAL FOR CONSTRUCTION # 20-047RRR

*For the convenience of the contractors, an electronic version of this RFP is issued for your use. Any changes to the document's questions or language that differs from the wording as issued in the Project Manual dated 01/2020 other than to fill in answers for the questions asked, will constitute a non-responsible proposal.*

## STATEMENT OF QUALIFICATIONS FOR SUBCONTRACTORS

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

### 1. OFFEROR INFORMATION

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

Type of Firm:

Corporation     Partnership     Sole Proprietorship     Joint Venture

Other \_\_\_\_\_

a. Year Firm was established: \_\_\_\_\_

b. Parent Company (if applicable) \_\_\_\_\_

c. All former names during the past 10 years your organization has operated?

\_\_\_\_\_

\_\_\_\_\_

### 2. LICENSING

Provide your team's New Mexico contractor's license, which is current and in good standing with the State of New Mexico Construction Industries Division (CID).

a. Name of license holder (or qualifying party) exactly as on file with the State of New Mexico Construction Industries Division:

\_\_\_\_\_

b. License Classification: \_\_\_\_\_

c. License Number: \_\_\_\_\_

d. Issue Date: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

e. Is the firm's contractor's license free of ever being suspended or revoked by the CID or by the appropriate licensing agency in any other state?

Yes - free of suspension or revocation     No – Attach explanation

**3. EXPERIENCE**

- a. Has your firm completed one (1) or more educational facility reroof project of similar complexity and of **50,000** square feet or more since **2013**, as the proposed project? Complete **Attachment A** for three (3) maximum projects listed:

Yes Number of Projects: \_\_\_\_\_  No

Project 1 Name: \_\_\_\_\_

Project 2 Name: \_\_\_\_\_

Project 3 Name: \_\_\_\_\_

Provide copies of Performance Evaluation Reports prepared in connection with projects described in Para. 3.a above.

- b. State the average annual amount of construction work performed during the past five years:  
\$ \_\_\_\_\_

- c. Also, on **Attachment A**, list major construction project your organization has in progress, giving the name of the project, owner, architect, contract amount, percent of completion, and scheduled completion date.

**4. KEY PERSONNEL EXPERIENCE**

Please note that more consideration will be given to those meeting or exceeding the required qualifications below:

- a. Does your assigned Project Manager have the following minimum qualifications and experience? (Attach Resume at **Attachment B**)

- (1) At least ten (10) years' experience in the construction industry?

Yes Number of Years: \_\_\_\_\_  No

- (2) Experience on at least one (1) construction type as identified in 3a.?

Yes Number of Projects \_\_\_\_\_  No

- (3) Experience as a Project Manager on one (1) or more construction projects totaling **30,000** square feet or more?

Yes Number of Projects \_\_\_\_\_  No

- b. Does your assigned Project Foreman/Superintendent have the following minimum qualifications and experience? (Attach Resume at **Attachment B**)

- (1) At least ten (10) years experience in the construction industry?

Yes Number of Years: \_\_\_\_\_  No

- (2) Experience on at least one (1) construction type as identified in 3a.?

Yes Number of Projects \_\_\_\_\_  No

- (3) Experience as a Project Foreman/Superintendent on one (1) or more construction projects totaling **30,000** square feet or more?

Yes Number of Projects \_\_\_\_\_  No

- c. Does your Firm have a Quality Assurance/Quality Control (QA/QC) Manager?  Yes  No

Name: \_\_\_\_\_ Years with your firm: \_\_\_\_\_

Present Position/Job Title: \_\_\_\_\_ Years in position: \_\_\_\_\_

List other project(s) this person has had a similar role for the past five (5) years:

\_\_\_\_\_

\_\_\_\_\_

Is your QA/QC a Principal or Officer of the firm?  Yes  No

**5. CAPACITY AND CAPABILITY TO PERFORM THE WORK**

**a. Resources**

(1) Total number of current employees:

Project Managers	_____
Estimator's	_____
Foremen	_____
Tradesmen	_____
Administration	_____
Other	_____

- b. Please list all projects currently under contract at square footage listed in 3a. with scheduled completion dates (**Attachment C**)

See Attachment C  None

**6. SAFETY**

- a. Does your firm have a written safety program compliant with current State regulations? Provide one (1) copy of your firm's written safety program at **Attachment D**.

Yes  No (attach explanation)

- b. Provide your Experience Modification Rate for the past five (5) years:

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ /

- c. Provide the Recordable Incident Rate for the past calendar year: \_\_\_\_\_

- d. Is your firm free of committing serious or willful violations of federal or state safety laws as determined by a final non-appealable decision of a court or government agency?

Yes  No (attach explanation)

**7. INSURANCE & CLAIMS HISTORY**

- a. Is your firm free of any court judgments, pending litigation, arbitration and final agency decisions filed within the last five (5) years in a construction related matter in which the contractor, or any officer, is or was a party?  Yes  No (attach explanation)

b. Has your firm during the past five (5) years been free of a determination by a court of competent jurisdiction that is filed a false claim with any federal, state or local government entity?

Yes  No (attach explanation)

c. Does your firm have the ability to provide the required insurance in the limit stated in the project documents (General Liability and Comprehensive Auto at \$1 Million per occurrence and \$1 Million in the aggregate)?

Yes  No (attach explanation)

**8. QUALITY ASSURANCE**

a. Does your firm have a written Quality Assurance Program?  Yes  No

Note: If you have a Quality Assurance Program, please provide one (1) copy of the written Assurance Program for **Attachment E**

**9. LABOR CODE VIOLATIONS**

a. **Has** your firm during the past five (5) years, been free of any determinations by a court or an administrative agency of repeated or willful violations of laws and/or regulations pertaining to the payment of prevailing wages or employment of apprentices of public works projects?

Refer to **Attachment F**  Yes  No

b. Is the firm free of all Subcontractor Fair Practices Act violations for the past five (5) years?

Yes  No (explain)

**THE UNDERSIGNED CERTIFIES THAT ALL OF THE QUALIFICATION INFORMATION SUBMITTED WITH THIS FORM IS TRUE AND CORRECT.**

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Firm Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Address of Firm

\_\_\_\_\_  
E-mail Address

\_\_\_\_\_  
City/State/Zip

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Fax Number

**END OF SUBCONTRACTOR STATEMENT OF QUALIFICATIONS**



**ATTACHMENT A**  
SUBCONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 3.a. EXPERIENCE ON SIMILAR PROJECTS OVER**  
**VALUATION STATED IN 3.a**

COMPLETE ONE FORM FOR EACH PROJECT LISTED ON THE QUESTIONNAIRE (MAXIMUM 3)

**PROJECT DESCRIPTION**

Project Type: \_\_\_\_\_ Owner: \_\_\_\_\_

Project Name and  
Location: \_\_\_\_\_

Gross Building Area (Sq. Ft.) \_\_\_\_\_  New  Addition  Renovation

Original Contract Amt.: \$ \_\_\_\_\_ Completion Date/Percentage Complete:  
\_\_\_\_\_

**DESIGN PROFESSIONAL**

Name of Firm: \_\_\_\_\_ Contact Name: \_\_\_\_\_

**GENERAL CONTRACTOR**

Name of Firm: \_\_\_\_\_ Contact Name: \_\_\_\_\_

---

**CUSTOMER SATISFACTION**

How was this measured?  Customer Survey  Attached  Yes  No  Other  
(Describe)

---

**ATTACHMENT B**  
SUBCONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 4 a, b, c, d RESUMES**

ATTACH ONE (1) PAGE RESUMES OF THE PROPOSED

1. **PROJECT MANAGER**
2. **PROJECT FOREMAN/SUPERINTENDENT**
3. **OTHER KEY PERSONNEL (*OPTIONAL*)**

6. **EDUCATION**

High School, College, Trade Schools, Trade Seminars, Trade/Management Specialized Courses, Etc.

7. **RELATED EXPERIENCE**

Related experience should include the following:

- a. Position Title
- b. Duties and Responsibilities
- c. Major accomplishments
- d. Number of personnel supervised

8. **PROJECT EXPERIENCE**

Identify project experience requested in the Statement at 4.a. (2) (3), 4.b. (2) (3), and 4.c. (2). Include the project Title and Location.

9. **Other information that demonstrates the individual's strengths for this project.**

10. **Project Professionals and Project Owner Reference may be included.**

**ATTACHMENT C**  
SUBCONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE:**  
**5.b. PROJECTS CURRENTLY UNDER CONTRACT**

<u>PROJECT TITLE AND LOCATION</u>	<u>START DATE</u>	<u>PROJECTED COMPLETION</u>

**ATTACHMENT D**  
SUBCONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 7.a. COPY OF FIRM'S WRITTEN SAFETY PLAN**

SUBMIT ONLY **ONE (1) COPY** OF SAFETY PLAN WITH SUBMITTAL PACKET

Include Work Loss Incidents & History

**ATTACHMENT E**  
SUBCONTRACTOR'S STATEMENT OF QUALIFICATIONS

**REFERENCE: 9.b. WRITTEN QUALITY ASSURANCE PROGRAM**

SUBMIT ONLY ONE (1) COPY WITH SUBMITTAL PACKET



**COMBINED  
LIST OF SUBCONTRACTORS  
and  
ASSIGNMENT OF ANTITRUST CLAIMS  
by  
CONTRACTOR, SUBCONTRACTORS,  
SUBSUBCONTRACTORS, and SUPPLIERS**

**EXAMPLE TRADES AND SUPPLIERS:** SITE WORK, CONCRETE, MASONRY, FRAMING, LUMBER, STEEL, STEEL FABRICATION, ROOFING, EXTERIOR INSULATION AND FINISH, DRYWALL, DOORS, GLASS AND GLAZING, PLASTER, PAINTING, CARPET, RESILIENT, CONVEYING SYSTEMS, HVAC, CONTROLS, PLUMBING, SHEET METAL, ELECTRICAL

1. Subcontractor Listing shall be included with Cost Proposal as a condition of the Proposal and be fully complete with regards to all Subcontractors providing services valued at \$5,000.00 or more, or one-half of one percent of the architect's or engineer's estimate of the total project cost, not including alternates, whichever is greater pursuant to Section 13-4-34, NMSA 1978.

Listing Threshold for this Project: \$90,722.00

a. Subcontractor Listing shall be expanded after Proposal award, and before Contract, to include major Suppliers and, each entity listed shall be signed by individual empowered to obligate Supplier, Subcontractor, or Subsubcontractor.

b. Subcontractor Listing shall also be expanded after Proposal award by apparent low Offeror if Awarded, and before Contract, to include the Department of Workforce Solutions labor enforcement fund registration number. See the Department of Workforce Solutions web site at [www.dws.state.nm.us](http://www.dws.state.nm.us) under "Public Works" for registration form, listings and information.

c. See Instructions to Offerors, Section 00 2113 Paragraph 4.5, Subcontractors, for rules regarding changes in this list after Proposal award.

2. **PROJECT NAME:** Rio Grande High School – New Gymnasium

**REQUEST FOR PROPOSAL NUMBER:** 20-047RRR:

The undersigned agrees that any and all claims which the firm may have or may inure to it for overcharges resulting from antitrust violations as to goods, services, and materials purchased in connection with the above-referenced project are hereby assigned to the Owner, but only to the extent that such overcharges are passed on to the Owner. It is agreed that the firm retains all rights to any such antitrust claims to the extent of any overcharges not passed on to the District, including the right to any treble damages attributable thereto.







**BID PROPOSAL FOR LUMP SUM CONTRACT**

Date of Proposal: \_\_\_\_\_

New Mexico State Contractor's License No. \_\_\_\_\_

License Classifications: \_\_\_\_\_

Resident Contractor's Preference Certificate No. \_\_\_\_\_

Veteran Resident Contractor Preference Certificate No. \_\_\_\_\_

Percent of preference qualified for: \_\_\_\_\_ (10%).

NOTE: Attach a copy of the valid certificate and documentation to validate percent preference.

NM DOL (Workforce Solutions) Certificate No. \_\_\_\_\_

Contractor's New Mexico Gross Receipts Tax No. \_\_\_\_\_

Contractor's Federal Employee Identification No. \_\_\_\_\_

**FD+C Project No. 393**

**Project Name: APS Data Charter School Reroof**

Proposal of (company name): \_\_\_\_\_

(Hereinafter called the "Offeror") organized and existing under the laws of the State of New Mexico, doing business as a Corporation, Partnership or Individual. (Circle correct one).

To: Board of Education  
Albuquerque Municipal School District Number 12  
Bernalillo and Sandoval Counties, New Mexico (hereinafter called "APS") for:

The construction of APS Data Charter School Reroof

The undersigned, as an authorized representative for the Offeror named above, in compliance with the Request for Proposals for the construction of a Rio Grande High School New Gymnasium, FD+C Project No. 394, having examined the drawings and specifications, with related documents, and having examined the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of labor, materials and supplies, hereby proposes to furnish all labor, materials and supplies, and to construct the project in accordance with the contract documents at the bids stated below. These bids are to cover all expenses incurred in performing the work required under the contract documents, of which this proposal is a part.

The undersigned Offeror's representative also acknowledges receipt of the following Addenda:

Addendum No: \_\_\_\_, dated \_\_\_\_\_, Addendum No: \_\_\_\_, dated \_\_\_\_\_

Addendum No: \_\_\_\_, dated \_\_\_\_\_, Addendum No: \_\_\_\_, dated \_\_\_\_\_

The following information is required for state reporting purposes only and will not be used in evaluating or awarding the contract. Is project material offered grown, produced or wholly manufactured in New Mexico? \_\_\_\_\_ (Yes/No) (Percentage; reference V-B-5 of the RFP)

**BID PROPOSAL FOR LUMP SUM CONTRACT**

**BASE BID:** The Offeror agrees to perform all work for the reroof of the DATA Charter School, as described in the Project Manual and as shown on the Drawings for the following Base Bid. Also provide Bid Lot amounts, amounts if requested.

(Amounts to be shown in both words and figures. In case of a discrepancy, the amount shown in words will govern, **please print.**) All sums will **exclude NM Gross Receipts Tax.**

The Work to be performed under this Contract shall be commenced not later than ten (10) consecutive days after the date of written Notice to Proceed, and that Substantial Completion shall be achieved not later than 850 calendar days after the date of written Notice to Proceed, except as hereafter extended by valid written Change Order by the Owner, for Base Bid, and Bid Lots.

Should the Contractor neglect, refuse, or otherwise fail to complete the Work within the time specified, the Contractor agrees to pay to the Owner in partial consideration for the award of this Contract the amount of One Thousand Five Hundred Dollars (\$1,500.00) per consecutive day, not as a penalty, but as liquidated damages for such breach of the Contract.

The price basis for this RFP is the bid proposed for the Base Bid, subject to the availability of funds. APS may award one or more Bid Lots at the sole discretion of APS, subject to availability of funds.

**BASE BID:**

(1) Base Bid:

**Total Base Bid Lump Sum:** \_\_\_\_\_  
\_\_\_\_\_ Dollars, (\$ \_\_\_\_\_)

**BID LOTS**

(2) none

**Total Bid Lot No. 1 Lump Sum:** \_\_\_\_\_  
\_\_\_\_\_ Dollars, (\$ \_\_\_\_\_)

**ALLOWANCES**

(3) none

**Total Allowance No. 1 Lump Sum:** \_\_\_\_\_  
\_\_\_\_\_ Dollars, (\$ \_\_\_\_\_)

**BID PROPOSAL FOR LUMP SUM CONTRACT**

The Offeror understands that the contract will be awarded in accordance with the provisions of the Request for Proposals and that the Owner reserves the right to reject any or all proposals and to waive any technical irregularities.

The Offeror agrees that this bid will be good and may not be withdrawn for a period of forty- five (45) calendar days after the scheduled closing time for receiving bid proposals.

Upon receipt of written notice of acceptance of this Bid, Offeror will execute the final contract and deliver surety bonds as required by the Request for Proposals within seven calendar days.

The PROPOSAL SECURITY attached in the sum of 5% of the amount proposed is: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ Dollars, (\$\_\_\_\_\_)

And will become the property of the Owner in the event the contract and bonds are not executed within the time set forth herein, as liquidated damages for the delay and additional expenses to the Owner caused thereby.

Respectfully Submitted,

By :( Authorized Signature) \_\_\_\_\_ Date: \_\_\_\_\_

By :( Same Name, Printed or Typed) \_\_\_\_\_

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

Company: \_\_\_\_\_

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

\_\_\_\_\_ Zip: \_\_\_\_\_

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

(Affix Corporate Seal if proposal is by Corporation)

**BOND REVIEW AND APPROVAL FORM**

THIS FORM MUST BE  
ATTACHED TO BOND

REVIEW AND APPROVAL:

This Bond has been executed by a Surety named in the current list of "companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies," as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, United States Treasury Department.

APPROVED:

\_\_\_\_\_

Owner's Representative or Governing Authority

Date:

\_\_\_\_\_

# AGENT'S AFFIDAVIT

THIS FORM MUST BE  
USED BY SURETY

(To be filled in by Agent.)

STATE OF \_\_\_\_\_ )

) ss.

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

\_\_\_\_\_, being first duly sworn, deposes and says

that he/she is the duly appointed agent for \_\_\_\_\_

and is licensed in the State of New Mexico.

Deponent further states that a certain bond given to indemnify the State of New Mexico in connection with the construction of \_\_\_\_\_

dated the \_\_\_\_\_ day of \_\_\_\_\_, 2012 executed by \_\_\_\_\_

\_\_\_\_\_ Contractor, as principal, and, \_\_\_\_\_

\_\_\_\_\_ as surety, signed by this

Deponent; and Deponent further states that said bond was written, signed, and delivered by him/her; that the premium on the same has been or will be collected by him/her; and that the full commission thereon has been or will be retained by him/her.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 2011,

\_\_\_\_\_

Notary Public

My Commission expires: \_\_\_\_\_

AGENT'S ADDRESS:

\_\_\_\_\_

\_\_\_\_\_

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

***CAMPAIGN CONTRIBUTION DISCLOSURE FORM***

Pursuant to Chapter 81, Laws of 2006, any prospective contractor seeking to enter into a contract with any state agency or local public body must file this form with that state agency or local public body. The prospective contractor must disclose whether they, a family member or a representative of the prospective contractor has made a campaign contribution to an applicable public official of the state or a local public body during the two years prior to the date on which the contractor submits a proposal or, in the case of a sole source or small purchase contract, the two years prior to the date the contractor signs the contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contractor to the public official exceeds two hundred and fifty dollars (\$250) over the two year period.

THIS FORM MUST BE FILED BY ANY PROSPECTIVE CONTRACTOR WHETHER OR NOT THEY, THEIR FAMILY MEMBER, OR THEIR REPRESENTATIVE HAS MADE ANY CONTRIBUTIONS SUBJECT TO DISCLOSURE.

The following definitions apply:

**“Applicable public official”** means a person elected to an office or a person appointed to complete a term of an elected office, who has the authority to award or influence the award of the contract for which the prospective contractor is submitting a competitive sealed proposal or who has the authority to negotiate a sole source or small purchase contract that may be awarded without submission of a sealed competitive proposal.

**“Campaign Contribution”** means a gift, subscription, loan, advance or deposit of money or other thing of value, including the estimated value of an in-kind contribution, that is made to or received by an applicable public official or any person authorized to raise, collect or expend contributions on that official’s behalf for the purpose of electing the official to either statewide or local office. “Campaign Contribution” includes the payment of a debt incurred in an election campaign, but does not include the value of services provided without compensation or unreimbursed travel or other personal expenses of individuals who volunteer a portion or all of their time on behalf of a candidate or political committee, nor does it include the administrative or solicitation expenses of a political committee that are paid by an organization that sponsors the committee.

**“Contract”** means any agreement for the procurement of items of tangible personal property, services, professional services, or construction.

**“Family member”** means spouse, father, mother, child, father-in-law, mother-in-law, daughter-in-law or son-in-law.

**“Pendency of the procurement process”** means the time period commencing with the public notice of the request for proposals and ending with the award of the contract or the cancellation of the request for proposals.

**“Person”** means any corporation, partnership, individual, joint venture, association or any other private legal entity.

**“Prospective contractor”** means a person who is subject to the competitive sealed

proposal process set forth in the Procurement Code or is not required to submit a competitive sealed proposal because that person qualifies for a sole source or a small purchase contract.

“**Representative of a prospective contractor**” means an officer or director of a corporation, a member or manager of a limited liability corporation, a partner of a partnership or a trustee of a trust of the prospective contractor.

DISCLOSURE OF CONTRIBUTIONS:

Contribution Made By: \_\_\_\_\_

Relation to Prospective Contractor: \_\_\_\_\_

Name of Applicable Public Official: \_\_\_\_\_

Date Contribution(s) Made: \_\_\_\_\_

Amount(s) of Contribution(s) \_\_\_\_\_

Nature of Contribution(s) \_\_\_\_\_

Purpose of Contribution(s) \_\_\_\_\_

(The above fields are unlimited in size)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title (position)

**--OR--**

**NO CONTRIBUTIONS IN THE AGGREGATE TOTAL OVER TWO HUNDRED FIFTY DOLLARS (\$250) WERE MADE** to an applicable public official by me, a family member or representative.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title (Position)



**CONFLICT OF INTEREST AND  
DEBARMENT/SUSPENSION CERTIFICATION FORM  
Rio Grande High School New Gymnasium  
RFP 20-047RRR**

*CONFLICT OF INTEREST – APPENDIX H*

As utilized herein, the term “Vendor” shall mean that entity submitting a proposal to Albuquerque Public Schools in response to the above referenced request for proposals.

**The authorized Person, Firm and/or Corporation states that to the best of his/her belief and knowledge:**

No employee or board member of Albuquerque Public Schools (or close relative), with the exception of the person(s) identified below, has a direct or indirect financial interest in the Vendor or in the proposed transaction. Vendor neither employs, nor is negotiating to employ, any Albuquerque Public Schools employee, board member or close relative, with the exception of the person(s) identified below. Vendor did not participate, directly or indirectly, in the preparation of specifications upon which the quote or offer is made. If the Vendor is a New Mexico State Legislator or if a New Mexico State Legislator holds a controlling interest in Vendor, please identify the legislator: \_\_\_\_\_ List below the name(s) of any Albuquerque Public Schools employee, board member or close relative who now or within the preceding 12 months (1) works for the Vendor; (2) has an ownership interest in the Vendor (other than as an owner of less than 1% of Vendor’s stock, if Vendor is a publicly traded corporation); (3) is a partner, officer, director, trustee or consultant to the Vendor; (4) has received grant, travel, honoraria or other similar support from Vendor; or (5) has a right to receive royalties from the vendor.

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***DEBARMENT/SUSPENSION STATUS***

The Vendor certifies that it is not suspended, debarred or ineligible from entering into contracts with the Federal Government, or any State agency or local public body, or in receipt of a notice or proposed debarment from any Federal or State agency or local public body. The vendor agrees to provide immediate notice to Albuquerque Public School’s Purchasing Department in the event of being suspended, debarred or declared ineligible by any department or agency of the Federal government, or any agency of local public body of the State of New Mexico, or upon receipt of a notice of proposed debarment that is received after the submission of the quote or offer but prior to the award of the purchase order or contract.

**CERTIFICATION**

The undersigned hereby certifies that he/she has read the above CONFLICT OF INTEREST and DEBARMENT/SUSPENSION Status requirements and that he/she understands and will comply with these requirements. The undersigned further certifies that they have the authority to certify compliance for the vendor named **and that the information contained in this document is true and accurate to the best of their knowledge.**

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

\_\_\_\_\_  
Name of Person Signing (typed or printed):

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

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

\_\_\_\_\_  
Name of Company (typed or printed):

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

\_\_\_\_\_  
City/State/Zip:

\_\_\_\_\_  
Telephone No:

\_\_\_\_\_  
Fax No.:

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

**LISTING FORM 00 4334 – APPENDIX I**  
**For Submission of**  
**SUBCONTRACTOR**  
**QUALIFICATIONS QUESTIONNAIRE**

**THRESHOLD: \$50,000 OR 5% OF ESTIMATE WHICHEVER IS GREATER**

**DP/AE ESTIMATE OF TOTAL PROJECT COST: \$ 18,144,464.00**

**QUALIFICATION THRESHOLD FOR THIS PROJECT: \$ 907,223**

1. The using agency has the right and requires that the contractor provide subcontractor qualifications from the subcontractors listed below, at whatever tier and regardless of the value of the subcontract.
2. Also, Per NMAC 1.4.8.12 D. (2): Subcontractor qualification questionnaires shall be required for all subcontractors identified in the Technical Proposal pursuant to the subcontractor listing requirements 1.4.8.13 NMAC, where the value of the subcontract is fifty thousand (\$50,000) or five percent (5%) of the estimate, whichever is greater.

This Subcontractor Questionnaire Listing Form shall be included in the Technical Proposal, in **TAB 3**.

**Note:** This form must be completed and submitted by the deadline for proposal submission. The offeror has the option to submit the original and required copies of the Subcontractor Qualifications Questionnaires up to 24 hours after the date and time of the proposal submission.

SUBCONTRACTOR	ENTITY NAME
HVAC	
Electrical	
Concrete	
Plumbing	
Masonry	

**PROJECT: DATA Charter School Reroof**

**SUPPLEMENTAL INFORMATION**

**ASBESTOS CONSIDERATIONS**

1. The Contractor, Subcontractors, and Materials Suppliers will to the best of their abilities, provide and install materials that are *ASBESTOS-FREE*. Any material violating AHERA regulations must be removed by a licensed asbestos abatement Contractor and replaced with non-asbestos containing equal(s) at no cost to Owner. The area where such work is conducted will be returned to its substantially complete condition. Such replacement action will be in effect for the period of construction and continue through the entire warranty year.
2. The Architect and the Contractor shall execute the attached asbestos document.
3. The following Considerations are made available as information for Bidders:

Not Applicable

**DOCUMENT FOLLOWS**



## Asbestos Roofing Consideration Letter DATA Charter High School Location No. 743

AC No. 8267

January 17, 2020

### Project:

This report is provided for the purposes of an asbestos roof consideration for FDC at DATA Charter High School.

Asbestos-Containing Materials (ACM), by definition, are any materials that contain greater than one percent (>1%) of any form of asbestos. Regulated Asbestos-Containing Material (RACM) is any ACM that is friable or may be made friable by the forces expected to be acted upon it during removal, transportation, or ultimate disposition.

### Building 01- Main Building

The following lists the asbestos-containing materials, non-asbestos containing materials and the non-suspect materials.  
*(A RED Font Depict Asbestos-Containing Materials)*

### Exterior Roof (M&O ER101)

#### Material Descriptions

- *Silver sealant (Around penetration/HVAC units) – Asbestos-Containing Material*
- *Black sealant (Around skylights/penetrations) – Asbestos Containing Material*
- *Gray flashing (Around skylights) – Asbestos Containing Material*

#### Material Descriptions

- Roof core – Non Asbestos-Containing Material

### Precautions:

The contractor shall be aware that asbestos abatement or any other related asbestos work is **not included** in this contract. This is for informational purposes only.

Additional Asbestos Considerations are as follows:

- All Regulated Asbestos-Containing Material (RACM) will be handled through the APS EMD.





**Asbestos Roofing Consideration Letter  
DATA Charter High School  
Location No. 743**

**AC No. 8267**

**January 17, 2020**

- b) As part of this report/inspection, you must be aware that there may be additional suspect friable materials not addressed in the initial inspection. If in the course of his/her work the contractor's personnel should encounter existing material of a suspicious nature which might possibly contain asbestos, certain precautions shall be taken: All work in the vicinity of the questionable material shall be stopped immediately. The Contractor shall notify the APS designated Inspector who will take samples and have laboratory analyses performed unless previously identified. If asbestos is found to be present, the Inspector will direct procedures to be followed. Under no circumstance is the Contractor to continue working on construction involving such suspicious or questionable materials.
- c) The Contractor is cautioned that the Inspector may not always be able to schedule the support work by APS or Contracted abatement qualified personnel as quickly as the Contractor would like to see it done. The Contractor shall be prepared to work on other areas of construction until such scheduled asbestos work by APS or Abatement Contractor is completed. Reasonable delays due to scheduling are to be anticipated and will not be justification for additional compensation to the Contractor.

Kelly Trujillo

Environmental Inspector  
Albuquerque Public Schools  
Environmental Management Department



**ALBUQUERQUE PUBLIC SCHOOLS**  
**DEPARTMENT OF FACILITIES PLANNING AND CONSTRUCTION**  
915 OAK STREET SE  
PO BOX 25704  
ALBUQUERQUE, NEW MEXICO 87125-0704  
(505) 242-5865

**RAQUEL REEDY**  
SUPERINTENDENT

**KAREN ALARID**  
EXECUTIVE DIRECTOR



**PROJECT NAME:** \_\_\_\_\_  
**ADDRESS:** \_\_\_\_\_  
**CITY:** \_\_\_\_\_  
**STATE:** \_\_\_\_\_

**Project #:** \_\_\_\_\_

In accordance with 40 CFR 763.99, this is to certify that the above referenced project drawings and specification have been reviewed and that to the best of our knowledge, no Asbestos Containing Building Materials (ACBM) were specified for the construction of this building.

**Project Architect:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**Firm:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This is to certify that for the above referenced project, to the best of our knowledge, no Asbestos-Containing Building Materials were used in the construction of this building.

**Construction Contractor:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**Firm:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**AHERA/NIOSH Inspector:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**PROJECT: DATA Charter School Reroof**

**SUPPLEMENTAL INFORMATION**  
**GEO-TECHNICAL INVESTIGATIONS**

1. This report is included for information only. Neither Owner nor the Design Professional assumes responsibility for the accuracy of the investigation. The data is made available for interpretation by potential Bidders and is not intended as a warranty of continuity of conditions. Recommendations, if any, shall not be construed as contract requirements unless specifically stated or referenced in the contract documents.

2. The following Reports are made available as information for Bidders:

Geotechnical Engineering Study Report dated July 31, 2014, Prepared by Amec  
Environment & Infrastructure, Inc.

**DOCUMENT FOLLOWS**  
**N/A**



## ENUMERATION OF THE CONTRACT DOCUMENTS

### PROJECT:

The Contract Documents will consist of the Agreement between the Owner and the Contractor and General Conditions, plus all attachments, exhibits, project specifications, schedules, the construction drawings, the Project Manual, the Request for Proposal (including the RFP Legal Notice and all Attachments), the Price Proposal Form and Proposal Bond Form, the Subcontractor Listing Requirements, any Bond/Insurance Certificate/Insurance Endorsement Forms, Minimum Wage Information, Contractor's Price Proposal and relevant Addenda or portions thereof, which shall be deemed to be so modified and amended as set out in the balance of the Contract Documents), all other documents identified in Article 7.22 of the Agreement between the Owner and the Contractor, and any modifications, Change Orders, Addenda, or amendments to any of those documents executed after the effective date of the agreement.

- A. The Drawings are identified as follows: As listed in Section 00 8100 – List of Drawings
- B. The Specifications are identified as follows: As listed in Section 00 8200 – Index to Technical Specifications
- C. All addenda to the Drawings/Specifications as issued during the RFP process.

00 4000-4

## **OWNER/CONTRACTOR AGREEMENT**

The form of Owner/Contractor Agreement to be executed is the standard Construction Agreement and General Conditions.

00 5000-1

RFP# 20-047RRR

**MINIMUM WAGE RATE INFORMATION**

The New Mexico State Minimum Wage Rates applicable for this Contract, as evidenced by the attached determination by the New Mexico Labor and Industrial Commission, shall be paid to all workers employed in the performance of the Work. See Request for Proposals and General Conditions to the Owner/Contractor Agreement.

**NM DECISION NO. BE-20-0573-B**

**DOCUMENTS FOLLOW**

00 6600-1



**LABOR RELATIONS DIVISION**

401 Broadway NE  
Albuquerque, NM 87102  
Phone: 505-841-4400  
Fax: 505-841-4424

226 South Alameda Blvd  
Las Cruces, NM 88005  
Phone: 575-524-6195  
Fax: 575-524-6194

**WWW.DWS.STATE.NM.US**

1596 Pacheco St, Suite 103  
Santa Fe, NM 87505  
Phone: 505-827-6817  
Fax: 505-827-9676

**Wage Decision Approval Summary**

1) Project Title: Digital Arts & Technology Academy (DATA) Charter School- School Re-Roof  
Requested Date: 03/19/2020  
Approved Date: 03/19/2020  
Approved Wage Decision Number: BE-20-0573-B

**Wage Decision Expiration Date for Bids: 07/17/2020**

2) Physical Location of Jobsite for Project:  
Job Site Address: 1011 Lambertson Place NE  
Job Site City: Albuquerque  
Job Site County: Bernalillo

3) Contracting Agency Name (Department or Bureau): Albuquerque Public Schools  
Contracting Agency Contact's Name: Ben Harris  
Contracting Agency Contact's Phone: (505) 848-8708 Ext.

4) Estimated Contract Award Date: 06/01/2020

5) Estimated total project cost: \$1,200,000.00  
a. Are any federal funds involved?: No  
b. Does this project involve a building?: Yes - The school building will have the old, deteriorated built-up asphalt roof removed and replaced with a new TPO roof system.  
c. Is this part of a larger plan for construction on or appurtenant to the property that is subject to this project?: No  
d. Are there any other Public Works Wage Decisions related to this project?: No  
e. What is the ultimate purpose or functional use of the construction once it is completed?: To provide a new water-tight roof system over the entire school building.

6) Classifications of Construction:

Classification Type and Cost Total	Description
<b>General Building (B)</b> Cost: \$1,200,000.00	The school building will have the old, deteriorated built-up roof system removed and replaced with a new TPO roof system.



## PUBLIC WORKS PROJECT REQUIREMENTS

As a participant in a Public Works project valued at more than \$60,000 in the state of New Mexico, the following list addresses many of the responsibilities that are defined by statute or regulation to each project stakeholder.

### Contracting Agency

- Ensure that all contractors wishing to bid on a Public Works project when the project is \$60,000 or more are actively registered with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> (Contractor Registration) prior to bidding.
- Please submit Notice of Award (NOA) and Subcontractor List(s) to the PWAA website promptly after the project is awarded.
- Please update the Subcontractor List(s) on the PWAA website whenever changes occur.
- All sub-contractors and tiers (excluding professional services) regardless of contract amount must be listed on the Subcontractor List and must adhere to the Public Works Minimum Wage Act.
- Ninety days after project completion please go into the PWAA system and close the project. Only contracting agencies are allowed to close the project. Agents or contractors are not allowed to close projects.

### General Contractor

- Provide a complete Subcontractor List and Statements of Intent (SOI) to Pay Prevailing Wages for all contractors, regardless of amount of work, to the contracting agency within 3 (three) days of award.
- Ensure that all subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> prior to bidding when their bid will exceed \$60,000.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- Confirm the Wage Rate poster, provided in PWAA, is displayed at the job site in an easily accessible place.
- When the project has been completed, make sure the Affidavits of Wages Paid (AWP) are sent to the contracting agency.
- All subcontractors and tiers (excluding professional services) regardless of contract amount must pay prevailing wages, be listed on the Subcontractor List, and adhere to the Public Works Minimum Wage Act.



**LABOR RELATIONS DIVISION**  
121 Tijeras Ave NE, Suite 3000  
Albuquerque, NM 87102  
Phone: 505-841-4400  
Fax: 505-841-4424

**WWW.DWS.STATE.NM.US**

## **Subcontractor**

- Ensure that all subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> prior to bidding when their bid will exceed \$60,000.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- All subcontractors and tiers (excluding professional services) regardless of contract amount must pay prevailing wages, be listed on the Subcontractor List, and adhere to the Public Works Minimum Wage Act.

## **Additional Information**

Reference material and forms may be found in the New Mexico Department of Workforce Solutions Public Works web pages at: <https://www.dws.state.nm.us/Labor-Relations/Labor-Information/Public-Works>.

## **CONTACT INFORMATION**

Contact the Labor Relations Division for any questions relating to Public Works projects by email at [public.works@state.nm.us](mailto:public.works@state.nm.us) or call (505) 841-4400.



## TYPE "B" – GENERAL BUILDING

Effective January 1, 2020

Trade Classification	Base Rate	Fringe Rate	Apprenticeship
<b>Asbestos Workers/Heat and Frost insulators</b>	32.26	12.06	0.60
<b>Asbestos Workers/Heat and Frost insulators-Los Alamos County</b>	34.69	12.06	0.60
<b>Boilermaker/ blacksmith</b>	34.97	28.85	0.60
<b>Bricklayer/Block layer/Stonemason</b>	24.46	8.81	0.60
<b>Carpenter/Lather</b>	24.63	11.24	0.60
<b>Carpenter-Los Alamos County</b>	27.80	13.19	0.60
<b>Millwright/ pile driver</b>	33.16	25.24	0.60
<b>Cement Mason</b>	21.07	10.33	0.60
<b>Electricians-Outside Classifications-Zone 1</b>			
Ground man	23.27	12.67	0.60
Equipment Operator	33.39	15.35	0.60
Lineman/Tech	39.28	16.91	0.60
Cable Splicer	43.21	17.95	0.60
<b>Electricians-Outside Classification: Zone 2</b>			
Ground man	23.27	12.67	0.60
Equipment Operator	33.39	15.35	0.60
Lineman/ technician	39.28	16.91	0.60
Cable Splicer	43.21	17.95	0.60





<b>Electricians-Outside Classifications: Los Alamos</b>			
Ground man	23.94	12.85	0.60
Equipment Operator	34.35	15.60	0.60
Lineman/ Technician	40.41	17.21	0.60
Cable Splicer	44.45	18.28	0.60
<b>Electricians-Inside Classifications: Zone 1</b>			
Wireman/ low voltage technician	32.70	11.18	0.60
Cable Splicer	35.97	11.28	0.60
<b>Electricians-Inside Classification: Zone 2</b>			
Wireman/ low voltage technician	35.64	11.27	0.60
Cable Splicer	38.91	11.37	0.60
<b>Electricians-Inside Classification: Zone 3</b>			
Wireman/ low voltage technician	37.61	11.33	0.60
Cable Splicer	40.88	11.43	0.60
<b>Electricians-Inside Classification: Zone 4</b>			
Wireman/ low voltage technician	41.20	11.44	0.60
Cable Splicer	44.47	11.53	0.60
<b>Electricians-Inside Classification: Los Alamos</b>			
Wireman/ low voltage technician	37.61	13.21	0.60
Cable Splicer	40.88	13.47	0.60
<b>Elevator Constructor</b>	43.80	35.25	0.60
<b>Elevator Constructor Helper</b>	35.04	35.25	0.60
<b>Glazier</b>			
Journeyman/ Fabricator	20.25	5.35	0.60



Delivery Driver	9.00	5.35	0.60
<b>Ironworker</b>	27.00	15.75	0.60
<b>Painter (Brush/Roller/Spray)</b>	17.00	6.88	0.60
<b>Paper Hanger</b>	17.00	6.88	0.60
<b>Drywall- Light Commercial &amp; Residential</b>			
Ames tool operator	25.08	7.10	0.60
Hand finisher/machine texture	24.08	7.10	0.60
<b>Plasterer</b>	23.17	8.99	0.60
<b>Plumber/Pipefitter</b>	30.76	11.62	0.60
<b>Roofer</b>	25.23	7.97	0.60
<b>Sheet metal worker</b>			
Zone 1	31.03	17.26	.60
Zone 2 – Industrial	32.03	17.26	.60
Zone 3 – Los Alamos	33.03	17.26	.60
<b>Soft Floor Layer</b>	19.94	17.26	0.60
<b>Sprinkler Fitter</b>	30.90	22.29	0.60
<b>Tile Setter</b>	24.46	8.81	0.60
<b>Tile Setter Helper/Finisher</b>	16.53	8.81	0.60
<b>Laborers</b>			
Group I- Unskilled and semi-skilled	17.50	6.27	0.60
Group II- Skilled	18.50	6.27	0.60
Group III- Specialty	20.75	6.27	0.60
<b>Masonry Laborers</b>			
Group I- Unskilled and Semi-Skilled	18.00	6.27	0.60
Group II- Skilled	19.75	6.27	0.60
Group III- Specialty	20.25	6.27	0.60
Reinforcing iron workers and post tension	24.00	6.27	0.60



<b>Operators</b>			
Group I	20.95	7.27	0.60
Group II	23.11	7.27	0.60
Group III	23.57	7.27	0.60
Group IV	24.01	7.27	0.60
Group V	24.20	7.27	0.60
Group VI	24.41	7.27	0.60
Group VII	24.52	7.27	0.60
Group VIII	27.56	7.27	0.60
Group IX	29.95	7.27	0.60
Group X	33.35	7.27	0.60
<b>Truck Drivers</b>			
Group I-VII	16.45	7.87	0.60
Group VIII	16.51	7.87	0.60
Group IX	18.45	7.87	0.60

**NOTE: All contractors are required to pay SUBSISTENCE, ZONE AND INCENTIVE PAY according to the particular trade. Details are located in a PDF attachment at [WWW.DWS.STATE.NM.US](http://WWW.DWS.STATE.NM.US). Search Labor Relations/Labor Information/Public Works/Prevailing Wage Rates.**

For more information about the Subsistence, Zone, and Incentive Pay rates, or to file a wage claim, contact the Labor Relations Division at (505) 841-4400 or visit us online at [www.dws.state.nm.us](http://www.dws.state.nm.us).

**GENERAL CONDITIONS**

The General Conditions of this Contract are incorporated in the standard agreement.

A sample Agreement is previously attached (see 00 5000).

**DOCUMENT FOLLOWS**

00 7000-1

**LIST OF DRAWINGS**

Sheet No.      Sheet Title

00 8100-1

**INDEX TO TECHNICAL SPECIFICATIONS**

00 8200-1

Invitation to Bid No. \_\_\_\_\_

APS Contract No. \_\_\_\_\_

**EXHIBIT A**  
**INDEX TO TECHNICAL SPECIFICATIONS**

*(Attach list of Technical Specifications.)*

**DOCUMENT FOLLOWS**



Invitation to Bid No. \_\_\_\_\_  
APS Contract No. \_\_\_\_\_

**EXHIBIT B**  
**LIST OF DRAWINGS**

*(Attach List of Drawings)*

**DOCUMENT FOLLOWS**





Invitation to Bid No. \_\_\_\_\_

APS Contract No. \_\_\_\_\_

**EXHIBIT C**  
**ESTIMATED MONTHLY DRAW-DOWN SCHEDULE**

*(Attach Contractor's Estimated Monthly Draw-down Schedule)*

**DOCUMENT FOLLOWS**





Invitation to Bid No. \_\_\_\_\_

APS Contract No. \_\_\_\_\_

**OWNER REVIEW OF CONTENT AND/OR FEASIBILITY**

DO NOT PROCEED

PROCEED WITH ESTIMATE OF COSTS ONLY (within 10 calendar days of receipt of this MCR)!

PROCEED WITH WORK, ESTIMATES OF COSTS TO FOLLOW (estimate within 10 days of receipt of this MCR)!

\_\_\_\_\_  
Authorized APS Representative

\_\_\_\_\_  
Date

**A/E-ESTIMATED COST OF REQUIRED DESIGN WORK:** (estimated within 5 days; Include breakdown of costs)

\$ \_\_\_\_\_ Initial

\_\_\_\_\_  
Project DP

\_\_\_\_\_  
Date

**PROCEED WITH DESIGN:** (Forward proposed costs of work to OWNER for approval, include GRT)

APPROVED AMOUNT \$ \_\_\_\_\_ Initial

\_\_\_\_\_  
For APS:

\_\_\_\_\_  
Date

**CONTRACTORS PROPOSED COST:** (Include backup, include GRT)

MCR Cost \$ \_\_\_\_\_

NMGRT @ \_\_\_\_\_ % \$ \_\_\_\_\_

APPROVED AMOUNT \$ \_\_\_\_\_ Initial

\_\_\_\_\_  
For APS:

\_\_\_\_\_  
Date

**MUST BE COMPLETED TO FINALIZE:**

PROCEED WITH MODIFICATION OF WORK AND TO CONTRACT SUM (INCLUDE IN CHANGE ORDER)

REJECTED BUT REPLACED BY MCR# \_\_\_\_\_

REJECTED – STOP ALL ACTION ON THIS REQUEST \_\_\_\_\_



**EXHIBIT D-2**  
**CHANGE ORDER**

Albuquerque Public Schools  
 PROJECT: \_\_\_\_\_  
 DATE: \_\_\_\_\_

- Distribution to:
- Contractor
  - Design Professional
  - APS FDC
  - APS Procurement
  - Other

**CHANGE ORDER NO:** \_\_\_\_\_

**CONTRACTOR:** \_\_\_\_\_

**NOT VALID UNTIL SIGNED BY ALBUQUERQUE PUBLIC SCHOOLS.** Signature of the Contractor indicates agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The Original Contract Sum was .....\$  
 Net change by previously authorized Change Orders .....\$  
 The Contract Sum prior to this Change Order was .....\$  
 The Contract Sum will be increased/decreased/unchanged  
 by this Change Order in the amount of .....\$  
 The new Contract Sum including this Change Order will be .....\$

The Contract Time will be increased/decreased/unchanged by \_\_\_\_\_ days  
 The date of Substantial Completion as of the date of this Change Order therefore is \_\_\_\_\_

Otherwise, Parties agree by checking here : that at the time of this Change Order, there is no agreement on adjustment to the Contract Time related to MCR(s) \_\_\_\_\_. The Contractor, without prejudice and without waiving any rights to such claim for adjustment to Contract Time in relation these MCR(s), agrees to postpone claim in accordance with Paragraph 7.3 of the General Conditions.

This CHANGE ORDER encompasses the following:

MCR #	SHORT DESCRIPTION	DISTRICT AMOUNT
<b>SUBTOTAL</b>		
<b>NMGRT</b>	INDICATE TAX RATE AS A %:	
	<b>TOTAL</b>	

By: _____ Karen Alarid, Director APS FDC ALBUQUERQUE PUBLIC SCHOOLS  Date: _____	By: _____   Date: _____	By: _____   Date: _____
--	----------------------------------	----------------------------------



**EXHIBIT E**  
**CERTIFICATE OF SUBSTANTIAL COMPLETION**

CONTRACT DATED:

PROJECT NAME:

WORK SUBSTANTIALY COMPLETE:

SUBSTANTIAL COMPLETION is defined, in accordance with Article 9 of the General Conditions, as the date certified by the Design Professional when all the Work, or portion of the Work, is complete except for minor items so that the Owner can completely occupy or fully utilize the Work for it's intended use.

The Design Professional also certifies that Contractor's Punch List of items to be completed or corrected prior to Final Completion, to the best of the Design Professional's knowledge, information and belief, is accurate and includes as a subset, the Punch List of Close-Out Work, in accordance with Subparagraph 9.10.2 of the General Conditions, as well as, a schedule, in accordance with Subparagraph 9.10.2 of the General Conditions, clearly stating when all Work will be complete and when Final Completion will occur in accordance with the General Conditions. The Design Professional and the Contractor certify that the Contractor has attached any agreed upon modifications or exceptions to Warranties stated in the Contract Documents.

The DESIGN PROFESSIONAL therefore has determined that the Date of Substantial Completion for that Work defined above was \_\_\_\_\_, 20\_\_ .

DESIGN PROFESSIONAL:

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

The CONTRACTOR certifies that the above is true and in agreement and to be responsible for any Liquidated Damages due related to Substantial Completion date in accordance with the Contract Documents. The amount due for Liquidated Damages is (say in words) \$\_\_\_\_\_.

CONTRACTOR:

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

The OWNER hereby accepts the above defined Work as being Substantially Complete on said date.

<p>By: _____ Karen Alarid, Director, APS FDC DISTRICT REPRESENTATIVE ALBUQUERQUE PUBLIC SCHOOLS Date: _____</p>	<p>Distribution to:</p> <ul style="list-style-type: none"><li><input type="checkbox"/> District Representative</li><li><input type="checkbox"/> Design Professional of Record</li><li><input type="checkbox"/> APS Procurement</li><li><input type="checkbox"/> Other</li></ul>
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**EXHIBIT F**  
**CERTIFICATE OF FINAL COMPLETION**

CONTRACT DATED:

PROJECT NAME:

SUBSTANTIAL COMPLETION DATE:

FINAL COMPLETION is defined, in accordance with Article 9 of the General Conditions, as the date certified by the Design Professional when all the Work of the Project is fully complete, the Close-Out requirements of Paragraph 9.10 of the General Conditions have been completed, including the Close-Out Meeting and approval of Close-Out by the Design Professional, in accordance with Subparagraph 9.10.2, and the Contract fully performed in accordance with the Contract Documents, and the Contractor entitled to final payment.

The DESIGN PROFESSIONAL has inspected the Work and has determined that the Date of Final Completion \_\_\_\_\_, 20\_\_ .

DESIGN PROFESSIONAL:

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

ONE YEAR INSPECTION: Approximately thirty days prior to \_\_\_\_\_, the one-year anniversary of the Date of Substantial Completion, the Design Professional, the Owner, and the Contractor shall conduct an inspection of the Project to determine any correction of the Work which may be required at that time.

The CONTRACTOR certifies that the Work is fully completed and was completed on or before \_\_\_\_\_, and submits herewith:

- Application for Final Payment (AIA G702, or equal)
- Affidavit of Payments (AIA G706, or equal)
- Consent of Surety (AIA G707, or equal)
- Release of Liens (AIA G706A, or equal)

CONTRACTOR:

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

The OWNER hereby accepts the Work as fully complete and will make final payment.

By: _____ Karen Alarid, Director, APS FDC DISTRICT REPRESENTATIVE ALBUQUERQUE PUBLIC SCHOOLS  Date: _____	Distribution to: <input type="checkbox"/> District Purchasing Agent <input type="checkbox"/> Design Professional <input type="checkbox"/> APS Procurement <input type="checkbox"/> Other
--	--



## EXHIBIT G – APS PROJECT MANAGEMENT SYSTEM

### **ELECTRONIC DATA REQUIREMENTS**

#### **General Requirements:**

- a. The Contractor shall provide at a minimum, the following to its staff:
  - i. **Computer:** Minimum Intel Pentium® 4 Processor 2.4 GHz or equivalent processor with 512 MB of RAM; recommended Centrino Duo® Processors 1.6 GHz or equivalent with 2GB or RAM, or higher.
  - ii. **Computer Operating System:** Windows XP, Windows Vista, or Windows 7
  - iii. **Web Browser:** Microsoft Internet Explorer 9
  - iv. **Work and Spreadsheet Processors:** Microsoft Office Word, Excel and Outlook
  - v. **Scheduling Software:** Microsoft Project or Primavera
  - vi. **Internet Service Provider:** A reliable ISP in the area of the Project
  - vii. **Connection Speed/Minimum Bandwidth:** DSL, ADSL, or T1 Line for transferring a minimum of 3Mbps Downstream and 512 Kbps Upstream
  - viii. **Have or install a scanner minimum 800 x 600 pixels, and a digital camera minimum resolution of one (1) megapixel.**
- b. Contractor shall provide its management personnel assigned to this Project with access to personal computers and the Internet on a daily basis.

#### **Project Web Requirements:**

- a. This project will utilize a web based project management tool called e-Builder Enterprise™. This web based application is a collaboration tool, which will allow project team members continuous access through the Internet to important project data as well as up to the minute decision and approval status information.
- b. Contractor shall have the responsibility for visiting the Project web site on a daily basis, and as necessary to be kept fully apprised of the Project developments, for correspondence, assigned tasks and other matters that transpire on the site. These may include but are not limited to: Contracts, Contract Exhibits, Contract Amendments, Drawing Issuances, Addenda, Bulletins, Permits, Insurance & Bonds, Safety Program Procedures, Safety Notices, Accident Reports, Personnel Injury Reports, Schedules, Site Logistics, Progress Reports, Daily Logs, Non-Conformance Notices, Quality Control Notices, Punch Lists, Meeting Minutes, Requests for Information, Submittal Packages, Substitution Requests, Monthly Payment Request Applications, Supplemental Instructions, Owner Variation Directives, Potential Variation Orders, Variation Order Requests, Variation Orders, and the like. All supporting data including but not limited to shop drawings, product data sheets, manufacturer data sheets and instructions, method statements, safety MSDS sheets, Substitution Requests and the like will be submitted in digital format via e-Builder Enterprise™.

#### **Electronic File Requirements:**

- a. In addition to the standard closeout submittal requirements detailed elsewhere in the Contract Documents, the Contractor shall also submit all closeout documents including “As-Built Drawings”, catalog cuts and Owner’s Operation and Maintenance manuals in digital format. All documents (including as-built drawings) shall be converted or scanned into the Adobe Acrobat (.pdf) file format and uploaded to e-Builder Enterprise™.

**e-Builder Enterprise™ User Licenses:**

**The Contractor is required to purchase and maintain for the life of the project at least one annual e-Builder Enterprise™ user license as part of basic services. e-Builder Inc. will facilitate user license acquisition.**



# Agreement between the Owner and the Contractor

## 2008 Edition, APS

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES; CONSULTATION WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS COMPLETION

Project (short title): Invitation to Bid No.: \_\_\_\_\_

Location: APS Contract No.: \_\_\_\_\_

Distribution to:            Owner (2)            Contractor            Design Professional

This Agreement entered into this            day of            , 20\_\_\_\_, by and between the parties  
as follows:

**THE OWNER:**

THE BOARD OF EDUCATION  
ALBUQUERQUE MUNICIPAL  
SCHOOL DISTRICT NO. 12  
("ALBUQUERQUE PUBLIC  
SCHOOLS")  
6400 UPTOWN BLVD, NE  
ALBUQUERQUE, NM 87110  
Telephone: (505) (880-3700)

**THE CONTRACTOR:**

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

and, hereinafter "Owner".

**APS CONSTRUCTION MANAGEMENT:**

ALBUQUERQUE PUBLIC SCHOOLS  
FACILITIES DESIGN & CONSTRUCTION  
915 OAK STREET, SE  
ALBUQUERQUE, NM 87106  
Telephone: (505) 848-8810  
Fax: (505) 246-9020

**DESIGN PROFESSIONAL OF RECORD:**

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

### RECITALS

WHEREAS, Contractor has represented to APS that it is specifically qualified to perform construction services of the nature contemplated by this Agreement; and

WHEREAS, Albuquerque Public Schools (APS) desires to engage the construction services of Contractor and Contractor desires to perform such services for APS.

The OWNER and the CONTRACTOR agree as set forth below.

## **ARTICLE 1**

### **THE CONTRACT DOCUMENTS**

The Contract Documents consist of the following:

Bid Form	Notice to Proceed
Agreement Between Owner and Contractor	Conditions of the Contract (General, Supplementary, and Other Conditions)
Performance Bond	Drawings
Labor and Material Payment Bond	Specifications
Agent's Affidavit	All Addenda Issued Prior to and All Modifications Issued after Execution of This Agreement
Certificate of Insurance	Exhibits A – G, attached
Assignment of Antitrust Claims	
Notice of Award	

These documents form the Contract, and all are as fully a part of the Contract as if attached to this Agreement or repeated herein. An enumeration of the Contract Documents appears in Article 7.

## **ARTICLE 2**

### **THE WORK**

The Contractor shall perform all the Work required by the Contract Documents for the following:

## **ARTICLE 3**

### **TIME OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**

The Work to be performed under this Contract shall commence not later than ten (10) consecutive calendar days after the date of written Notice to Proceed. Substantial Completion shall be achieved not later than \_\_\_\_\_ calendar days after the date of written Notice to Proceed, except as hereafter extended by valid written Change Order by the Owner.

Should the Contractor neglect, refuse, or otherwise fail to complete the Work within the time specified for Substantial Completion, the Contractor agrees, in partial consideration for the award of this Contract, to pay to the Owner, by lump sum or by monthly payments if required by the Owner, the amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) per consecutive calendar day, not as a penalty, but as liquidated damages for such breach of this Contract.

Phased Construction: If the project contains multiple phases of construction, each phase shall be subject to the amount of liquidated damages per consecutive calendar day indicated in the paragraph above, if so noted below:

Phase 1:	calendar days. Liquidated Damages	apply this phase.
Phase 2:	calendar days. Liquidated Damages	apply this phase.
Phase 3:	calendar days. Liquidated Damages	apply this phase.

**ARTICLE 4**  
**CONTRACT SUM**

The Owner shall pay the Contractor in current funds for the performance of the Work, subject to additions and deductions by Change Order as provided in the Contract Documents, the Contract Sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_).

The Contract sum is determined as follows:

Base Bid Amount.....	\$	_____
Bid Lot 1 - HVAC warranty/maintenance...	\$	_____
Bid Lot 2 - PV System.....	\$	_____
Bid Lot 3 - _____.....	\$	_____
Alternates (if any).....	\$	_____
Award Amount .....	\$	_____
Gross Receipts Tax* @ _____ %.....	\$	_____
Contract Sum .....	\$	_____

\* Gross receipts tax (GRT) shall be added as a line item to the Schedule of Values and in each approved Modification / Change Request (MCR) amount for change in the Work. During the course of the Project, any change in GRT rate will be applied to the remaining balance of Contract Sum by approved MCR.

**ARTICLE 5**  
**PROGRESS PAYMENTS**

Based upon Applications for Payment submitted to the Design Professional by the Contractor and Certificates for Payment issued by the Design Professional, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided in the Contract Documents for the period ending the last day of the month as follows:

Not later than twenty-one (21) days following the end of the period covered by the Application for Payment of the portion of the Contract Sum properly allocable to labor, materials, and equipment incorporated in the Work and the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site or some other location agreed upon in writing for the period covered by the Application for Payment, less the aggregate of previous payments made by the Owner; less such amounts as the Design Professional shall determine for all incomplete Work and unsettled claims as provided in the Contract Documents.

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate provided by State statute regulating prompt payment.

## ARTICLE 6

### FINAL PAYMENT

Final payment, constituting the entire unpaid balance of the Contract Sum, shall be paid by the Owner to the Contractor within thirty (30) calendar days after notification of the Owner by the Design Professional that all incomplete and unacceptable work that was noted during the Substantial Completion Inspection and listed on the attachment to the Certificate of Substantial Completion has been corrected, and provided the Contract has been fully performed, a Certificate for Final Completion and final Certificate for Payment has been issued by the Design Professional; and the Contractor has provided to the Owner a certified statement of Release of Liens (AIA Document G706A or approved form) and Consent of Surety and such other documents required by the General Conditions.

## ARTICLE 7

### GENERAL AND SPECIAL PROVISIONS

**7.1** This document shall be executed in no less than four (4) counterparts, each of which shall be deemed an original.

**7.2** **Owner Provided Insurance.** See General Conditions for the Contract for Construction.

**7.3** This Agreement shall be governed exclusively by the provisions hereof and by the laws of the State of New Mexico as the same from time to time exist.

**7.4** Terms used in this Agreement which are defined in the Conditions of the Contract shall have the meanings designated in those Conditions.

**7.5** As between the parties to this Agreement: As to all acts or failures to act by either party to this Agreement, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the relevant Date of Substantial Completion of the Work; and as to any acts or failures to act occurring after the relevant Date of Substantial Completion, not later than the date of the Owner's approval of the Final Certificate of Payment.

**7.6** The Contractor shall hold harmless and indemnify the Owner against any and all injury, loss, or damage, including cost of defense - including but not limited to court costs and attorneys' fees - arising out of the negligent acts, errors, or omissions of the Contractor.

**7.7** This Agreement shall not become effective until signed by all parties required to sign this Agreement.

**7.8** The Contractor and his agents and employees are independent contractors and are not employees of the Owner. The Contractor and his agents and employees shall not accrue leave, retirement, insurance, bonding, use of Owner vehicles, or any other benefits afforded to employees of the Owner as a result of this Agreement.

**7.9** The Contractor, upon Final Payment of the amounts due under this Agreement, releases the Owner, his officers and employees from his liabilities and obligations arising from or under this Agreement, including but not limited to all damages, losses, costs, liability, and expenses, including but not limited to attorneys' fees and costs of litigation that the Contractor may incur.

**7.10** The Contractor agrees not to purport to bind the Owner or the State of New Mexico to any obligation not assumed herein by the Owner unless the Contractor has express written authority to do so, and then only within the strict limits of that authority.

**7.11 Notices.** All notices herein provided to be given, or which may be given, by either party to the other shall be deemed to have been fully given when made in writing and deposited in the United States mail postage prepaid, in the instance of Notice of Termination of Work, Certified Mail, Federal Express, or similar verifiable delivery method addressed as follows:

OWNER: ALBUQUERQUE PUBLIC SCHOOLS  
FACILITIES DESIGN &  
CONSTRUCTION  
ATTN: KAREN ALARID, DIRECTOR  
915 OAK STREET, SE  
ALBUQUERQUE, NM 87106

CONTRACTOR:

Nothing herein contained shall preclude the giving of any such written notice by personal service. The address to which notices shall be mailed to either party may be changed by written notice given by such party to the other as herein above provided.

**7.12 Gender, Singular/Plural.** Words of any gender used in this Agreement shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, unless the context requires otherwise.

**7.13 Captions and Section Headings.** The captions and section headings contained in this Agreement are for convenience of reference only, and in no way limit, define, or enlarge the terms, scope, and conditions of this Agreement.

**7.14 Certificates and Documents Incorporated.** All certificates and documentation required of the Contractor by the provisions of this Agreement shall be attached to this Agreement at the time of execution and are hereby incorporated by reference as though set forth in full in this Agreement to the extent they are consistent with its conditions and terms.

**7.15 Separability.** If any clause or provision of this Agreement is illegal, invalid, or unenforceable under present or future laws effective during the term of this Agreement, then and in that event it is the intention of the parties hereto that the remainder of this Agreement shall not be affected thereby.

**7.16 Waiver.** No provision of this Agreement shall be deemed to have been waived by either party unless such waiver be in writing signed by the party making the waiver and addressed to the other party; nor shall any custom or practice which may evolve between the parties in the administration of the terms hereof be construed to waive or lessen the right of either party to insist upon performance by the other party in strict accordance with the terms hereof. Further, the waiver by any party of a breach by the other party of any term, covenant, or condition hereof shall not operate as a waiver of any subsequent breach of the same or any other term, covenant, or condition thereof.

**7.17 Entire Agreement.** This Agreement represents the entire contract between the parties and, except as otherwise provided herein, may not be amended, changed, modified, or altered without the written consent of the parties hereto. This Agreement incorporates all of the conditions, agreements, and understandings between the parties concerning the subject matter of this Agreement, and all such conditions, understandings, and agreements have been merged into this written Agreement. No prior condition, agreement, or understanding, verbal or otherwise, of the parties or their agents shall be valid or enforceable unless embodied in this written Agreement.

**7.18 Interchangeable Terms.** For purposes of all provisions within this Agreement and all attachments hereto, the terms "Agreement" and "Contract" shall have the same meaning and shall be interchangeable.

**7.19 Words and Phrases.** Words, phrases, and abbreviations which have well-known technical or trade meanings used in the Contract Documents shall be used according to such recognized meanings. In the event of a conflict, the more stringent meaning shall govern.

**7.20 Relationship of Contract Documents.** The Contract Documents are complementary, and any requirement of one contract document shall be as binding as if required by all.

**7.21** Pursuant to Section 13-1-191, NMSA 1978, reference is hereby made to the Criminal Laws of New Mexico (including Sections 30-14-1, 30-24-2, and 30-41-1 through 3, NMSA 1978) which prohibit bribes, kickbacks, and gratuities, violation of which constitutes a felony. Further, the Procurement Code (Sections 13-1-28 through 13-1-199, NMSA 1978) imposes civil and criminal penalties for its violation.

**7.22** The Contract Documents, which constitute the entire Agreement between the Owner and the Contractor, are listed in Article 1 and, except for Modifications issued after execution of this Agreement, are enumerated in this Paragraph 7.22.

**7.22.1** The following documents bound in the Project Manual dated:

- Bid Form
- Agreement between Owner and Contractor
- Performance Bond
- Labor and Material Payment Bond
- Agent's Affidavit
- Certificate of Insurance
- Assignment of Antitrust Claims
- Notice of Intent to Award
- Notice of Award
- Notice to Proceed
- General Conditions

Supplementary Conditions  
Addenda and Modifications

**7.22.2 Specifications**

Specifications: Refer to **Exhibit A**, attached to this Agreement

**7.22.3 Drawings**

Drawings, dated \_\_\_\_\_ ; refer to **Exhibit B**, attached to this Agreement.

**7.22.5 Addenda**

No. _____	Description _____	Date _____
No. _____	Description _____	Date _____
No. _____	Description _____	Date _____
No. _____	Description _____	Date _____
No. _____	Description _____	Date _____
No. _____	Description _____	Date _____

**7.22.6 Exhibits**

- Exhibit A – Index to Technical Specifications
- Exhibit B – List of Drawings
- Exhibit C – Estimated Monthly Draw-down Schedule
- Exhibit D-1 – Modification/Change Request
- Exhibit D-2 – Change Order
- Exhibit E – Certificate of Substantial Completion
- Exhibit F – Certificate of Final Completion
- Exhibit G – APS Project Management System

**END OF ARTICLE 7**

Invitation to Bid No.: \_\_\_\_\_

APS Contract No.: \_\_\_\_\_

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**AGREED: This Agreement is entered into as of the day and year first written above.**

**CONTRACTOR** By: \_\_\_\_\_

Printed Name:

Title:

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

Federal Identification Number:

NM CRS Identification Number:

**OWNER:** By: \_\_\_\_\_

Printed Name: Karen Alarid

Title: Director, Facilities Design & Construction Date: \_\_\_\_\_

---







## Asbestos Roofing Consideration Letter DATA Charter High School Location No. 743

AC No. 8267

January 17, 2020

### Project:

This report is provided for the purposes of an asbestos roof consideration for FDC at DATA Charter High School.

Asbestos-Containing Materials (ACM), by definition, are any materials that contain greater than one percent (>1%) of any form of asbestos. Regulated Asbestos-Containing Material (RACM) is any ACM that is friable or may be made friable by the forces expected to be acted upon it during removal, transportation, or ultimate disposition.

### Building 01- Main Building

The following lists the asbestos-containing materials, non-asbestos containing materials and the non-suspect materials. *(A RED Font Depict Asbestos-Containing Materials)*

### Exterior Roof (M&O ER101)

#### Material Descriptions

- *Silver sealant (Around penetration/HVAC units) – Asbestos-Containing Material*
- *Black sealant (Around skylights/penetrations) – Asbestos Containing Material*
- *Gray flashing (Around skylights) – Asbestos Containing Material*

#### Material Descriptions

- Roof core – Non Asbestos-Containing Material

### Precautions:

The contractor shall be aware that asbestos abatement or any other related asbestos work is **not included** in this contract. This is for informational purposes only.

Additional Asbestos Considerations are as follows:

- All Regulated Asbestos-Containing Material (RACM) will be handled through the APS EMD.





**Asbestos Roofing Consideration Letter  
DATA Charter High School  
Location No. 743**

**AC No. 8267**

**January 17, 2020**

- b) As part of this report/inspection, you must be aware that there may be additional suspect friable materials not addressed in the initial inspection. If in the course of his/her work the contractor's personnel should encounter existing material of a suspicious nature which might possibly contain asbestos, certain precautions shall be taken: All work in the vicinity of the questionable material shall be stopped immediately. The Contractor shall notify the APS designated Inspector who will take samples and have laboratory analyses performed unless previously identified. If asbestos is found to be present, the Inspector will direct procedures to be followed. Under no circumstance is the Contractor to continue working on construction involving such suspicious or questionable materials.
- c) The Contractor is cautioned that the Inspector may not always be able to schedule the support work by APS or Contracted abatement qualified personnel as quickly as the Contractor would like to see it done. The Contractor shall be prepared to work on other areas of construction until such scheduled asbestos work by APS or Abatement Contractor is completed. Reasonable delays due to scheduling are to be anticipated and will not be justification for additional compensation to the Contractor.

Kelly Trujillo

Environmental Inspector  
Albuquerque Public Schools  
Environmental Management Department





**LABOR RELATIONS DIVISION**

401 Broadway NE  
Albuquerque, NM 87102  
Phone: 505-841-4400  
Fax: 505-841-4424

226 South Alameda Blvd  
Las Cruces, NM 88005  
Phone: 575-524-6195  
Fax: 575-524-6194

**WWW.DWS.STATE.NM.US**

1596 Pacheco St, Suite 103  
Santa Fe, NM 87505  
Phone: 505-827-6817  
Fax: 505-827-9676

**Wage Decision Approval Summary**

1) Project Title: Digital Arts & Technology Academy (DATA) Charter School- School Re-Roof  
Requested Date: 03/19/2020  
Approved Date: 03/19/2020  
Approved Wage Decision Number: BE-20-0573-B

**Wage Decision Expiration Date for Bids: 07/17/2020**

2) Physical Location of Jobsite for Project:  
Job Site Address: 1011 Lambertson Place NE  
Job Site City: Albuquerque  
Job Site County: Bernalillo

3) Contracting Agency Name (Department or Bureau): Albuquerque Public Schools  
Contracting Agency Contact's Name: Ben Harris  
Contracting Agency Contact's Phone: (505) 848-8708 Ext.

4) Estimated Contract Award Date: 06/01/2020

5) Estimated total project cost: \$1,200,000.00  
a. Are any federal funds involved?: No  
b. Does this project involve a building?: Yes - The school building will have the old, deteriorated built-up asphalt roof removed and replaced with a new TPO roof system.  
c. Is this part of a larger plan for construction on or appurtenant to the property that is subject to this project?: No  
d. Are there any other Public Works Wage Decisions related to this project?: No  
e. What is the ultimate purpose or functional use of the construction once it is completed?: To provide a new water-tight roof system over the entire school building.

6) Classifications of Construction:

<b>Classification Type and Cost Total</b>	<b>Description</b>
<b>General Building (B)</b> <b>Cost: \$1,200,000.00</b>	The school building will have the old, deteriorated built-up roof system removed and replaced with a new TPO roof system.



## PUBLIC WORKS PROJECT REQUIREMENTS

As a participant in a Public Works project valued at more than \$60,000 in the state of New Mexico, the following list addresses many of the responsibilities that are defined by statute or regulation to each project stakeholder.

### Contracting Agency

- Ensure that all contractors wishing to bid on a Public Works project when the project is \$60,000 or more are actively registered with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> (Contractor Registration) prior to bidding.
- Please submit Notice of Award (NOA) and Subcontractor List(s) to the PWAA website promptly after the project is awarded.
- Please update the Subcontractor List(s) on the PWAA website whenever changes occur.
- All sub-contractors and tiers (excluding professional services) regardless of contract amount must be listed on the Subcontractor List and must adhere to the Public Works Minimum Wage Act.
- Ninety days after project completion please go into the PWAA system and close the project. Only contracting agencies are allowed to close the project. Agents or contractors are not allowed to close projects.

### General Contractor

- Provide a complete Subcontractor List and Statements of Intent (SOI) to Pay Prevailing Wages for all contractors, regardless of amount of work, to the contracting agency within 3 (three) days of award.
- Ensure that all subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> prior to bidding when their bid will exceed \$60,000.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- Confirm the Wage Rate poster, provided in PWAA, is displayed at the job site in an easily accessible place.
- When the project has been completed, make sure the Affidavits of Wages Paid (AWP) are sent to the contracting agency.
- All subcontractors and tiers (excluding professional services) regardless of contract amount must pay prevailing wages, be listed on the Subcontractor List, and adhere to the Public Works Minimum Wage Act.



**LABOR RELATIONS DIVISION**  
121 Tijeras Ave NE, Suite 3000  
Albuquerque, NM 87102  
Phone: 505-841-4400  
Fax: 505-841-4424

**WWW.DWS.STATE.NM.US**

## **Subcontractor**

- Ensure that all subcontractors wishing to bid on a Public Works project have an active Contractor Registration with the Public Works and Apprenticeship Application (PWAA) website: <http://www.dws.state.nm.us/pwaa> prior to bidding when their bid will exceed \$60,000.
- Make certain the Public Works Apprentice and Training Act contributions are paid either to an approved Apprenticeship Program or to the Public Works Apprentice and Training Fund.
- All subcontractors and tiers (excluding professional services) regardless of contract amount must pay prevailing wages, be listed on the Subcontractor List, and adhere to the Public Works Minimum Wage Act.

## **Additional Information**

Reference material and forms may be found in the New Mexico Department of Workforce Solutions Public Works web pages at: <https://www.dws.state.nm.us/Labor-Relations/Labor-Information/Public-Works>.

## **CONTACT INFORMATION**

Contact the Labor Relations Division for any questions relating to Public Works projects by email at [public.works@state.nm.us](mailto:public.works@state.nm.us) or call (505) 841-4400.



## TYPE "B" – GENERAL BUILDING

Effective January 1, 2020

Trade Classification	Base Rate	Fringe Rate	Apprenticeship
<b>Asbestos Workers/Heat and Frost insulators</b>	32.26	12.06	0.60
<b>Asbestos Workers/Heat and Frost insulators-Los Alamos County</b>	34.69	12.06	0.60
<b>Boilermaker/ blacksmith</b>	34.97	28.85	0.60
<b>Bricklayer/Block layer/Stonemason</b>	24.46	8.81	0.60
<b>Carpenter/Lather</b>	24.63	11.24	0.60
<b>Carpenter-Los Alamos County</b>	27.80	13.19	0.60
<b>Millwright/ pile driver</b>	33.16	25.24	0.60
<b>Cement Mason</b>	21.07	10.33	0.60
<b>Electricians-Outside Classifications-Zone 1</b>			
Ground man	23.27	12.67	0.60
Equipment Operator	33.39	15.35	0.60
Lineman/Tech	39.28	16.91	0.60
Cable Splicer	43.21	17.95	0.60
<b>Electricians-Outside Classification: Zone 2</b>			
Ground man	23.27	12.67	0.60
Equipment Operator	33.39	15.35	0.60
Lineman/ technician	39.28	16.91	0.60
Cable Splicer	43.21	17.95	0.60



<b>Electricians-Outside Classifications: Los Alamos</b>			
Ground man	23.94	12.85	0.60
Equipment Operator	34.35	15.60	0.60
Lineman/ Technician	40.41	17.21	0.60
Cable Splicer	44.45	18.28	0.60
<b>Electricians-Inside Classifications: Zone 1</b>			
Wireman/ low voltage technician	32.70	11.18	0.60
Cable Splicer	35.97	11.28	0.60
<b>Electricians-Inside Classification: Zone 2</b>			
Wireman/ low voltage technician	35.64	11.27	0.60
Cable Splicer	38.91	11.37	0.60
<b>Electricians-Inside Classification: Zone 3</b>			
Wireman/ low voltage technician	37.61	11.33	0.60
Cable Splicer	40.88	11.43	0.60
<b>Electricians-Inside Classification: Zone 4</b>			
Wireman/ low voltage technician	41.20	11.44	0.60
Cable Splicer	44.47	11.53	0.60
<b>Electricians-Inside Classification: Los Alamos</b>			
Wireman/ low voltage technician	37.61	13.21	0.60
Cable Splicer	40.88	13.47	0.60
<b>Elevator Constructor</b>	43.80	35.25	0.60
<b>Elevator Constructor Helper</b>	35.04	35.25	0.60
<b>Glazier</b>			
Journeyman/ Fabricator	20.25	5.35	0.60



Delivery Driver	9.00	5.35	0.60
<b>Ironworker</b>	27.00	15.75	0.60
<b>Painter (Brush/Roller/Spray)</b>	17.00	6.88	0.60
<b>Paper Hanger</b>	17.00	6.88	0.60
<b>Drywall- Light Commercial &amp; Residential</b>			
Ames tool operator	25.08	7.10	0.60
Hand finisher/machine texture	24.08	7.10	0.60
<b>Plasterer</b>	23.17	8.99	0.60
<b>Plumber/Pipefitter</b>	30.76	11.62	0.60
<b>Roofer</b>	25.23	7.97	0.60
<b>Sheet metal worker</b>			
Zone 1	31.03	17.26	.60
Zone 2 – Industrial	32.03	17.26	.60
Zone 3 – Los Alamos	33.03	17.26	.60
<b>Soft Floor Layer</b>	19.94	17.26	0.60
<b>Sprinkler Fitter</b>	30.90	22.29	0.60
<b>Tile Setter</b>	24.46	8.81	0.60
<b>Tile Setter Helper/Finisher</b>	16.53	8.81	0.60
<b>Laborers</b>			
Group I- Unskilled and semi-skilled	17.50	6.27	0.60
Group II- Skilled	18.50	6.27	0.60
Group III- Specialty	20.75	6.27	0.60
<b>Masonry Laborers</b>			
Group I- Unskilled and Semi-Skilled	18.00	6.27	0.60
Group II- Skilled	19.75	6.27	0.60
Group III- Specialty	20.25	6.27	0.60
Reinforcing iron workers and post tension	24.00	6.27	0.60





<b>Operators</b>			
Group I	20.95	7.27	0.60
Group II	23.11	7.27	0.60
Group III	23.57	7.27	0.60
Group IV	24.01	7.27	0.60
Group V	24.20	7.27	0.60
Group VI	24.41	7.27	0.60
Group VII	24.52	7.27	0.60
Group VIII	27.56	7.27	0.60
Group IX	29.95	7.27	0.60
Group X	33.35	7.27	0.60
<b>Truck Drivers</b>			
Group I-VII	16.45	7.87	0.60
Group VIII	16.51	7.87	0.60
Group IX	18.45	7.87	0.60

**NOTE: All contractors are required to pay SUBSISTENCE, ZONE AND INCENTIVE PAY according to the particular trade. Details are located in a PDF attachment at [WWW.DWS.STATE.NM.US](http://WWW.DWS.STATE.NM.US). Search Labor Relations/Labor Information/Public Works/Prevailing Wage Rates.**

For more information about the Subsistence, Zone, and Incentive Pay rates, or to file a wage claim, contact the Labor Relations Division at (505) 841-4400 or visit us online at [www.dws.state.nm.us](http://www.dws.state.nm.us).

## ALBUQUERQUE PUBLIC SCHOOLS

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# General Conditions of the Contract for Construction

2008 Edition rev. 1

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## ARTICLE 1 GENERAL PROVISIONS

### 1.1 BASIC DEFINITIONS

#### 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and Addenda issued prior to execution of the Contract, and Modifications.

Modifications are (1) a written amendment to the Contract signed by Owner and Contractor, (2) Modification / Change Request hereinafter referred to as MCR approved by Owner, Contractor and Design Professional, (3) Change Order, or (4) a written order for a minor change in the Work, hereinafter referred to as Supplemental Instruction issued by the Design Professional. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as bidding requirements (advertisement or Invitation to Bid, Instructions to Bidders, sample forms, the Contractor's bid or portions of Addenda relating to bidding requirements).

#### 1.1.2 THE CONTRACT

The Contract Documents 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 (1) between the Design Professional and Contractor, (2) between the Owner and a Subcontractor, Material Supplier and Equipment Supplier, (3) between the Owner and Design Professional or (4) between any persons or entities other than the Owner and Contractor. The Design Professional shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Design Professional's duties.

**1.1.2.1** Each and every provision of law and clause required by law to be inserted in this Contract shall be read and enforced as though it were included herein; and if through error or otherwise any such provision is not inserted, or is not correctly inserted, then upon the written application of either party the Contract shall be amended without cost to make such insertion or correction and that the remainder of this Contract shall remain in effect and not be affected thereby.

**1.1.2.2** Counterparts: This Agreement may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such counterparts shall together constitute but one and the same instrument. Owner may retain a duplicate copy (e.g. electronic image, photocopy, facsimile) of this Agreement which shall be considered an equivalent to this original.

#### 1.1.3 THE WORK

The term "Work" means the construction and services required by or reasonably inferable from the Contract Documents, whether completed or partially completed, and includes all labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the results indicated by the Contract Documents in a safe, expeditious, orderly and workmanlike manner in keeping with current standards of the industry. The Work may constitute the whole or a part of the Project.

#### 1.1.4 THE PROJECT

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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.

#### **1.1.5 THE DRAWINGS**

The Drawings are the graphic and pictorial portions of the Contract Documents showing, the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

#### **1.1.6 THE SPECIFICATIONS**

The Specifications are the written requirements of the Contract Documents for products, materials, workmanship, and performance of related services.

#### **1.1.7 THE PROJECT MANUAL**

The Project Manual is the volume of written Construction Documents typically containing Bidding Requirements, contract forms, Conditions of the Contract and Specifications.

#### **1.1.8 PUNCH LIST**

A punch list is a comprehensive list of incomplete, defective or incorrect Work prepared by the Contractor, Design Professional or Owner to indicate Work required to be completed. Specific punch lists required by the Contract Documents include the Substantial Completion Punch List created by the Contractor prior to application for Substantial Completion in accordance with Paragraph 9.8, and that includes the Close-Out Punch List as required by Paragraph 9.10, and any other punch list created by the Owner or Design Professional for the purposes of this Paragraph and otherwise successful completion of the Work.

### **1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS**

**1.2.1** 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 one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

**1.2.2** Reasonably Inferable, as used in this Agreement, shall mean information or knowledge that is derivable or evident by prudent and diligent examination of the Contract Documents and other information reasonably available by the Contractor or Subcontractor knowledgeable in their field, and includes items:

1. specified in the Contract Documents required to complete the Work, but not graphically indicated. Contractor shall provide the minimum product or work necessary to fulfill the specifications or otherwise the requirements of any industry standards, such as, but not limited to, final function of Work such as strength, profile, or use as indicated by the Contract Documents; and,
  2. shown or graphically indicated as required to complete the Work but not specified. Contractor shall provide the minimum product or work necessary to complete the depicted Work,
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such as, but not limited to, final function of Work such as strength, profile, or use as indicated by the Contract Documents.

**1.2.3** Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings are for convenience of reference only and shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Such separation will not operate to make the Owner or Design Professional an arbiter of labor disputes or work agreements.

**1.2.4** Words shall be first interpreted within the context they are used and by definition, if any, provided by the Contract Documents themselves. Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in accordance with such recognized meanings. If the meaning of a word is not clear from the Contract Documents or have a well-known technical or construction industry meaning, the Webster's Collegiate Dictionary, current at time of contract, meaning shall apply.

### **1.2.5 INCONSISTENCIES**

In the event of conflicts in the Contract Documents, the most restrictive or otherwise most beneficial to the Owner shall apply to all similar conditions. Other rules for conflicts in the Contract Documents shall be that:

1. Addenda shall govern over all other Contract Documents and subsequent Addenda shall govern over prior Addenda only to the extent modified;
2. between drawings and specifications, the specifications shall govern;
3. within the drawings:
  - a) schedule, when identified as such, shall govern over notes or other directions included within the drawings.
  - b) specific note shall govern over general note.
  - c) note evidently intended to be used as a general or typical note, shall be used as such throughout.
  - d) dimensions provided shall take precedence over scaled measurements.
  - e) large scale drawings shall take precedence over smaller scale drawings; and
4. General Conditions shall govern over all sections of the Contract Documents, except as modified by Supplementary General Conditions or Addenda.
5. The Contractor shall comply with the provisions of Article 3.2 in providing notification of conflict within the Contract Documents, regardless of rules governing such conflicts and contained in this subparagraph.

### **1.3 CAPITALIZATION**

**1.3.1** Within the General Conditions, these terms are capitalized when they are used specifically in relations to the Agreement: Owner and Contractor who are parties to this Agreement, Design Professional who performs services under agreement with the Owner, Subcontractors who perform work under subcontract at any tier with the Contractor, the various Bidding and Contract Documents,



Project, Work, titles of numbered Articles and Paragraphs within the Contract Documents, and names used to identify parts of the Project. When these terms are used generically and not specifically associated with the Project, they are not capitalized.

#### **1.4 INTERPRETATION**

**1.4.1** In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

#### **1.5 EXECUTION OF CONTRACT DOCUMENTS**

**1.5.1** The Contract Documents shall be signed by the Owner and Contractor. If either the Owner or Contractor does not sign all the required documents of the Contract Documents, the Design Professional shall identify such unsigned documents.

**1.5.2** Execution of the Contract by the Contractor is representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

#### **1.6 OWNERSHIP AND USE OF DRAWINGS AND SPECIFICATIONS**

**1.6.1** Drawings, specifications and copies thereof shall remain the Owner's property. They are not to be used on another project. Neither the Contractor nor any Subcontractor, material supplier or equipment supplier or any person or entity shall own or claim a copyright to any Drawings, Specifications or any other documents prepared or developed for definition of the Work. The Owner will retain all common law, statutory and other reserved rights, in addition to the copyrights. The Contractor, Subcontractors, material suppliers and equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents for use in the execution of their Work under the Contract Documents. 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 Owner's copyrights or other reserved rights.

**1.7 Risk of Cost Increase:** Contractor understands and agrees that its bid took into account the possibility that prices for construction materials, labor, and other goods and services needed or used in completion of this project may increase or decrease during the course of performance of the contract. Contractor shall bear the risk of any such cost increases, and no increase or other adjustment in payment shall be made on account of such cost increases.

## **ARTICLE 2 OWNER**

### **2.1 GENERAL**

**2.1.1** The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a

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representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Subparagraph 4.2.1, the Design Professional does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

## **2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER**

**2.2.1** The Owner shall, at the written request of the Contractor, prior to commencement of the Work and thereafter, furnish to the Contractor reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Furnishing of such evidence shall be a condition precedent to commencement or continuation of the Work. After such evidence has been furnished, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

**2.2.2** Except for permits and fees, including those required under Subparagraph 3.7.1, which are the responsibility of the Contractor under the Contract Documents, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities that shall include utility expansion charges but, not tapping fees.

**2.2.3** The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner, but shall exercise proper precautions relating to the safe performance of the Work.

**2.2.4** Unless stated otherwise in the Contract Documents, the Owner shall furnish in accordance with Article 6 specific testing, adjusting and compliance monitoring and explicitly:

1. geotechnical testing and analysis including soil testing and compaction, but excluding load testing for caissons and piers; and,
2. concrete testing including slump analysis and compression testing with, at the Owner's request, the Contractor responsible for forming test cylinders or similar; and
3. testing and balancing of heating and air-conditioning systems with the Contractor responsible for timely, diligent and coordinated corrections to Work required until performance is compliant with the Contract Documents.

The Contractor shall be responsible for testing and costs as defined by Paragraph 13.5 and Subparagraph 12.2.1.1.

**2.2.5** Information or services required of the Owner by the Contract Documents shall be furnished by the Owner with reasonable promptness. Any other information or services relevant to the Contractor's performance of the Work, under the Owner's control, shall be furnished by the Owner after receipt from the Contractor of a written request for such information or services.





**2.2.6** Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, five (5) copies of Drawings and Project Manuals; however, the Contractor may have more copies free of charge if they are available without additional cost to the Owner.

### **2.3 OWNER'S RIGHT TO STOP THE WORK**

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

### **2.4 OWNER'S RIGHT TO CARRY OUT THE WORK**

**2.4.1** If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven (7) day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may after such seven (7) day period, without prejudice to other remedies that the Owner may have, correct such deficiencies. In such case, an appropriate Modification in accordance with Article 7 shall be issued deducting from payments then or thereafter due the Contractor for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Design Professional's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

**2.4.2** If in the event that the Contractor defaults or neglects to carry out the Work to final completion in keeping with the Substantial Completion Schedule provided in accordance with Subparagraph 9.8.2 and, fails within a seven (7) day period after receipt of written notice from the Owner to correct such default with diligence and promptness, the Owner may after such seven (7) day period, without prejudice to other remedies, correct Punch List and Close-Out deficiencies to achieve project completion without further notice to the Contractor or its surety. In such case, an appropriate Modification in accordance with Article 7 shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Design Professional's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

**2.4.3** In carrying out the Owner's right to complete the Work in accordance with Paragraph 2.4, the Owner shall have the right to exercise the Owner's sole discretion as to the manner, methods and reasonableness of costs of completing the Work.

## **ARTICLE 3 CONTRACTOR**

### **3.1 GENERAL**

**3.1.1** The Contractor is the person or entity identified as such in the Agreement and is referred to



throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative.

**3.1.1.1 Independent Contractor:** In performing the Work, Contractor is acting and shall be deemed for all purposes to be an independent contractor. Owner and Contractor are not partners, agents or joint venturers with each other, and this Agreement is not intended to nor shall it be construed to create a partnership, joint venture, or agency relationship between Owner and Contractor. Contractor shall complete the Work according to Contractor's own means and methods of work, which shall be in the exclusive charge and control of Contractor, and which shall not be subject to the control and supervision of Owner, except as to the results of the Work. Contractor shall be entirely and solely responsible for its acts and the acts of its employees, subcontractors and agents while engaged in the performance of the Work. Contractor, its employees, subcontractors and agents shall not hold themselves out as employees or agents of Owner. Contractor and its employees are hereby expressly precluded from and not entitled to any employee benefits from Owner.

**3.1.2** The Contractor shall perform the Work in accordance with the Contract Documents.

**3.1.3** 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 Design Professional in the Design Professional's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than Contractor.

**3.1.4** The Contractor shall, prior to bid, be properly licensed according to the requirements of the Construction Industries Licensing Act, Chapter 60, and Article 13 NMSA 1978 and shall ensure to the Owner that such license shall remain in effect for the duration of the Work and warranty periods.

**3.1.5 Debarred or Suspended Contractors:** A business (Contractor, Subcontractor, or supplier) that has either been debarred or suspended pursuant to the requirements of Sections 13-1-177 through 13-1-180, and 13-4-11 through 13-4-17, NMSA 1978, shall not be permitted to do business with the Owner and shall not be considered for award of contract during the period for which it is debarred or suspended.

**3.1.6 Bribes, Gratuities and Kickbacks**

**3.1.6.1** It is illegal in the State of New Mexico for any public employee to solicit or accept anything of value in connection with award of contract for this Bid and for any person to offer or pay anything of value to any such public employee (30-24-1 and 30-24-2, NMSA 1978).

**3.1.6.2** Pursuant to Section 13-1-191, NMSA 1978, reference is hereby made to the Criminal Laws of New Mexico (including 30-24-1, 30-24-2, and 30-41-1 through 30-41-3, NMSA 1978), which prohibit bribes, kickbacks, and gratuities, and violation of which constitutes a felony. Further, the Procurement code (13-1-28 through 13-1-199, NMSA 1978) imposes civil and criminal penalties for its violation.



**3.1.7 Assignment of Antitrust Claims**

**3.1.7.1** The Contractor agrees that any and all claims that the Contractor may have or that may inure to the Contractor for overcharges resulting from antitrust violations as to goods, services, and materials purchased in connection with this Bid are hereby assigned to the Owner, but only to the extent that such overcharges are passed on to the Owner. The Contractor further agrees to require each of its Subcontractors and suppliers to assign any and all such claims for overcharges to the Owner by executing an assignment on the form provided by the Owner for such purpose. The executed forms (see Section 00 4000 of the Bid Documents) shall be submitted prior to the commencement of the Work or the supplying of any materials by the supplier or Subcontractor. The submission of this executed form may be waived by the Owner upon a showing of a good-faith effort by the Contractor to obtain agreement in writing from its supplier or Subcontractor. Waiver by the Owner will not unreasonably be denied.

**3.1.7.2** It is agreed that the Contractor retains all rights to any such antitrust claims to the extent of any overcharges not passed on to the Owner, including the right to any treble damages attributable thereto.

**3.1.8 Contracts with Nonresident Persons or Partnerships or Un-admitted Foreign Corporations; Agent for Service of Process**

Contractor agrees to the requirements of Sections 13-4-21 through 13-4-24, NMSA 1978, whereby a public works contract with a nonresident person or partnership or foreign corporation not authorized to do business in the State shall contain a specific provision designating an agent resident within the State, and his address, upon whom process and writs in any action or proceeding against such business may be served in any action arising out of such contract.

**3.1.9 Project Management Software:** Contractor shall purchase one or more seat licenses, as needed for contractor and each participating subcontractor, of APS's project management software, as needed to manage information and communicate with the project team. APS will provide training in the use of the project management software.

**3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR**

**3.2.1** 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 Subparagraph 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating construction by the Contractor and for the purpose of discovering errors, omissions in the Contract Documents; any errors, inconsistencies or omissions discovered by the Contractor shall be reported promptly in writing to the Design Professional as a Request for Interpretation in accordance with Subparagraph 3.2.4.



**3.2.1.1** Before ordering any materials or proceeding with Work, the Contractor and Subcontractors shall verify measurements at the Work site and shall be responsible for the correctness of such measurements.

**3.2.2** Any design errors or omissions noted by the Contractor during this review shall be reported promptly in writing to the Owner and to the Design Professional, 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 suspected non conformity discovered by or made known to the Contractor shall be reported promptly in writing to the Owner and to the Design Professional. If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Design Professional and Owner, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

**3.2.3** If the Contractor believes that additional cost or time is involved because of clarifications or instructions issued by the Design Professional in response to the Request for Interpretation pursuant to Subparagraphs 3.2.1 and 3.2.1.1, the Contractor shall make Claims as provided in Subparagraphs 4.3.6 and 4.3.7. If the Contractor fails to perform the obligations of Subparagraphs 3.2.1 and 3.2.1.1, the Contractor shall pay such costs and damages resulting from errors, inconsistencies or omissions in the Contract Documents or for differences between field measurements or conditions and the Contract Documents as would have been avoided if the Contractor had performed such obligations.

#### **3.2.4 REQUEST FOR INTERPRETATION**

**3.2.4.1** Any question concerning a variation or deviation from the Contract Documents, including a minor change in the Work found necessary due to actual field conditions, shall be submitted to the Design Professional as a Request for Interpretation (RFI) for review and resolution before proceeding with the Work. When submitting an RFI, the Contractor must provide all information necessary for the Design Professional to promptly process, including detailed:

1. reference(s) to Specification number, Drawing page and detail, and the like;
2. description of issue;
3. drawings, photos or sketches of conditions, if necessary; and,
4. submittals or other information as necessary to facilitate resolution.

**3.2.4.2** Request for Interpretation may be initiated only by the Contractor and shall be answered by Design Professional within **ten (10) days**, or other reasonable time agreed upon between the parties. All Subcontractor RFI's must be initiated through the Contractor. All answers to RFI's by the Design Professional's consultants or Owner must be initiated through the Design Professional.

**3.2.4.3** If substitutions are allowed after the contract award, RFI shall not be used for any substitution request (see Subparagraph 3.4.2).



### 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

**3.3.1** 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, unless the Contract Documents give other specific instructions concerning these matters. 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, the Contractor shall give timely written notice to the Owner and Design Professional and shall not proceed with that portion of the Work without further written instructions from the Design Professional with concurrence from the Owner. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage not due to negligence of the Contractor, its employees, subcontractors or their agents or employees. This paragraph shall not be deemed to create a duty on the part of the Design Professional or the Owner to the Contractor, Subcontractor or their employees to monitor for jobsite safety.

**3.3.2** 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.

**3.3.3** 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.

### 3.4 LABOR AND MATERIALS

**3.4.1** Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, 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 in the Work.

**3.4.2** The Contractor may request substitution of material only if:

1. allowed after the contract award;
2. all supporting information has been evaluated and approved by the Contractor;
3. includes a detailed itemized comparison of the proposed substitution with the specified product;
4. acceptance does not include substantial revision of Contract Documents, unless Contractor agrees to reimburse the Owner for those costs; and,
5. substitution request is submitted as a formal MCR, with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order.



**3.4.3** 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.

**3.4.4** Drug and Alcohol Policy: During the term of the Agreement, Contractor is required to have in place and comply with a Drug and Alcohol policy that meets or exceeds the requirements and procedures contained in all applicable laws. Contractor shall provide a work environment that is free from the use, consumption, possession, sale or distribution of illegal drugs and alcohol and from the misuse of legal drugs on this project. Employees must be fit for duty and not be under the influence of illegal drugs, alcohol or controlled substances (without a valid prescription for the controlled substances) when employees are present for duty and at all times while performing the Work on this project. At a minimum, Contractor's policy shall include: reasonable testing procedures, full compliance with all Department of Transportation requirements for covered functions, including FMCSA (CDL) employees, where applicable, and compliance with all other applicable laws, regulations and decrees. Further, Contractor is responsible for testing and other related costs, and for providing all required reports to any government agency. Contractor shall require that all of its subcontractors adhere to and comply with the Drug and Alcohol Policy.

### **3.5 WARRANTY**

**3.5.1** The Contractor warrants to the Owner and Design Professional that materials and equipment furnished under the Contract will be of good quality and new, unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance and improper operation, or normal wear and tear and normal usage. If required by the Design Professional, the Contractor shall furnish satisfactory evidence as to kind and quality of materials and equipment.

### **3.6 TAXES**

#### **3.6.1 Gross Receipts Tax (GRT)**

**3.6.1.1** Section 7-10-4, NMSA 1978 provides that any person (as defined in Section 7-10-3, NMSA 1978) performing services for the State, as those terms are used in the Gross Receipts Tax Registration Act (Chapter 7, Article 10, NMSA 1978), must be registered and be issued an identification number with the Taxation and Revenue Department to pay the GRT.

**3.6.1.2** The identification number is needed to properly complete the approval process of the Contract; therefore, so as to cause no delay in the processing, the Contractor must register with the Department. For information:

Taxation and Revenue Department  
P.O. Box 630  
Santa Fe, New Mexico 87504-0630  
TELEPHONE; (505) 827-0700



TRD Website: [www.state.nm.us/tax/](http://www.state.nm.us/tax/)

or, TRD District Office in Albuquerque, Farmington, Las Cruces, Santa Fe or Roswell.

**3.6.1.3** The Contractor shall pay New Mexico Gross Receipts and other applicable taxes specific for the Work provided by the Contractor which are legally enacted when bids are received or negotiations concluded.

**3.6.1.4** If any person who performs services for the Owner is not registered to pay the gross receipt tax, the Owner shall withhold payment of the amount due until the person has presented evidence of registration with the Revenue Division to pay the GRT.

**3.6.1.5** Taxes. Contractor shall pay all taxes and contributions for unemployment insurance, old age retirement benefits, pensions, annuities, and similar benefits, which may now or thereafter be employed by Contractor for performance of the Work. Contractor shall be liable for and shall pay and shall indemnify, defend, and hold Owner harmless from all such taxes and contributions and any interest accrued and penalties imposed, and reasonable attorney fees and all taxes (including but not limited to, income, withholding, gross receipts, compensating, use and all other taxes of whatsoever kind and whatsoever nature), excises, assessments, and other charges levied by any governmental agency or authority on or because of the Work, or on any materials, equipment, services, or supplies furnished in the performance of the Work. On all invoices or progress payment invoices, Contractor shall separately show all New Mexico gross receipts, compensating, sales, and other similar taxes charged to Owner, provided that in no event shall interest or penalties on such taxes be reimbursable by Owner. Contractor shall utilize appropriate New Mexico Nontaxable Transaction Certificates, or similar certificates from other states, where applicable, to minimize such gross receipts, compensating, sales and other similar taxes.

**3.6.2 Nonresident Contractor's Requirements for Gross Receipts Tax Surety Bond**

**3.6.2.1** Section 7-1-55A, NMSA 1978 provides that any person (as defined in Section 7-1-3, NMSA 1978) engaged in the construction business who does not have his principal place of business in New Mexico and enters into a prime construction contract to be performed in this State shall, at the time such contract is entered into, furnish the Taxation and Revenue Department with a surety bond or other acceptable security in a sum equivalent to the GRT to be paid under the contract multiplied by the applicable rate of the GRT imposed by Section 7-9-4, NMSA 1978 to secure payment of the tax imposed on the gross receipts from the Contract. He shall obtain a certificate from the Taxation and Revenue Department that the requirements of this paragraph have been met.

**3.6.2.2** If the total sum to be paid under the Contract is changed by ten percent (10%) or more after the date the surety bond or other acceptable security is furnished to the Director or his delegate, such person shall increase or decrease, as the case may be, the amount of the bond or security within **fourteen (14) days** after the change (7-1-55B, NMSA 1978).



**3.6.2.3** In addition to the above requirements, the Contractor will be subject to all the requirements of Section 7-1-55, NMSA 1978.

### **3.7 PERMITS, FEES AND NOTICES**

**3.7.1** Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the Building Permit, Building Permit Planchecking Fees, Fugitive Dust Control Construction Permit, Storm Water Pollution Prevention Plan, and other permits and governmental fees, licenses and inspections and Certificate of Occupancy necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received, negotiations concluded, and facilities occupied. Changes or modifications to the work shall include all requirements of this paragraph.

**3.7.2** The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities applicable to performance of the Work. Certificates of Inspection, use and occupancy will be delivered to the Owner upon completion of the Work in sufficient time for occupation of the facility in accordance with the approved schedule for the Work. Contractor shall deliver a photocopy of the Building Permit to the Design Professional and Owner as soon as it is obtained.

### **3.8 ALLOWANCES**

**3.8.1** The Contractor shall include in the Contract Sum all allowances stated in the Contract Document. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

**3.8.2** Unless otherwise provided in the Contract Documents:

1. allowances shall cover the cost of the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts.
2. Contractor's costs for unloading and handling at the site, labor, installation costs, overhead profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances;
3. whenever costs are more than or less than allowances, the contract Sum shall be adjusted accordingly by appropriate modification in accordance with Article 7. The amount of the Change Order shall reflect:
  - a) the difference between actual costs and the allowances under Clause 3.8.2.11; and,
  - b) changes in Contractor's under Clause 3.8.2.2.

**3.8.3** Materials and equipment under an allowance shall be selected by the Owner in sufficient time to avoid delay in Work.

### **3.9 SUPERINTENDENT**

**3.9.1** The Contractor shall employ a competent Superintendent, who is acceptable to the Owner, and





necessary assistants who shall be in attendance at the Project site during performance of the Work. The Superintendent shall represent the Contractor, and communication given to the Superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

**3.9.2** Within **ten (10) days after Notice of Award** and commencement of the Work, the Contractor shall submit to the Design Professional, for the Owner's consideration for approval, a resume and Statement of Qualification of proposed Superintendent(s) and assistants. During construction, the Contractor shall replace individuals who are no longer acceptable to the Owner and shall submit a resume and Statement of Qualification for proposed replacements.

### **3.10 CONTRACTOR'S SCHEDULES, LOGS, MEETINGS AND REPORTS**

**3.10.1** The Contractor, promptly after being awarded the Contract and before the first payment application, shall prepare and submit for the Owner's and Design Professional's information a Critical Path Construction Schedule for the Work that indicates the intended start and completion of the various construction activities, which shall be implemented and adhered to by the Contractor, Subcontractors, material suppliers and equipment suppliers. At a minimum, the schedule shall be a GANTT type schedule and shall not exceed time limits allowed by the Contract Documents with no fewer work breakdown events than line items of the Schedule of Values. The Schedule will incorporate and make provisions for significant known Owner activities, holidays and other special occasions. The Contractor will acknowledge that a reduction in activity may be necessary during the time prior to and during periods of special Owner events or occasions. The schedule shall be revised to indicate Work complete before each payment application and at appropriate intervals as required by the conditions of the Work and progress of the Work. The revised schedule shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work including, but not limited to time recovery strategies and Recovery Plan, if progress of the Work is behind schedule.

**3.10.1.1** The Contractor shall perform the Work in general accordance with the most recent schedule submitted to the Owner and Design Professional.

**3.10.2** The Contractor shall prepare before the second payment application and keep current, for the Design Professional's approval, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Design Professional **fourteen (14) days**, or as otherwise agreed between the parties, to review submittals. A Submittal Log shall be maintained by the Contractor indicating for each scheduled submittal, the appropriate specification number, the date of submission, the date of approval and any re-submittals.

**3.10.3 Bi-Weekly Meeting:** Prior to the start of Work on the site and in no event later than the first payment application, the Contractor shall establish a bi-weekly meeting time with the Owner and Design Professional and shall establish an agenda for the meeting. Contractor shall host the weekly job site meeting and shall maintain meeting minutes and distribute such notes to all parties in attendance and to those requested at the next meeting within **three (3) days** of the meeting. The meetings shall include but not be limited to:



1. adoption of previous meeting's meeting notes that include list of attendees;
2. new business;
3. old business;
4. items requiring action with those assigned to action and expected action date;
5. outstanding RFI's;
6. outstanding submittals; and,
7. other business including review of Progress Report or Payment Application if appropriate.

Meetings shall be open forum, chaired by the Contractor and shall include any Subcontractors doing work or anticipating work in the near future or for any other reason, Owner, any entities that the Owner would like to attend, including User Representative or users of completed project, Design Professional, any consultant(s) to the Design Professional who have or will have any work under way associated with the consultant's specialty. The Contractor shall alert the Owner and Design Professional as to which consultants are requested to attend the next meeting and include request in the meeting minutes. Phone or web conferencing may be used if effective in the opinion of the Owner.

**3.10.3.1 Progress Report:** Each month, at the regularly scheduled weekly meeting that is just prior to the Contractor submitting the Payment Application for that month; the Contractor shall present a Progress Report. The Contractor prepared Progress Report shall review the Project Schedule, review the Schedule Recovery Plan if necessary, and review the Three-Week-Look-Ahead Schedule.

**3.10.3.2** The Contractor prepared Three-Week-Look-Ahead Schedule shall include specific details of Work expected to be accomplished three weeks into the future, identify critical path Work to be completed, and identify potential obstacles including RFIs, submittals, material deliveries, utility hook-ups or any other event or task that might hinder the progress of the Work.

**3.10.4 Emergency Contact List:** The Contractor shall at the first weekly meeting, deliver to the Owner and the Design Professional an Emergency Contact List that will include emergency contacts for every company that has worked or will do work on the Project. List shall include company, main office number, after hours office number(s); and, both a primary and secondary contact name, cell number and home number. The Contractor shall keep the Emergency Contact List current and distribute the most current version to Owner and Design Professional.

**3.10.5 Daily Report:** The Contractor shall prepare a Daily Report each day that Contractor, Subcontractors or any other entity are on the Project. The Daily Reports shall be maintained at the site, be well organized and include:

1. report date and who prepared the report;
2. weather conditions - low temp, high temp, visibility, humidity, wind, wind direction, cloud conditions, precipitation amount, other notes;
3. companies present by name and their - number of workers, work location, total man hours that day for each company;
4. equipment - type, source, units of work done, location of work, hour meter reading;
5. material brought to site - description, units, quantity, quality, location, time;
6. visitors to site - name, company, time;



7. safety concerns - company, contact, noticed by, work activity, safety issue, requirement, outcome; and,
8. quality assurance and control - company, description of issue, specification section, issued by.

### **3.11 DOCUMENTS AND SAMPLES AT THE SITE**

**3.11.1** The Contractor shall maintain at the site for the Owner, one record copy of the As-built Drawings, Specifications, Addenda, Modification / Change Requests, and other Modifications, in good order and marked currently to record field changes and selections made during construction, as well as, one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals, and Meeting Notes and Daily Job Reports. These shall be available to the Design Professional and the Owner and shall be delivered to the Design Professional for submittal to the Owner upon completion of the Work. Information maintained in PSFA-CIMS in accordance with Subparagraph 4.2.4.1 with web access at the site shall be considered "at the site".

### **3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

**3.12.1** Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor for a Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

**3.12.2** Product Data are 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.

**3.12.3** Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

**3.12.4** Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Design Professional is subject to the limitations of Subparagraph 4.2.7. Informational submittals upon which the Design Professional is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned without action.

**3.12.4.1** Shop Drawings, Product Data, Samples and similar shall not be submitted on a "piece meal" basis and shall be submitted in packages, in accordance with the Construction Documents, so that like or interrelated submittals, that must be compared or correlated one to another, are submitted together. Submittals not submitted as a package so that they may be compared one to another for approval or other action shall be returned to the Contractor without review but, with explanation by the Design Professional as why and what is required when re-submitted. For example, finish materials such as tile, carpet, wall covering and paint shall be submitted as a package.



**3.12.4.2** If substitutions are allowed after the contract award, a submittal shall not be used for any substitution request (see Subparagraph 3.4.2).

**3.12.5** The Contractor shall review for compliance with the Contract Documents, approve and submit to the Design Professional Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Design Professional without action.

**3.12.6** By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

**3.12.7** The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Design Professional and, if required, by the Jurisdiction Having Authority.

**3.12.8** The Work shall be in accordance with approved submittals, except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Design Professional's approval of Shop Drawings, Product Data, Samples or similar submittals, unless the Contractor has substitution approved in accordance with Subparagraph 3.4.2, or unless the Contractor informed the Design Professional in writing of such deviation at the time of submittal and the Design Professional has given written approval to the specific deviation as a minor change as a Supplemental Instruction. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Design Professional's approval thereof.

**3.12.9** The Contractor shall direct specific attention, in writing on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Design Professional on previous submittals. In the absence of such written notice the Design Professional's approval of a resubmission shall not apply to such revisions.

**3.12.10** The Contractor shall not be required to provide professional services which constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a Design Professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Design Professional will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be



provided by a properly licensed Design Professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. The Owner and the Design Professional shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such Design Professionals, provided the Owner and Design Professional have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Subparagraph 3.12.10, the Design Professional will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

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

### **3.13 USE OF SITE**

**3.13.1** The Owner assumes no responsibility or liability for the physical conditions or safety of the Work site or for any improvements located on the Work site. The Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment to either the Contract Sum or Contract Time concerning any failure by the Contractor or Subcontractor to comply with the requirements of this Paragraph 3.13.

**3.13.2** The Contractor will bear the cost and make the necessary arrangements and provisions for all construction water required during the entire construction period through the Owner or otherwise.

**3.13.3** The Contractor will bear the cost and make the necessary arrangements and provisions for all construction electricity including distribution required during the entire construction period through the Owner or otherwise.

**3.13.4** The Contractor will bear the cost and be responsible for temporary lighting, heating and cooling for the entire project.

**Exception:** If available and at no premium cost to the Owner, the Owner will at no cost to the Contractor, allow the Contractor to utilize the Owner's existing lighting, heating and cooling providing Contractor will return systems to like or better condition that shall include, but not be limited to, new lamping, new filters, and the like.

**3.13.5** Any temporary utility or other work done by the Contractor to accommodate Work requirements shall be removed at the conclusion of the Work and all finishes shall be repaired to match the existing, or in the areas of new construction, equal to or exceeding the requirements of the Contract Documents.

**3.13.6** The Contractor shall request in writing any utility shut downs well in advance of necessity of any shut down and shall not proceed with any shut down without prior Owner approval. The Owner shall not be required to make any adjustment to either the Contract Sum or Contract Time concerning any failure by the Contractor or Subcontractor to comply with the requirements of this Subparagraph 3.13.6.



**3.13.7** The Contractor shall provide and maintain a suitable temporary main field office at the Project site. The Office may be in, or a part of, the existing facility, provided that prior approval is obtained from the Owner. The Contractor will move or remove their office from the existing facility at the request of the Owner.

**3.13.8** The Contractor may, if space is available, allow Subcontractors, material suppliers and equipment suppliers to provide and maintain field offices or storage trailers on the Project site for their own use. Locations and size of any office or storage trailers shall be as approved by the Contractor and Owner prior to their placement on site. The Owner or Contractor may at any time require any temporary building or trailer to be moved or removed

**3.13.9** The Contractor shall conduct and confine operations at the site to areas as permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

**3.13.10** All project related vehicles either company or personal vehicles may park on-site only in areas designated by the Owner and Design Professional. Parking will only be provided to the extent space on site will allow. All Contractors' parking must be well removed from normal facility traffic, and especially away from any pedestrian crossings, walkways, or drop off or loading areas.

**3.13.11** All Contractor access to the Project site shall be by a designated construction entrance as directed by the contract documents, the Design Professional and the Owner, and shall be enforced by the Contractor.

**3.13.12** Access to existing facility work areas, either occupied or not occupied, shall be controlled by the Owner. Every effort will be made by the Contractor to cooperate with the Owner's security requirements and policies. Access to a work area must be in accordance with the times and conditions scheduled and agreed to by all parties. Any access, other than at normally scheduled work times, must be coordinated with the Owner or Owner's appointee at least 48 hours in advance. The Owner has the right to restrict or limit access as necessary to meet their needs, especially in regard to security and safety. Each Contractor, Subcontractor, or supplier's full cooperation is required.

**3.13.13** The Project working hours shall be those established by the Contract Documents and as agreed by the Owner. Any changes in project working hours such as adding shift work, extending work day hours or other similar changes must be submitted least forty-eight (48) hours in advance to the Owner for consideration.

**3.13.14** Contractor shall make every effort to minimize disruptions such as noise or dust and shall provide safe access and egress to the Owner's operations, facility, portion of facility, or surrounding areas, including, but not limited to neighborhood or community, and shall, to inform and gain approval from the Owner of planned work, prepare and present to the Owner and Design Professional for Owner approval prior to beginning construction or using the site a:

1. schedule for the work, to include Phasing Plans, proposed hours of operations, and activities to take place on weekends, school holidays and/or other special access requirements;
2. site logistics plan, showing proposed secure and fenced areas, locations and types of temporary barricades, material storage and staging areas, school property entrances used for



material deliveries, and special material or equipment storage requirements. This plan will include a description and proposed location for the Contractor's temporary office, storage trailers, Subcontractor's trailers, sanitary facilities, employee parking areas, etc.;

3. detailed construction and phasing plan, to include locations of proposed temporary dust or noise partitions, alternate emergency egress routes, temporary facilities, means and path of moving materials and equipment into the facility, and provisions for maintaining and supplying required utility services; and,

4. routing plan to maintain safe ingress and egress to all areas at all times for students, staff and public either nearby or within the Project site that shall include re-routing pedestrian ways, re-routing traffic, erect routing signs, building of bridges, barricades, pedestrian tunnels, or whatever effort that will best accommodate Owner operations and provide required protection while work is in progress ensuring that no entrances or exits are blocked, closed off, or restricted in any way unless prior approval is granted by the Owner and the Fire Marshall or other jurisdiction having authority.

**3.13.15** Contractor shall ensure that any and all of the Contractor's flammable liquids are stored outside of the building, and transported in approved containers. Paint, paint thinners, gasoline, oil, roofing materials or other flammable materials shall be stored fifty (50) feet, or more, outside of all buildings, marked as to contents and properly protected. The Contractor shall not pour flammable or toxic solvents, thinners, etc., into drains and sewers.

**3.13.16** Whenever electric light for illumination purposes is found necessary for the safe progress of the work, the Contractor shall provide such lights as may be required to properly execute the work. This temporary lighting shall be constructed and arranged as not to interfere with the progress of other trades or Contractors working in the facility. This system of temporary lighting shall be erected and maintained strictly in accordance with the controlling codes and OSHA standards. The Contractor shall furnish all bulbs and temporary lighting devices required to carry on the work for all Trades under their Contract.

**3.13.17** In accordance with Paragraphs 3.15, 6.3, 10.2 and others of the General Conditions, the Contractor shall be responsible for the daily removal and disposal of all rubbish, debris and trash from the site and building which results from Work. The Contractor shall provide a dumpster, or other trash removal facility, for use by their Subcontractors and all rubbish, debris and trash shall be deposited in Contractor provided containers located at an approved location on the site. There shall be no burning of trash or other open fires on the site. If in the opinion of the Owner neatness is not maintained, the Owner may following appropriate notice to the Contractor, have the area cleaned and withhold cost from any amounts owing to Contractor.

**3.13.18** The Contractor shall, at the completion of Work in a given area, expeditiously remove all surplus material, equipment, and debris of every nature resulting from their operations, and put the areas in a neat, clean, and orderly condition. At Final Completion of the Project or an area of the Project, the Contractor shall final clean from top to bottom inside and out everything to the Owner's satisfaction that including plumbing fixtures, equipment, windows, floors, walls, light fixtures and the like in accordance with Paragraph 3.15 of the General Conditions.

**3.13.19** The Contractor shall in accordance with Article 10, afford protection to all adjacent areas, buildings, roads, walks, and all other property adjacent to their work. Any portion of a building or



other property damaged during construction operations shall be promptly, properly and thoroughly repaired and replaced without cost to the Owner.

**3.13.20** Contractor shall maintain a safety plan that includes how the Contractor proposes to meet all OSHA and related requirements, details on safety equipment to be utilized, how the potential for fire and other potential hazards will be addressed, welding and cutting procedures and, how the Contractor will maintain safety related systems such as fire alarms, intercoms, and sprinklers while the Work is proceeding in accordance with Paragraph 3.3 and other parts of the General Conditions.

**3.13.21 Jobsite Requirements Pertaining to Personnel:**

1. All personnel on site, directly or indirectly in the employ of Contractor, are restricted from any interaction with any Owner Staff, Students, or other members of the public while on, or adjacent to Owner property except through jobsite meetings in accordance with Subparagraph 3.10.3 or as otherwise determined by the Owner;
2. shall remain in their designated work areas. Communications with any non-project related persons on or near the site shall be through project Superintendent;
3. no firearms or any other types of weapons, of any sort will be allowed on site. If any person is found to be in possession of any Firearm, of any kind, they will be directed to leave immediately and will not be allowed to return. This includes any firearms found in Company or Private vehicles, tool boxes or brought on site in any other manner;
4. it is the policy of the Owner to prohibit smoking on any occupied school campus and on a new, un-occupied, site to limit smoking to designated areas;
5. it is the policy of the Owner to prohibit use, possession, sale, and distribution of alcohol, drugs, or other controlled substances on its premises and to prohibit the presence of an individual with such substances in their body from the workplace, the Contractor shall enforce this policy; and,
6. Contractor agrees that any employee who is found in violation of requirements of this Paragraph, or of the Contract Documents, or who refuses to permit inspection shall be barred from the Project site at the discretion of the Owner in accordance with Subparagraph 13.8.4.1.

**3.14 CUTTING AND PATCHING**

**3.14.1** The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

**3.14.1.1** Cutting and patching shall be done by individuals skilled in working the materials involved so to prevent a reduction of visual qualities or resulting in substantial evidence of the cut-and-patch work.

**3.14.2** The Contractor shall not damage or endanger a portion of the Work, fully or partially completed, or existing construction of the Owner or separate contractors 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. The Contractor will not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.





**3.15 CLEANING UP**

**3.15.1** The Contractor on a daily basis shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials and shall then thoroughly clean the premises and the site to the Owner's satisfaction.

**3.15.2** 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 in accordance with Paragraph 6.3.

**3.16 ACCESS TO WORK**

**3.16.1** The Contractor shall provide the Owner and Design Professional access to the Work in preparation and progress wherever located.

**3.17 ROYALTIES, PATENTS AND COPYRIGHTS**

**3.17.1** The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Design Professional harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Design Professional. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished in writing to the Design Professional.

**3.18 INDEMNIFICATION**

**3.18.1** To the fullest extent permitted by law and to the extent claims, damages, losses or expenses are not covered by Project Management Protective Liability insurance purchased by the Contractor in accordance with Paragraph 11.3, the Contractor shall indemnify and hold harmless the Owner, Design Professional, Design Professional's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Paragraph 3.18.

This Agreement to indemnify shall not extend to liability, claims, damages, losses or expenses, including attorney fees, arising out of the:

1. preparation or approval of maps drawings, opinions, reports, surveys, change orders, designs, or specifications by the parties indemnified hereunder, or the agents or employees of the parties indemnified hereunder; or,



2. giving or failure to give directions or instructions by the parties indemnified or their agents or employees, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property.

**3.18.2** In claims against any person or entity indemnified under this Paragraph 3.18 by an employee of the Contractor, a Subcontractor, or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Subparagraph 3.18.1 shall not be limited by a limitation on amount or type of damages compensation or benefits payable by or for the Contractor, Subcontractor under any Liability Insurance, Workers' Compensation Acts, Disability Benefit Acts or other employee benefit acts.

### **3.19 REPRESENTATIONS AND ASSURANCES**

**3.19.1** The Contractor, in addition to the requirements of the Contract Documents, represents to the Owner, as an inducement to the Owner to execute the Owner-Contractor Agreement, which representations will survive the execution and delivery of the Agreement and the completion of the Work that Contractor:

1. is financially solvent, able to pay debts, and has sufficient working capital to complete the Work;
2. is able to furnish the plant, tools, materials, supplies, equipment, skilled labor and sufficient experience and competence required to complete the Work equal to or exceeding industry standards;
3. in accordance with Subparagraph 3.1.4, is authorized and properly licensed to do business in the State of New Mexico and in the locale where the Work is located;
4. in execution of the Agreement and performance thereof is within the Contractor's duly authorized powers; and
5. Subcontractors, material suppliers and equipment suppliers have visited the site of Work and have become familiar with the conditions under which the Work is to be performed, obtained all available information and have correlated observations and acquired information with the requirements of the Contract Documents including conditions:
  - a) bearing upon access to the site, accommodations required, transportation, disposal, handling and storage;
  - b) affecting availability of labor, materials, equipment, water, electricity, utilities and roads;
  - c) such as weather, river stages, flooding;
  - d) related to the apparent form and nature of the Work site, including the surface and sub-surface conditions; and,
  - e) that in general would be deemed by a prudent contractor to be material to the Work as to assess risk, contingencies and other circumstances.

## **ARTICLE 4 ADMINISTRATION OF THE CONTRACT**

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#### 4.1 DESIGN PROFESSIONAL

**4.1.1** The term "Design Professional" means the Architect, Engineer or other professional person lawfully licensed to practice the profession within the State of New Mexico and can fulfill the requirements of the Contract Documents within that person's licensed authority. If lawfully allowed, the Design Professional shall also mean the Design Professional's authorized representative unless the Owner has a reasonable objection.

**4.1.2** Duties, responsibilities and limitations of authority of the Design Professional as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Design Professional. Consent shall not be unreasonably withheld.

**4.1.3** If the employment of the Design Professional is terminated, the Owner shall employ a new Design Professional against whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the former Design Professional.

**4.1.4** If there is no Design Professional, the Owner shall assume the responsibilities for Administration of the Contract Documents.

#### 4.2 DESIGN PROFESSIONAL'S ADMINISTRATION OF THE CONTRACT

**4.2.1** The Design Professional will provide administration of the Contract as described in the Contract Documents, and will be an Owner's representative (1) during construction, (2) until final payment is due and (3) with the Owner's concurrence, from time to time during the one-year period for correction of Work described in Paragraph 12.2. The Design Professional will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

**4.2.2** The Design Professional, as a representative of the Owner, will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become familiar with and to keep the Owner informed about the progress and quality of the Work completed, (2) to use all reasonable efforts to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if the Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Design Professional will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work that is the responsibility of the Contractor to provide. The Design Professional will neither have control over or charge of, nor be responsible for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Subparagraph 3.3.1. However, if the Design Professional becomes aware of the failure of the Contractor, Subcontractors or any other person or entity performing any of the Work to use proper construction means, methods, techniques, sequences, procedures, safety precautions and programs or failure of any of the foregoing parties to carry out the Work in accordance with the Contract Document, the Design Professional shall promptly notify the Contractor and the Owner of the deficiency.



**4.2.3.** The Design Professional will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Design Professional will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

**4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION**

**4.2.4.1** Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized or requested by the Owner, the Owner and Contractor shall endeavor to communicate with each other through the Design Professional about matters arising out of or relating to the Contract. Communications by and with the Design Professional's consultants shall be through the Design Professional. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

**4.2.4.2** English is the language that will be used on site to issue all directions, used in all project related meetings, and used in all project related correspondence. Contractor, Subcontractors, material suppliers and equipment suppliers' foremen and supervisory staff, must be able to read and converse in English, and be able to receive and understand all directions issued by the Owner and Design Professional.

**4.2.4.3** Except as otherwise provided in the contract document, project team information and communications shall be conducted electronically using the APS project management software. See also 3.1.9.

**4.2.5** Based on the Design Professional's evaluations of the progress and quality of the Work, Contractor's Application for Payment and all other information available to the Design Professional, the Design Professional shall within **five (5) days** of receipt of a properly completed Application for Payment certify to the Owner the undisputed amount recommended for payment to the Contractor and shall provide specific reasoning for denial of disputed amounts.

**4.2.6** The Design Professional will have authority to reject Work that does not conform to the Contract Documents, and shall do so unless, after consultation with the Owner, Owner instructs otherwise. Whenever the Design Professional considers it necessary or advisable, the Design Professional will have authority, subject to the Owner's approval, to require inspection or testing of the Work in accordance with Subparagraphs 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Design Professional nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Design Professional to the Contractor, Subcontractors, material and equipment suppliers, their agents or employee, or other persons or entities performing portions of the Work.

**4.2.7** Unless rejected in accordance with Subparagraph 3.12.4.1 or is otherwise not in compliance with Section 3 of this Agreement, the Design Professional, shall within a reasonable time not to



exceed **fourteen (14) days**, or other reasonable time agreed upon by the parties, review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, for the purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is conducted solely in the interest of the Owner, and shall not relieve the Contractor of responsibility for determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating

instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Design Professional's review of the Contractor's submittals shall not relieve the Contractor of any obligations of these General Conditions. The Design Professional's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Design Professional, of any construction means, methods, techniques, sequences or procedures. The Design Professional's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

**4.2.7.1** The Contractor shall be responsible for cost of inordinate re-reviews, exceeding two, by Design Professional due to non-compliance with Subparagraph 3.12.6.

**4.2.7.2** Rejection of any submittal due to non-compliance with Subparagraph 3.12.6 shall not be the basis for claim for a project delay..

**4.2.8** The Design Professional may prepare for Owner consideration, Modification / Change Requests and Change Orders. The Design Professional shall review Contractor proposals for adjustment to the Contract Sum or Contract Time relative to a Modification / Change Request and shall either approve, reject or suggest compromise to such proposals.

**4.2.8.1** The Design Professional may authorize Supplemental Instructions for minor changes in the Work as provided in Paragraph 7.4, provided there is no material change to the time, cost, specification or scope of the Work.

**4.2.9** The Design Professional will conduct inspections to make recommendations to the Owner of the date or dates of Substantial Completion and the date of Final Completion, will receive, approve and forward to the Owner, for the Owner's records, written warranties, Certificates of Insurance and related documents required by the Contract and assembled by the Contractor and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents.

**4.2.10** If the Owner and Design Professional agree, the Design Professional will provide one or more project representatives to assist in carrying out the Design Professional's responsibilities at the site.

**4.2.11** Subject to the claims procedures set forth in Paragraph 4.3, the Design Professional will, in the first instance, interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Design Professional's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which



interpretations required of the Design Professional shall be furnished in compliance with this Paragraph 4.2, then delay shall not be recognized on account of failure by the Design Professional to furnish such interpretations until **ten (10) days** after written request is made for them.

**4.2.12** Interpretations and decisions of the Design Professional will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of

drawings. When making such interpretations and initial decisions, the Design Professional will make all reasonable efforts to secure faithful performance by both the Owner and the Contractor and will not show partiality to either, and will not be liable for results or interpretations or decisions so rendered in good faith.

**4.2.13** The Design Professional's decisions on matters relating to aesthetic effect will, with the Owner's consent, be final if consistent with the intent expressed in the Contract Documents.

### **4.3 CLAIMS AND DISPUTES**

**4.3.1** Definition. A Claim is a demand or assertion by one of the parties seeking as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be initiated by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

**4.3.2** Time Limits on Claims. Claims by either party must be initiated within **twenty-one (21) days** after occurrence of the event giving rise to such Claim or within **five (5) days** after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be initiated by written notice to the Design Professional and the other party.

**4.3.3** Continuing Contract Performance. Pending final resolution of a Claim except as otherwise agreed in writing or as provided in Subparagraph 9.7.1 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

**4.3.4** Claims for Concealed or Unknown Conditions. If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than **twenty-one (21) days** after first observance of the conditions. The Design Professional will promptly investigate such conditions and if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Design Professional determines that the conditions at the site are not materially different from those indicated in the Contract



Documents and that no change in the terms of the Contract is justified, the Design Professional shall so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within **twenty-one (21) days** after the Design Professional has given notice of the decision. If the conditions encountered are materially different, the Contract Sum and Contract Time shall be equitably adjusted, but if the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the Design Professional for initial determination, subject to further proceedings pursuant to Paragraph 4.4.

**4.3.5** Claims for Additional Cost. If the Contractor wishes to make Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Paragraph 10.6.

**4.3.6** If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Design Professional, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Design Professional, (4) unjustified failure of payment by the Owner, (5) termination of the Contract by the Owner, or (6) Owner's suspension, Claim shall be filed in accordance with this Paragraph 4.3.

#### **4.3.7 CLAIMS FOR ADDITIONAL TIME**

**4.3.7.1** If the Contractor wishes to make Claim for an increase in the Contract Time, it shall be submitted as a Modification / Change Request in accordance with Article 7. In the case of a continuing delay only one Claim is necessary.

**4.3.7.2** If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction. Substantiation must include supporting evidence from the U.S. Weather Bureau or similar for the previous ten (10) year averages for the locale of the Project, as well as, evidence supported by original project schedule and daily job logs that specific Work events falling on the critical path were delayed.

**4.3.8** Injury or Damage to Person or Property. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding **five (5) days** after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

**4.3.8.1** The Contractor shall promptly notify the Owner and Design Professional in writing of any claims received by the Contractor for personal injury or property damage related to the Work.

**4.3.9** If unit prices are stated in the Contract Documents or subsequently agreed upon, and if



quantities originally contemplated are changed in a proposed Modification / Change Request by more than fifteen percent (15%), the applicable unit prices shall be equitably adjusted in accordance with Article 7.

**4.3.10** Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes damages incurred by the:

1. Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
2. Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, loss of profit except anticipated profit arising directly from the Work performed.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Subparagraph 4.3.10 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

#### **4.4 RESOLUTION OF CLAIMS AND DISPUTES**

**4.4.1** Decision of Design Professional. Claims, including those alleging an error or omission by the Design Professional, but excluding those arising under Paragraphs 10.3 through 10.5, shall be referred initially to the Design Professional for decision. An initial decision by the Design Professional shall be required as a condition precedent to mediation, arbitration or litigation of all Claims between the Contractor and Owner arising prior to the date final payment is due, unless **thirty (30) days** have passed after the Claim has been referred to the Design Professional with no decision having been rendered by the Design Professional. The Design Professional will not decide disputes between the Contractor and persons or entities other than the Owner.

**4.4.2** The Design Professional will review Claims and within **ten (10) days** of the receipt of the Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) recommend approval of the Claim, (4) suggest a compromise, or (5) advise the parties that the Design Professional is unable to resolve the Claim if the Design Professional concludes that, in the Design Professional's sole discretion, it would be inappropriate for the Design Professional to resolve the Claim.

**4.4.3** In evaluating Claims, the Design Professional may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Design Professional in rendering a decision. The Design Professional may request the Owner to authorize retention of such persons at the Owner's expense.

**4.4.4** If the Design Professional requests a third party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within **ten (10) days** after receipt of such





request, and shall either provide a response on the requested supporting data, advise the Design Professional when the response or supporting data will be furnished or advise the Design Professional that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Design Professional will either reject or approve the Claim in whole or in part.

**4.4.5** The Design Professional will approve or reject Claims by written decision, which shall state the reasons therefore and which shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Design Professional shall be final and binding on the parties but subject to arbitration.

**4.4.6** A written decision of the Design Professional shall state that (1) the decision is final, but subject to arbitration and (2) a demand for arbitration of a Claim covered by such decision must be made within **thirty (30) days** after the date on which the party making the demand receives the final written decision, then failure to demand arbitration within said **thirty (30) days** period shall result in the Design Professional's decision becoming final and binding upon the Owner and Contractor. If the Design Professional renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence, but shall not supersede arbitration proceedings unless the decision is acceptable to all parties concerned.

**4.4.7** Upon receipt of a Claim against the Contractor or at any time thereafter, the Design Professional or the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Design Professional or the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

#### **4.5 (NOT USED)**

#### **4.6 ARBITRATION**

**4.6.1** Any Claim arising out of or related to the Contract, except those waived as provided for in Subparagraphs 4.3.10, 6.2.3, 9.11.4 and 9.11.5, shall after decision by the Design Professional or **thirty (30) days** after submission of the Claim to the Design Professional, be subject to arbitration. Prior to arbitration, the parties shall endeavor to resolve disputes informally.

**4.6.2** Claims not resolved by other means shall be decided by arbitration which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect. The Demand for Arbitration shall be filed in writing with the other party to the Contract and with the American Arbitration Association, and a copy shall be filed with the Design Professional.

**4.6.3** A Demand for Arbitration shall be made within the time limits specified in Subparagraphs 4.4.6 and 4.6.1 as applicable, and in other cases within a reasonable time after the Claim has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations as determined pursuant to Paragraph 13.7.



**4.6.4** Claims and Timely Assertion of Claims. The party filing a Notice of Demand for Arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

**4.6.5** Arbitration proceedings under this Agreement may be consolidated or joined with arbitration proceedings pending between other parties if the arbitration proceedings arise out of the same transaction or relate to the same subject matter. Consolidation will be by order of the arbitrator, in any of the pending cases, or if the arbitrator fails to make such an order, the parties may apply to any court of competent jurisdiction within Bernalillo County, New Mexico, for such an order. Inclusive to this Subparagraph are the Owner, the Design Professional, the Contractor, all subcontractors, material suppliers, equipment suppliers, engineers, designers, lenders, sureties, and all other parties concerned with the construction of the Project are bound, each to each other, by this Subparagraph, provided such party has signed this Agreement or has signed an agreement which incorporates this Agreement by reference or signs any other agreement to be bound by this arbitration clause.

**4.6.6** Judgment on Final Award. The award rendered by the arbitrator or arbitrators shall be final and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

## **ARTICLE 5 SUBCONTRACTS**

### **5.1 DEFINITIONS**

**5.1.1** A Subcontractor is a person or entity who has a direct or indirect contract with the Contractor to perform a portion of the Work regardless of contractual tiers below the prime contract between the Owner and Contractor. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

### **5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK**

**5.2.1** Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after Notice of Intent to Award, shall furnish in writing to the Owner through the Design Professional the names of entities and key personnel (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Design Professional will promptly reply to the Contractor in writing stating whether or not the Owner or the Design Professional, after due investigation, has reasonable objection to any such proposed entity or person. Failure of the Owner or Design Professional to reply promptly shall constitute notice of no reasonable objection. The requirements of this Subparagraph 5.2.1 shall supplement Subcontractor listing at bid as required by §13-4-34 NMSA 1978.

**5.2.2** The Contractor shall not contract with a proposed person or entity to whom the Owner or



Design Professional has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

**5.2.3** If the Owner or Design Professional has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Design Professional has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by the change, and an appropriate Modification in accordance with Article 7 shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

**5.2.4** The Contractor shall not change a Subcontractor, person or entity previously selected if the Owner or Design Professional makes reasonable objection to such substitute. Any substitutions of a Subcontractor will comply with the New Mexico Subcontractor Fair Practices Act to the extent that the Subcontractors Fair Practices Act is applicable.

### **5.3 SUBCONTRACTUAL AND SUPPLIER RELATIONS**

**5.3.1** By appropriate agreement, written where legally required for validity, 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 performance of Work, responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Design Professional. Each subcontract and supplier agreement shall preserve and protect the rights of the Owner and Design Professional under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with suppliers. The Contractor shall make available to each proposed Subcontractor and supplier, prior to execution of the Agreement, copies of the Contract Documents to which the Subcontractor and suppliers where appropriate 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.

**5.3.2** Nothing contained in Subparagraph 5.3.1 or elsewhere in the Contract Documents shall create any contractual relationship with or cause of action in favor of a third party against the Owner.

**5.3.3** Each entity intending to do work on the Project shall, prior to bid, be properly licensed according to the requirements of the Construction Industries Licensing Act, Chapter 60, Article 13 NMSA 1978 and shall ensure to the Contractor and to the Owner that such license shall remain in effect for the duration of the Work and warranty periods.

### **5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS AND SUPPLIER AGREEMENTS**



**5.4.1** Each subcontract or supplier agreement for a portion of the Work may be assigned by the Contractor to the Owner provided that assignment is:

1. effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 14.2 and only for those subcontract or supplier agreements which the Owner accepts by notifying the Subcontractor, supplier and the Contractor in writing: and
2. subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

**5.4.2** Upon such assignment, if the Work has been suspended for more than **thirty (30) days**, the Subcontractor's or supplier's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

## **ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

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

**6.1.1** The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these, including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Paragraph 4.3.

**6.1.2** 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.

**6.1.3** 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 and Subcontractors shall participate with other separate contractors, the Owner's own forces and the Owner in reviewing and coordinating their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised. The Contractor and Subcontractors shall not delay or cause additional expense to another contractor by neglecting to perform correctly or to an agreed schedule. In the absence of a schedule mutually agreed upon by all parties, the Owner may create a binding schedule for all parties or take other appropriate action to avoid unnecessary delay and damages.

**6.1.4** Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights which apply to the



Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11, and 12.

**6.1.5** Unless otherwise provided in the Contract Documents, the Owner's separate contractor shall test, adjust and balance (TAB) the HVAC system to design requirements in coordination with the Contractor's or Subcontractors own forces. The TAB work shall integrate with the Contractor's or Subcontractor's installation of the Work, equipment start-up and operational testing as required by the Contract Documents. Coordination and cooperation for this work and other similar Owner contractor work shall be in accordance with Paragraph 6.2.

## **6.2 MUTUAL RESPONSIBILITY**

**6.2.1** 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 Contractor's construction and operations with theirs as required by the Contract Documents.

**6.2.2** If part of the Contractor's Work depends on proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Design Professional and Owner apparent discrepancies or defects in such other construction that would render it unsuitable for proper execution and results. Failure of the Contractor to report 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.

**6.2.3** 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. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities and damage to the Work or defective construction of the Owner or a separate Owner contractor. Should the Contractor sustain any personal injury or damage to property through any act or omission of any other Contractor having a contract with the Owner, the Contractor sustaining damage will have no claim or cause of action against the Owner for such damage and hereby waives any such claim.

**6.2.4** The Contractor shall promptly remedy damage caused by the Contractor to completed or partially completed or existing construction or to property of the Owner or separate contractors as provided in Subparagraph 10.2.5.

**6.2.5** The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Subparagraph 3.14.

## **6.3 OWNER'S RIGHT TO CLEAN UP**

**6.3.1** If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Design Professional will allocate



the cost among those responsible.

- .1 Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Owner's employees.

## **ARTICLE 7 CHANGES IN THE WORK**

### **7.1 GENERAL**

**7.1.1** Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Modification / Change Request, or by Supplemental Instruction for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

**7.1.2** Any material change in the Work require a Modification / Change Request (MCR) that has been finalized by agreement by the Owner and based on proposal from the Contractor and recommendation of the Design Professional. A Change Order, required to modify the Purchase Order, shall accumulate approved MCRs, and must be approved by the Owner, Contractor and Design Professional. Supplemental Instruction for a minor change in the Work, will not create cost or time effect on the Project in accordance with Subparagraph 7.4.1, and may be issued only by the Design Professional.

**7.1.3** Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the, Modification / Change Request or Supplemental Instruction.

### **7.2 MODIFICATON / CHANGE REQUEST**

**7.2.1** A Modification / Change Request or MCR (Exhibit D-1) is a written document that may be initiated by the Contractor, Design Professional or Owner that identifies why there is a potential change in the Work that may require an adjustment, to the Contract Sum or Contract Time, or both, and suggests how that the change should take place. Following the initiation of a MCR by one of the parties, the Owner:

1. must agree to MCR's content and feasibility and if in agreement may authorize the MCR to; proceed with estimates of costs only; or proceed with the Work with estimates of costs to follow in accordance with Subparagraph 7.2.4;
2. will consider proposal(s) from the Contractor in accordance with Article 7 for adjustment to Contract Sum or Contract Time, if any; and,
3. shall authorize the Work to proceed if not previously authorized in accordance with Subparagraph 7.2.4 and authorize adjustment to Contract Sum in accordance with Paragraph 7.2 or, shall reject the MCR and replace with another or, stop all action on the MCR.

**7.2.1.1** A MCR is required for any modification or change in the Work that:

1. may affect the Contract Sum or Time;



2. alters the Work by substitution or any other way not considered minor as defined by Paragraph 7.4; or,
3. otherwise materially affect the Work or intended function of the Project including a change to aesthetics.

**7.2.1.2** A MCR when finalized by Owner approval, may modify the Contract without invalidating the Contract and may order changes in the Work within the general scope of the Contract with Contract Sum and Contract Time. Owner approval of a MCR:

1. shall adjust the Contract Sum accordingly; and,
2. will begin Owner consideration of related adjustment to Contract Time, if any;
3. and shall be included into a Change Order upon approval of the parties in accordance with Paragraph 7.3.

**7.2.2** A MCR shall be used to:

1. approve a modification or change to the Work;
2. accumulate data such as cost and time impacts before authorizing a modification or change to the Work;
3. direct Work to be done with cost, time, etc. to follow in the absence of total agreement on the terms of a modification or change to the Work or to prevent delay of the Work; and,
4. stop all action on a proposed modification or change to the Work.

**7.2.3** If Work defined by a MCR requires an adjustment to Contract Sum or Contract Time, the Contractor shall, within **ten (10) days** of the date of Owner issuance of MCR or delivery of MCR to Contractor if that date is later, prepare and deliver to the Design Professional a proposal for such adjustment based on:

1. unit prices or lump sum allowances stated in the Contract Documents;
2. unit price or lump sum determined in accordance with Subparagraph 7.2.5;
3. provision in the MCR as determined by the Owner and in accordance with Subparagraph 7.2.5; or,
4. a manner agreed upon by the parties and consistent with Subparagraph 7.2.5 and these General Conditions.

**7.2.4** Upon receipt of a Modification / Change Request authorized by the Owner to "Proceed with the Work with costs to follow", the Contractor shall consider the MCR a directive and promptly proceed with the change in the Work involved and, provide a proposal for adjustment to Contract in accordance with Subparagraph 7.2.3.

**7.2.5 Allowable Costs and Fees:** If a proposal to adjust the Contract Sum exceeds \$200 and if not otherwise provided in the MCR or Contract Documents, the Contractor, shall provide an itemized accounting\* together with appropriate supporting data that include :

1. quantities and unit costs of materials, including cost of transportation, whether incorporated or consumed;



2. quantities and unit costs of labor, including labor burdens such as social security and unemployment insurance, fringe benefits such as health insurance required by agreement or custom (Labor Burdens shall not include retirement plans qualified by minimum employment time, organizational fees or dues, legal or related expenses, information technology training and the like);
3. quantities and unit utilization or rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
4. quantities and unit costs of on-site supervision and field office personnel directly attributable to the change;
5. quantities and unit costs of and insurance, use tax or similar related to the Work;
6. Overhead and Profit\*\*;
7. quantities and unit premiums for all bonds costs and permit fees on items 1 through above; and,
8. State Gross Receipts Tax (GRT); and,

\* If pricing compounds, the compounding order shall be the same as listed items 1 - 8 of this Sub-paragraph.

\*\* Overhead and Profit (O&P), a fixed amount that may include, but is not limited to, project management, main office expenses, computers, minor tools and incidentals, may be added on top of items 1 through 5 above, provided that combined they do not exceed the following:

Subtotal before applying overhead and profit	Under \$2000	\$2000 to \$10,000	\$10,001 to \$50,000	Over \$50,001
Contractor - For work performed by own forces	18%	16%	14%	12%
Contractor - For subcontracted work.	11%	9%	6%	5%
For work performed by 1 <sup>st</sup> tier Subcontractor	18%	15%	12%	9%
For work performed by 2 <sup>nd</sup> tier Subcontractor	10%	8%	5%	4%
Subcontractor - Maximum aggregate O&P allowed over cost regardless of number of tiers.	29%	24%	18%	14%
<b>Exception:</b> In extraordinary circumstances, the Owner may allow adjustment to the above maximums.				

**7.2.5.1 Time-and-Material:** If for the purpose of authorizing Work to proceed upon issuance on an MCR prior to the Owner receiving proposal of costs, so that labor or material costs are to be





accumulated for later inclusion into a proposal to adjust the contract sum, the MCR must clearly state conditions and limitations of time-and-material work to proceed under the change in Work with costs to follow provision of the MCR. At a minimum, the MCR shall state the maximum allowable cost. In addition, the Daily Job Report must reflect all appropriate detail on related Work, such as work performed that day, number of workers, materials received and similar. A separate daily worker log must also be maintained that will be included in the proposed cost of the MCR. The daily worker log for each MCR, must list each worker, the type of work performed and the hours worked, and must be

signed-off daily by an individual, agreed upon in the MCR, that may be the Project Superintendent. In accordance with this Paragraph 7.2, proposal of costs shall be delivered by the Contractor within Ten (10) days of issuance of MCR.

**7.2.5.1.1 Reimbursement for Utility and Impact Fees:** Owner may require Contractor to pay local government impact fees and/or fees to utilities as necessary for the project. Such fees shall be reimbursed to Contractor at cost plus two percent (2%).

**7.2.5.2 Audit:** The Owner shall be entitled to audit the books and records of a Contractor or any Subcontractor for any time-and-material or negotiated cost, such as those associated with a change in the Work, to the extent that such books and records relate to the proposal or performance of such Work. Such books and records shall be maintained by the Contractor for a period of three years from the date of final payment under the prime Contract and by the Subcontractor for a period of three years from the date of final payment under the subcontract, unless a shorter period is otherwise authorized in writing (13-1-16, NMSA 1978).

**7.2.6** The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Design Professional. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

**7.2.7** A proposed adjustment to Contract Sum and Contract Time submitted by Contractor for a MCR indicates agreement of the Contractor therewith for the proposed Modification. The Design Professional shall make recommendation to the Owner on the appropriateness of the proposed adjustment. The Owner may, after evaluation of the proposal and review of the Design Professional's recommendation, accept the Contractor's proposed adjustment to Contract Sum and finalize the MCR. If Owner approves MCR, it shall be recorded for inclusion into a Change Order.

**7.2.8** If the Contractor does not respond promptly with a proposal for adjustment to Contract Sum and Contract Time relative to an MCR or disagrees with the method for adjustment, or; if there are amounts or terms in dispute for such changes in the Work; the Design Professional on the basis of reasonable expenditures or savings of those performing the Work attributable to the change in the Work shall make a determination for purpose of settlement of dispute. That determination of adjustment to the Contract Sum and Contract Time shall be presented to the Owner and the Contractor for consideration. If the Owner or the Contractor do not agree with the Design Professional's determination, the provisions of Subparagraph 7.2.9 shall apply. When the Owner and Contractor agree with the determination made by the Design Professional concerning the adjustments



in the Contract Sum, such agreement shall be effective immediately upon Contractor's acceptance in writing and Owner's approval of MCR.

**7.2.9** The Owner shall, within **fifteen (15) days** of the determination made by the Design Professional regarding adjustment to Contract Sum or Contract Time in accordance with Subparagraph 7.2.8, either:

1. accept the Design Professional's determination and, approve the MCR with the adjustment recommended by the Design Professional and record the MCR as approved by the Owner to be included into a Change Order; or
2. approve the MCR with an adjustment the Owner determines to be appropriate based on available information and record the MCR as approved by the Owner to be included into a Change Order.

Adjustment to Contract Sum in accordance with this Subparagraph 7.2.9 shall be subject to the right of Contractor to disagree and assert a claim in accordance with Paragraph 4.3.

**7.2.10** Partial agreement of an adjustment to Contract Sum or Contract Time relative to a MCR may be allowed by the Owner only if adjustment to Work, requested by the MCR, can be subdivided into independent parts. In the event of such subdivision; MCR shall be broken into separate parts with alpha suffixes such as MCR 2A, MCR 2B and so on.

**7.2.11** Periodically, approved MCR's shall be accumulated by the Owner or Design Professional into a Change Order in accordance with Paragraph 7.3.

### **7.3 CHANGE ORDERS**

**7.3.1** A Change Order (Exhibit D-2) is a written instrument prepared by the Design Professional and signed by the Owner, Contractor and Design Professional, stating their agreement upon:

1. change in the work as made by finalized Modification / Change Request(s) that has been previously approved by the Owner or authorized in accordance with Sub-paragraphs 7.2.8 or 7.2.9.;
2. amount of the adjustment, if any in the Contract Sum resultant of approved MCR(s);
3. extent of the adjustment, if any, in the Contract Time related to approved MCR(s); or,
4. if disagreement on adjustment in the Contract Time, parties agree to postponement of inclusion of any adjustment to Contract Time into a Change Order; however, all Contractor proposed or Owner offered adjustment(s) to time shall be incorporated into a Change Order prior to Substantial Completion in accordance with Subparagraph 9.8.6.

**POSTPONEMENT OF ADJUSTMENT TO CONTRACT TIME LANGUAGE:**

"At the time of this Change Order, there is no agreement on adjustment to the Contract Time related to MCR(s) XX, XX, XX and XX. The Contractor, without prejudice and without waiving any rights to such claim for adjustment to Contract Time in relation to these MCR(s), agrees to postpone claim in accordance with Paragraph 7.3 of the General Conditions."

**7.3.2** Methods used in determining adjustments to the Contract Sum include those listed in



Paragraph 7.2. Proposals submitted that do not follow the requirements under Paragraph 7.2 will be returned to be resubmitted prior to processing.

**7.3.3** Individuals Authorized to Make Changes: All Change Orders must be approved and signed on behalf of Owner by the Director, Facilities Design and Construction or Director's designee.

#### **7.4 MINOR CHANGES IN THE WORK**

**7.4.1** The Design Professional will have authority to order Supplemental Instructions for minor changes in the work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

### **ARTICLE 8 TIME**

#### **8.1 DEFINITIONS**

**8.1.1** Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

**8.1.2** The date of commencement of the Work is the date established in the Agreement.

**8.1.3** The date of Substantial Completion is the date certified by the Design Professional in accordance with Paragraph 9.8.

**8.1.4** The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

#### **8.2 PROGRESS AND COMPLETION**

**8.2.1** Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

**8.2.2** The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by the Contract Documents, a Notice to Proceed shall be given by the Owner that shall establish the commencement of the Contract Time as provided by the Contract Documents.



**8.2.3** The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

**8.2.4** The Owner shall not be liable to the Contractor for additional time or money if the Contractor submits a progress report or construction schedule expressing an intention to achieve completion of the Work prior to the Contract Time and then is not able to achieve intended accelerated schedule regardless of the reason.

### **8.3 DELAYS AND EXTENSIONS OF TIME**

**8.3.1** If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Design Professional, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending mediation and arbitration, or by other causes which the Design Professional and the Owner determine may justify delay, then the Contract Time shall be extended by Modification in accordance with Article 7 for such reasonable time as the Design Professional in concurrence with the Owner may determine.

**8.3.2** Extensions of time not associated with modifications or changes to the Work shall not be allowed to increase the Contract amount for overhead or for any other reason and shall strictly apply toward liquidated damages.

**8.3.3** Claims relating to time shall be made in accordance with applicable provisions under Paragraph 4.3.

### **8.4 CONTRACT TIME AND LIQUIDATED DAMAGES**

**8.4.1** The Contractor agrees that the Work will be prosecuted regularly, diligently and without interruption at such rate of progress as will ensure completion within the Contract Time. It is expressly understood and agreed, by and between the Contractor and the Owner, that the Contract Time is a reasonable time for completion of the Work, taking into consideration the average climate range and usual industrial conditions prevailing in the locality of the Project. If the Contractor neglects, fails or refuses to complete the Work within the Contract Time, or any proper extension granted by the Owner, then the Contractor agrees to pay the Owner the amount specified in the Contract Documents, not as a penalty, but as liquidated damages.

**8.4.2** The parties agree that the amount of the likely damage to the Owner for such delay is difficult to ascertain at the time of execution of this Agreement, but that a reasonable estimate of such damages for delay is set forth in the contract Documents. Liquidated damages may be deducted from any monthly progress payments due to the Contractor or from other monies being withheld from the Contractor when a reasonable estimate of expected Substantial Completion can be determined by the Owner.

**8.4.3** Final accounting of Liquidated Damages shall be determined at Substantial Completion and



the Contractor and Surety are liable for any liquidated damages over and above unpaid balance held by the Owner.

**ARTICLE 9 PAYMENTS AND COMPLETION**

**9.1 CONTRACT SUM**

**9.1.1** The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

**9.2 SCHEDULE OF VALUES**

**9.2.1** Before the first Application for Payment, the Contractor shall submit to the Design Professional a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Design Professional may require. Support data shall include accounting of all Project costs distributed to Level 2 UniFormat™ convention. The schedule of values, upon acceptance by the Design Professional with the Owner's prior approval, shall be used as a basis for reviewing the Contractor's Application for Payment.

**9.2.1.1** Gross Receipts Tax shall be included as a separate line item of the Schedule of Values. In the event of a GRT rate change, the Contractor shall submit an MCR requesting an adjusted amount on balance to complete the Contract.

**9.2.2** To protect the Owner from the significant liability and arduous accounting efforts required by lingering documentation and close-out work, the Schedule of Values shall provide a separate line item titled "Documentation and Close-Out" to provide a value consistent with and appropriate to required documentation provisions throughout the Contract including those required by Subparagraph 9.10. The value of the Documentation and Close-Out line item shall not be less than the following:

For a total Contract amount excluding tax of:	Documentation and Close-Out amount
--	---------------------------------------



less than \$20,000	\$0
20,001 - 75,000	6,000
75,001 - 100,000	8,000
100,001 - 200,000	10,000
200,001 - 350,000	15,000
350,001 - 500,000	25,000
501,001 - 1,000,000	50,000
1,000,001 - 1,500,000	70,000
1,500,001 - 2,000,000	90,000
2,000,001 - 3,000,000	120,000
for each additional million	add 30,000

**9.2.2.1** If requested in writing by the Contractor, and in the sole opinion of the Owner, the Contractor is in full compliance with the documentation requirements of the Contract, the Documentation and Close-Out Schedule of Value line item may be reduced each month prior to Substantial Completion up to five percent (5%) of the originally scheduled amount or one thousand dollars (\$1,000), whichever is greater, providing that the Documentation and Close-Out line item is not reduced to less

than fifty percent (50%) of the original amount required until which time that Close-Out is complete as required by Paragraph 9.10.

**9.2.3** Progress Payment Draw-down Schedule: To facilitate Owner's financial planning, Contractor shall complete **Exhibit C**, Estimated Monthly Draw-down Schedule, to provide an estimate of cash draws for each individual month during the life of the project.

### 9.3 APPLICATIONS FOR PAYMENT

**9.3.1** No later than the 25<sup>th</sup> of each month, the Contractor shall submit to the Design Professional an itemized Application for Payment for operations completed in accordance with the Schedule of Values for that month. Such application shall be supported by such data substantiating the Contractor's right to payment as the Owner or Design Professional may require such copies of requisitions from Subcontractors and material suppliers. No Applications for Payment will be processed until the initial Schedule of Values is received and approved by Design Professional with concurrence from the Owner and for subsequent payment applications; the Project Schedule has been updated in accordance with Subparagraph 3.10.1.

**9.3.1.1** No Application for Payment may include more than:

1. ninety-five percent (95%) of the scheduled value of any work requiring testing prior to testing and verification of testing by the Design Professional to meeting requirements of the Contract Documents;
2. ninety percent (90%) of the scheduled value for systems that require, as a part of acceptance



of the Work, testing or balancing including, but not limited to, mechanical heating, air-conditioning and electrical distribution until testing, balancing or other verification required by the Contract Documents has been completed and verified as acceptable by the Design Professional.

**9.3.1.2** Such applications may not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

**9.3.2** Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation into the Work. Any payments for such materials or equipment shall be conditioned upon the Contractor's demonstration that they are adequately protected from weather, damage, vandalism and theft and that such materials or equipment have been inventoried and stored in accordance with procedures established by or approved by the Owner. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing and with sufficient Contractor provided insurance against loss, and with Owner named as co-insured, to cover the value of stored materials and their transport to the Project.

**9.3.3** The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been

previously issued and payments received from the Owner shall be free and clear of claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, material suppliers and equipment relating to the Work. The Contractor additionally warrants that all As-Built drawings accurately depict completed Work covered by an Application for Payment, inclusive of all trades and inclusive of, but not be limited to, actual locations and installed types, brand, model number and similar of all Work including ducts, pipes, conduit, equipment, walls and site utilities.

#### **9.4 CERTIFICATES FOR PAYMENT**

**9.4.1** Application for Payment must be submitted to the Design Professional no later than the 25<sup>th</sup> of the month for which the application is being made. The Design Professional will review with the Owner the accuracy and appropriateness of the application and, within **five (5) days** after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Design Professional determines is properly due, or notify the Contractor and Owner in writing of the Design Professional's reasons for withholding certification in whole or in part as provided in Subparagraph 9.5.1.

**9.4.2** The issuance of a Certificate for Payment will constitute a representation by the Design Professional to the Owner, based on the Design Professional's evaluation of the Work and the data comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of the Design Professional's knowledge, information and belief, the quality of the Work is



in accordance with the Contract Documents and that As-Built drawings are current to actual Work completed. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Design Professional. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified.

**9.4.3** The Owner will issue payment to the Contractor in the amount certified in the approved Certificate for Payment within **twenty-one (21) days** from the end of the progress payment period which shall be the end of the month for which the Certificate of Payment is made.

## **9.5 DECISIONS TO WITHHOLD CERTIFICATION**

**9.5.1** The Design Professional may withhold a Certificate for Payment and may assess Liquidated Damages in accordance with Paragraph 8.4, in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Design Professional's opinion the representations to the Owner required by Subparagraph 9.4.2 cannot be made. If the Design Professional is unable to certify payment in the amount of the Application, the Design Professional will notify the Contractor and Owner as provided in Subparagraph 9.4.1. If the Contractor and Design Professional cannot agree on a revised amount, the Design Professional will promptly issue a Certificate for Payment for the amount for which the Design Professional is able to make such representations to the Owner. The Design Professional may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Design Professional's opinion to protect the Owner from loss for which the Contractor is

responsible, including loss resulting from acts and omissions described in Subparagraph 3.3.2, because of:

1. defective Work not remedied;
2. third party claims 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 Sum;
5. damage to the Owner or another contractor;
6. reasonable evidence that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
7. persistent failure to carry out the Work in accordance with the Contract Documents.

**9.5.2** When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

## **9.6 PROGRESS PAYMENTS**





**9.6.1** After the Design Professional has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents.

**9.6.2** The Contractor shall promptly pay each Subcontractor and supplier, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained, , if any, from payments to the Contractor on account of such Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments in a similar manner. It is the Contractor's responsibility to comply with § 57-28-5(C) of the New Mexico Retainage Act, requiring Contractors to make prompt payment to Subcontractors for work performed within **seven (7) days** after receipt of payment from the Owner or pay interest for failing to make prompt payment.

**9.6.3** The Design Professional will on request, furnish to a Subcontractor information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Design Professional and Owner on account of portions of the Work done by such Subcontractor.

**9.6.4** Neither the Owner nor Design Professional shall have an obligation to pay or to see to the payment of money to a Subcontractor except as may otherwise be required by law.

**9.6.5** Payment to material suppliers shall be treated in a manner similar to that provided in Subparagraphs 9.6.2, 9.6.3 and 9.6.4.

**9.6.6** A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

**9.6.7** Payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, or create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

## **9.7 FAILURE OF PAYMENT**

**9.7.1** If the Owner does not pay the Contractor the amount approved by the Design Professional or the Design Professional does not approve the application for payment then, within **forty-five (45) days** from the end of the progress payment period, Contractor may, upon **seven (7) additional days** written notice to the Owner and Design Professional, stop the Work until payment of the amount owing has been received. Unless Contractor's action was improper or if the amount claimed is shown not to have been due, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus



interest as provided for in the Contract Documents. In the event of a wrongful Stop-Work, the Contractor shall remain responsible to the Owner for delivering the Project in accordance with the Contract Documents.

**9.7.2 Incomplete or Disputed Invoices:** If Owner, through its project representative or through the Design Professional, determines that an invoice is improperly completed, then within seven (7) business days after receipt, Owner will notify Contractor of the way in which the invoice is improperly completed. Following such notice, Owner shall have no further duty to pay the improperly completed invoice until it is resubmitted in properly completed form.

**9.7.3** In the event Owner pays an invoice and the Work for that invoice is subsequently determined by the Design Professional or Owner to be not in compliance with the Contract Documents, then the next invoice shall be adjusted to account for the non-complying work. Payment by Owner shall not constitute acceptance of Work subsequently determined to be not in compliance with the Contract Documents.

**9.7.4 Prompt Payment of Complete, Undisputed Invoices:** If Owner does not dispute or question the invoice, then Owner shall pay Contractor the full amount of the invoice within twenty-one (21) days of receipt of the undisputed Progress Payment invoice, and if Owner fails to do so, then Owner shall pay Contractor interest, as required by the Prompt Payment Act, from the twenty-second (22<sup>nd</sup>) calendar day after said receipt at the rate set forth from time-to-time in the Prompt Payment Act until the payment is issued. Nothing in this Agreement shall be construed as requiring Owner to pay interest on disputed amounts or on Contractor claims.

**9.7.5 Set-Offs:** Owner shall have the right to set off any amounts which may become payable to Contractor under this Agreement, against any amounts which Contractor may owe Owner, whether under this Agreement or otherwise.

## **9.8 SUBSTANTIAL COMPLETION**

**9.8.1** Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is complete and in compliance with the Contract Documents except for minor items so that the Owner can completely occupy or fully utilize the Work for its intended use. Owner's Occupancy under conditional approval by public authorities having jurisdiction over the Work, or occupancy of a facility or otherwise utilizing the Work under duress, shall not be considered Substantial Completion.

**9.8.2** When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall promptly prepare and submit to the Design Professional a comprehensive Contractor's Punch List inclusive and all incomplete and non-compliant Work to be completed or corrected prior to final payment, as well as, the requirements of Subparagraph 9.10.2.

**9.8.3** The Contractor shall submit along with the punch list a separate and detailed schedule



indicating the date of Final Completion and all work to be completed before Final Completion including Close-Out requirements as provided in Paragraph 9.10. Failure to include any item on punch list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

**9.8.4** Upon receipt of the Contractor's Punch List and Closeout Schedule, the Design Professional will within **ten (10) days** make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Design Professional's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof, as it is fully intended and designed to be used, the Contractor shall complete or correct such item upon inspection by the Design Professional to determine Substantial Completion. In the event the Work does appear Substantially Complete, the Design Professional will review the Contractor's Punch List for completeness required for issuance of Substantial Completion. The Contractor shall be responsible for cost of excessive Design Professional time and effort in completing list of incomplete and non-compliant Work not included in Contractor's Punch List or otherwise due to Contractor's neglect of responsibilities of Subparagraph 9.8.2.

**9.8.5** When the Work or designated portion thereof is substantially complete, the Design Professional will prepare a Certificate of Substantial Completion (Exhibit E), with the Owner's prior approval, 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 list accompanying the Certificate in accordance with Subparagraph 9.8.2..

**9.8.6** Warranties shall be in accordance with this Subparagraph 9.8.6 and Paragraph 12.2 and shall include all components and equipment required by the Contract Documents. All Work shall be warranted for the greater of:

1. a minimum of one (1) year from the date of Substantial Completion;
2. one (1) year from the date of first installation in accordance with Subparagraph 12.2.2.2;
3. one (1) year from the date of replacement due to failure such that; each component of the Work must not fail for a one (1) year period regardless of the date of Substantial Completion;
4. that required by the Contract Documents; or,
5. that provided in the Certificate of Substantial Completion that will become an addendum to the Contract.
6. Refer to the roofing specifications for additional roofing warranty requirements.

Owner and Contractor may, by mutual agreement, amend the Contract at Substantial Completion to include Performance Bonding, extended warranty, on-site maintenance, subsequent testing, scheduled replacement or other mutually agreeable terms.

**9.8.7** Any postponement(s) of inclusion(s) of adjustment(s) to Contract Time in accordance with Subparagraph 7.3.1.4 shall be included into a MCR for agreement and then into a Change Order prior to Certificate of Substantial Completion. If the Contractor and the Owner do not agree on Contractor



proposal, the Design Professional on the basis of evidence that critical path of work flow was reduced or expanded attributable to the change(s) in the Work with evidence being differences in Contractor's initial and current schedules and other evidence, shall make an determination for purpose of settlement of dispute. That determination of adjustment to the Contract Time shall be presented to the Owner and the Contractor for consideration. When the Owner and Contractor agree with the determination made by the Design Professional concerning the adjustments in the Contract Time such agreement shall be effective immediately, upon Contractor's written approval, and shall be recorded by preparation and execution of an appropriate MCR that shall be approved by the Owner. If after **five (5) days** the Owner or Contractor cannot agree with the determination made by the Design Professional regarding adjustment to Contract Time, then the Design Professional may order the preparation and execution of an appropriate MCR and:

1. if the Contractor is in disagreement, the MCR shall be recorded as approved by the Owner to be included in a Change Order;
2. if the Owner is in disagreement, the MCR shall be recorded as "approved by dispute resolution authority of the Design Professional" in accordance with this Subparagraph 9.8.6 to be included into a Change Order; and,
3. either approval shall be subject to the right of either party to disagree and assert a claim in accordance with Article 4.

**9.8.8** Liquidated Damages shall be determined in accordance with Paragraph 8.4.

**9.8.9** The Certificate of Substantial Completion shall be submitted to the Contractor and Contractor shall submit for consent of surety, if required, for written acceptance and following acceptance, the Owner shall make payment to Substantial Completion. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

## **9.9 PARTIAL OCCUPANCY OR USE**

**9.9.1** The Owner may occupy or use any completed or partially completed portion of the Work at any stage provided such occupancy or use is consented to by the insurer as required under Clause 11.4.1.3 and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have communicated in writing the responsibilities for payments, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties, if different from the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Design Professional as provided under Subparagraph 9.8.2. The stage or the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, then by decision of the Design Professional.

**9.9.2** Immediately prior to such partial occupancy or use, the Owner, Contractor and Design Professional shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.



**9.9.3** Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of work not complying with the requirements of the Contract Documents.

#### **9.10 CLOSE-OUT REQUIREMENTS**

**9.10.1** Before final completion in accordance with Paragraph 9.11 can be achieved all Work must be complete and accepted including the requirements under Paragraph 9.10 including:

1. Work associated with Punch List(s);
2. testing, balance or performance operations complete and in agreement that associated work is in compliance with the Contract Documents and verified as such by the Design Professional;
3. one hard copy and one electronic copy in .pdf format of final approved test, balance or performance report(s) complete with directory of contents submitted to Owner, if provided by Contractor;
4. Operation and Maintenance Manuals complete and verified as such by the Design Professional;
5. Owner sign-off of receipt of O&M Training on proper use, care and operation of all systems or components as required by the Contract Documents;
6. two hard copy sets and one electronic copy in .pdf format of final approved Operation and Maintenance Manuals with directory of contents submitted to Owner;
7. As-Built drawings provided for conversion to accurate Record Drawings and verified as such by the Design Professional using information provided by the Contractor and by other knowledge the Design Professional may possess;
8. written certification signed by Owner of delivery and stocking of extra material, equipment or components required by the Contract Documents at a location established by the Owner;
9. delivery of all warranties required by the Contract Documents;
  
10. all keys, passes, codes, software or other methods or components of control or security have been correctly and adequately accounted for and closed-out.

**9.10.2** The Contractor shall prepare a separate Close-Out Punch List listing all requirements of Subparagraph 9.10.1 and the status of each, whether completed or not and the expected completed date of each component of the list. The Close-Out Punch List shall be a separate part and a subset of the Contractor's Punch List required for Substantial Completion in accordance with Subparagraph 9.8.2. At completion of the List, the Contractor shall state in writing to the Design Professional that the Close-Out Punch List has been completed and request a Close-Out Meeting with the Design Professional and the Owner. The Design Professional shall schedule such meeting within **ten (10) days** of the request, or otherwise reply in writing to the Contractor why the request is pre-mature. At the Close-Out Meeting, all requirements to achieve close-out will be verified, and if Work is found to be complete, the Design Professional, with concurrence from the Owner, shall provide written approval of Contractor's completion of close-out requirements within **five (5) days** of the conclusion of the meeting.



**9.10.3** The balance at Substantial Completion of the Schedule of Values line item for Documents and Close-Out in accordance with Subparagraph 9.2.2 shall only be approved for payment when all requirements under Paragraph 9.10 are complete. No partial payment of the Close-Out balance will be considered. Contractor agrees that Close-Out Requirements, in accordance with Paragraph 9.10, are part of the value of Work defined by the Contract Documents and shall not be construed to mean retainage. Any variation or deviation from this Paragraph 9.10 shall be made through an appropriate Modification in accordance with Article 7.

**9.10.4** The Contractor shall be responsible for cost of excessive Design Professional time and effort related to failure of Contractor to achieve Closeout Schedule provided in accordance with Subparagraph 9.8.3, as determined by Owner.

### **9.11 FINAL COMPLETION AND FINAL PAYMENT**

**9.11.1** Following completion of close-out requirements in accordance with Paragraph 9.10, and upon receipt of a written notice from the Contractor that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Design Professional will promptly make such inspection and, when the Design Professional finds the Work acceptable under the Contract Documents and the Contract fully performed, the Design Professional will promptly, with the Owner's prior approval, issue a Certificate of Final Completion (Exhibit F) and following approval by all parties, a final Certificate for Payment each stating that to the best of the Design Professional's knowledge, information and belief and on the basis of the Design Professional's or Design Professional's Project Representative's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Design Professional's issuance of Certificate of Final Completion and final Certificate for Payment will constitute a further representation that conditions listed in Subparagraphs 9.10 and 9.11.2 have been fulfilled as precedent to the Contractor's being entitled to final payment.

**9.11.2** Final payment shall not become due until the Contractor submits to the Design Professional:

1. an affidavit that payrolls, bills for subcontracts, materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied;
2. a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least **forty-five (45) days** prior written notice has been given to the Owner;
3. a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents;
4. consent of surety, if any, to final payment;
5. releases and waivers of claims of all Subcontractors, and suppliers; and,
6. if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers, claims, security interests or encumbrances arising out of the



Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor or other entity refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify and protect the Owner.

If any claim remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such claim, including all costs and reasonable attorney's fees.

**9.11.3** If, after Substantial Completion of the Work, Final Completion thereof is materially delayed through no fault of the Contractor or by issuance of changes in the Work affecting Final Completion, and the Design Professional so confirms, the Owner shall, upon application by the Contractor and certification by the Design Professional, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Design Professional prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

**9.11.4** The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:

1. Claims, security interests or encumbrances arising out of the Contract and unsettled;
2. failure of the Work to comply with the requirements of the Contract Documents; or
3. terms of special warranties required by the Contract Documents.

**9.11.5** Acceptance of final payment by the Contractor, a Subcontractor or supplier shall constitute a waiver of Claims by that payee, except those previously made in writing and identified by the payee as unsettled at the time of final Application for Payment.

## **ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

### **10.1 SAFETY PRECAUTIONS AND PROGRAMS**

**10.1.1** The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Owner may, but is under no obligation, point out unsafe conditions or operations.

**10.1.2** The Contractor shall at all times conduct operations and take precautions under this Contract in a manner to avoid risk or bodily harm to persons on or around the Work site and to avoid risk of damage to any property. The Contractor shall continuously inspect the construction operations and shall cause Subcontractors and all other entities on or around the Project to be aware of dangers or risks and to comply with applicable health or safety laws, codes, standards and regulations applicable to the locale where the Project is located.

### **10.2 SAFETY OF PERSONS AND PROPERTY**

**10.2.1** The Contractor shall take reasonable precautions for safety of, and shall provide reasonable



protection to prevent damage, injury or loss to:

1. employees on the Work and other persons who may be affected thereby and shall include clean work site, well maintained equipment, barricades, safety awareness programs or whatever effort that will best accomplish required protection;
2. students, staff and public either nearby or within the Project site that shall include re-routing pedestrian ways, re-routing traffic, providing signage, building of bridges, barricades, pedestrian tunnels, or whatever effort that will best accomplish required protection;
3. Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors; and
4. other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

**10.2.2** The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

**10.2.3** The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

**10.2.4** When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

**10.2.5** The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Subparagraphs 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible, except damage or loss attributable to acts or omissions of the Owner or Design Professional or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations stated throughout the Contract Documents.

**10.2.6** The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent, unless otherwise designated by the Contractor in writing to the Owner and Design Professional.

**10.2.7** The Contractor shall report in writing to the Owner and the Design Professional within **five (5) days** of an accident arising out of or in connection with the Work which caused lost time injury, personal injury, death or property damage, giving full details and statements of any witnesses. In cases





of serious bodily injury, death or serious property damage, Contractor shall immediately contact the proper authorities, as well as, Owner and Design Professional by the most expeditious means.

**10.2.8 Accident Reporting.** In case of an accident involving Contractor, its subcontractors, or the Work, an investigative report shall be prepared by Contractor and one copy thereof given to Owner within twenty-four (24) hours of the occurrence of the accident. Verbal notification of any serious injury that may require overnight hospitalization or fatal injuries shall be provided within one (1) hour of the injury.

### **10.3 HAZARDOUS MATERIALS**

**10.3.1** If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and immediately report the condition to the Owner and Design Professional in writing.

**10.3.2** The Owner shall obtain the services of a properly licensed testing 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 obtain the services of a remediation contractor to remove the hazard and to verify that it has been rendered harmless. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. The Contract Time adjusted as provided in Article 7. "Rendered Harmless" shall mean that the levels of such materials are less than any applicable exposure levels, including but not limited to EPA regulations.

**10.4** The Owner shall not be responsible under Paragraph 10.3 for materials and substances brought to the site by the Contractor.

**10.5** If, without negligence on the part of the Contractor, the Contractor is held liable for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Contract shall be equitably adjusted in accordance with Article 7.

### **10.6 EMERGENCIES**

**10.6.1** In an emergency affecting safety of persons or property, the Contractor shall use its best efforts to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency, shall be determined as provided in Paragraph 4.3 and Article 7.

**10.7 Liability for Property Damage:** Contractor shall continuously maintain adequate protection of Work from damage and shall at all times protect Owner's property, including materials furnished by Owner, from injury or loss. Contractor shall make good at its own expense any such damage, injury, or loss that may result from its effort in connection with the Work. Contractor shall provide all facilities for protection required by authorities having jurisdiction. Contractor shall be liable to Owner and its affiliates for any loss of or damage to the property of Owner and its affiliates resulting from Contractor's performance of the Work.



**10.8** Trespass: Contractor shall be solely responsible for any act of trespass or any injury to adjacent property resulting from or in connection with Contractor's performance of the Work. Contractor shall be liable for any claims that may arise from the deposit of debris of any kind on adjacent property.

**10.9** Underground Utility Facilities: Contractor shall be familiar with the requirements of the respective underground facility laws of the State of New Mexico. It shall be the Contractor's responsibility to locate all underground utility facilities in the Work site area including, but not limited to, tunnels and vaults for gas, electric, telephone, water, sanitary sewer lines, storm sewer lines, and the like, as well as to repair or pay for damage to these utility facilities. Contractor shall take the necessary steps to safeguard these underground utility facilities.

## **ARTICLE 11 INSURANCE AND BONDS**

### **11.1 LIABILITY INSURANCE**

**11.1.1** The Contractor and Subcontractors shall purchase from and maintain in a company or companies lawfully authorized to transact insurance in New Mexico, insurance that shall protect the Contractor and Subcontractors from claims set forth below, which may arise out of or result from operations under the Contract and for which the Contractor and Subcontractors may be legally liable, whether such operations be by the Contractor and Subcontractors or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

1. claims under Workers' Compensation, Disability Benefit and other similar Employee Benefit Acts, which are applicable to the Work to be performed;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
4. claims for damage for personal injury;
5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting there from;
6. claims for damages because of bodily injury, death of a person property damage arising out of ownership, maintenance or use of a motor vehicle;
7. claims for bodily injury or property damage arising out of completed operations; and
8. claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18.

Provision of insurance does not limit the liability of the Contractor under 3.18.1 herein.

**11.1.2** The Contractor shall ensure that liability insurance is maintained in accordance with Article 11 and may, at Contractor's option, either insure the activities of Subcontractors or require them to maintain insurance to cover all claims in Article 11. If the Owner is damaged by the failure or neglect of the Contractor to maintain insurance as described above, then the Contractor shall be liable for all costs and damages properly attributable thereto.



**11.1.3** The insurance required by Subparagraph 11.1.1 shall be written for not less than limits of liability specified herein or required by law, whichever coverage is greater. Coverage, shall be written on an occurrence basis and shall be maintained without interruption from the date of commencement of the Work until date of Final Payment and termination of any coverage required to be maintained after final payment.

**11.1.4** Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These certificates and the insurance policies required by this Paragraph 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least **forty-five (45) days** prior written notice has been given to the Owner. If any of the foregoing insurance coverages are requested to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Subparagraph 9.10.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both shall be furnished by the Contractor with reasonable promptness.

**11.1.4.1** The Certificates of Insurance shall clearly state the coverages, limits of liability, covered operations, effective dates and dates of expiration of policies of Insurance. The Contractor will promptly notify and furnish to the Owner copies of any endorsements that are subsequently issued amending coverage or limits. The Certificates of Insurance shall be in the appropriate ACORD form, or similar format acceptable to the Owner and shall include the following statements:

1. "The (*the name of the Owner whose name appears on the Agreement*), its agents, servants and employees are recognized as Additionally Insured."
2. "The insurance coverage certified herein will not be canceled or materially changed, except after **forty-five (45) days** written notice has been provided to the Owner"
3. "The insured will not violate, or permit to be violated, any conditions of this policy, and will at all times satisfy the requirements of the insurance company transacting the policy."
4. "The coverage provided by this certificate is primary."
5. "Nothing in this certificate of coverage will be construed to affect the Owner, agents, servants and employees defenses, immunities or limitations of liability under the New Mexico Tort Claims Act."

**11.1.5 Minimum Required Coverages:**

**11.1.5.1** Worker's Compensation Insurance shall be provided as required by applicable State law for all employees engaged at the site of the Project under this Contract, including Subcontractor employees. In case any class of employee engaged in work on the Project under this Contract is not protected under the Worker's Compensation Statute, the Contractor shall provide, and cause each Subcontractor to provide Employer's Liability Insurance in an amount not less than five hundred thousand (\$500,000). Failure to comply with the conditions of this Subparagraph 11.1.5.1 will subject this Contract to termination.

**11.1.5.2** Public Liability Insurance shall not be less than the liability amounts set forth in the New Mexico Tort Claims Act, §41-4-1 et seq. NMSA 1978, as it now exists or may be amended.



**11.1.5.3** Comprehensive Vehicle Liability Insurance, for both owned and non-owned vehicles, shall be one million dollars (\$1,000,000) per occurrence combined single limit for both personal injury and property damage.

## **11.2 OWNER'S LIABILITY INSURANCE**

**11.2.1** The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

## **11.3 (NOT USED)**

## **11.4 PROPERTY INSURANCE**

**11.4.1** The Contractor shall provide insurance ("builder's risk") which will protect the interests of the Contractor and Subcontractors in the Work. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until Final Payment has been made as provided in Paragraph 9.11 or until no person or entity other than the Owner has an insurable interest in the property required by this Paragraph 11.4 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, and Subcontractors in the Project.

**11.4.1.2** This property insurance may not cover portions of the Work stored off the site or any portions of the Work in transit. Insurance covering Work or materials stored off site shall be in accordance with sub-paragraph 9.3.2.

**11.4.1.3** Partial occupancy or use in accordance with Paragraph 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

**11.4.2** Boiler and Machinery Insurance. The Owner shall purchase and maintain Equipment Breakdown Coverage if required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner, this insurance shall include interests of the Owner, Contractor and Subcontractors in the Work.

**11.4.3** Loss of Use Insurance. The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

**11.4.4** If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if



possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Modification / Change Request Change Order.

**11.4.5** If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site, by property insurance under policies separate from those insuring through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive rights in accordance with the terms of Subparagraph 11.4.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

**11.4.6** Before an exposure to loss may occur, the Contractor may review any Owner provided insurance required by this Paragraph 11.4. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least **thirty (30) days** prior written notice has been given to the Contractor.

**11.4.7** Waivers of Subrogation. The Owner and Contractor waive all rights against each other and any of their subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Paragraph 11.4 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner. The Owner or Contractor, as appropriate, shall require of the Design Professional, Design Professional's consultants, separate contractors described in Article 6, if any, and the subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity that would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly,

and whether or not the person or entity had an insurable interest in the property damaged. The provisions of this paragraph shall not include claims with respect to damages to non-work buildings or properties

**11.4.7.1..**The provisions of Paragraph 11.4.7 shall not be effective as to a person or entity whose acts or failures to act cause the harm and rise to a level beyond mere negligence.

**11.4.8** A loss insured under Owner's property insurance shall be adjusted by the Owner and made payable to the Owner for the insured's, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Subparagraph 11.4.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity.

**11.4.9** The Owner shall distribute in accordance with such agreement as the parties in interest may agree, or in accordance with an arbitration award in which case the procedure shall be as provided in Paragraph 4.6. If after such loss, no other special agreement is made, and unless the Owner terminates



the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

**11.4.10** The Owner shall have power to adjust and settle a loss with insurers.

## **11.5 PERFORMANCE BOND AND PAYMENT BOND**

**11.5.1** If the contract price exceeds \$25,000, the Contractor shall furnish Labor, Material and Performance surety bonds covering faithful performance of the Contract in amounts not less than 100 percent of the Contract amount, exclusive of GRT, unless Owner or the Contract Documents require a lesser percentage, for payment of obligations arising there under. These Labor, Material and Performance bonds shall be delivered to the Owner within **seven (7) days** of the Notice of Award or evidence satisfactory to the Owner that such bonds are forthcoming. Said bonds must comply with the requirements of §13-4-18, NMSA 1978. If the amount of the Sum of the Work is increased, the amounts of the bonds shall be increased accordingly.

Attach bonds as Exhibit G - Payment and Performance Bonds.

**11.5.1.1** A Subcontractor shall provide a performance and payment bond on a public works building project if the subcontractor's contract (to the Contractor) for work to be performed on a project is one hundred and twenty-five thousand (\$125,000) or more. Failure of a Subcontractor to provide required bond shall not subject the Owner to any increase in cost due to any substitution of an approved Subcontractor.

**11.5.2** Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

## **ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

### **12.1 UNCOVERING OF WORK**

**12.1.1** If a portion of the Work is covered contrary to the Design Professional's or Owner's request or to requirements specifically expressed in the Contract Documents, it must be uncovered for the Design Professional's and Owner's examination and be replaced at the Contractor's expense without change in the Contract Time.

**12.1.2** If a portion of the Work has been covered, which the Design Professional has not specifically requested to examine prior to its being covered, the Design Professional may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Modification in accordance with Article 7, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

### **12.2 CORRECTION OF WORK**

#### **12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION**



**12.2.1.1** The Contractor shall promptly correct Work rejected by the Owner or Design Professional or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such defective Work, including additional testing and inspections and compensation for the Design Professional's services and expenses made necessary thereby, shall be at the Contractor's expense.

**12.2.2 AFTER SUBSTANTIAL COMPLETION**

**12.2.2.1** In addition to the Contractor's obligations under Paragraph 3.5, if within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Subparagraph 9.8.6, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one year period for correction of the Work, if the Owner fails to notify the Contractor and gives the Contractor an opportunity to make the correction, the Owner waives the rights to require the correction by Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within reasonable time during that period after receipt of notice from the Owner or Design Professional, the Owner may correct it in accordance with Paragraph 2.4.

**12.2.2.2** The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work and in accordance with all other requirements of Subparagraph 9.8.6.

**12.2.2.3** The one-year period for correction of Work shall be extended by corrective Work performed by the Contractor pursuant to this Paragraph 12.2 and Sub-paragraph 9.8.6.

**12.2.3** The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

**12.2.4** The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

**12.2.5** Nothing contained in this Paragraph 12.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents or law. Establishment of the one-year period for correction of Work as described in Subparagraph 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be



sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

**12.2.6** Eleven (11) months after Substantial Completion, the Design Professional shall coordinate, with the Owner and the Contractor, an 11-Month Correction Period Inspection of all portions of the Work. Any Work found defective or needing adjustment or other correction in order to function and operate in accordance with the indication of the Contract Documents shall be promptly completed by the Contractor within **twenty (20) days**, or as otherwise agreed between the parties. The Owner may make such corrections or adjustments in accordance with Paragraph 2.4.

Refer to the roofing specifications for additional post-construction inspections.

### **12.3 ACCEPTANCE OF NONCONFORMING WORK**

**12.3.1** If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

## **ARTICLE 13 MISCELLANEOUS PROVISIONS**

### **13.1 LAW**

**13.1.1** The Contract shall be governed by the laws of the State of New Mexico and parties agree that the State of New Mexico District Court of the County, where the Project is located, shall have

exclusive jurisdiction to resolve all Claims, issues and disputes not otherwise resolved in accordance with the Contract Documents.

**13.1.2** The Owner's total liability to Contractor or any other entity claiming by, through, or under Contractor for any Claim, cost, loss, expense or damage caused in part by the fault of the Owner and in part by the fault of the contractor or any other entity or individual shall not exceed the percentage share that Owner's fault bears to the total fault of Owner, Contractor and all other entities and individuals as determined on the basis of comparative fault principles.

**.1 Owner's Disclaimer:** Owner assumes no responsibility for any understanding or representations made by any of its officers or agents during or prior to the negotiation and execution of the Contract Documents, including but not limited to representations concerning site conditions, unless such understandings or representations are expressly stated in a Contract Document signed by Owner that expressly provides therein that responsibility for such expressly stated understanding or representation is assumed by Owner. Representations made but not so expressly stated and for which liability is not expressly assumed by Owner in the Contract Documents shall be deemed only for the information of Contractor, and Owner will not be liable or responsible therefor.





**13.1.3** All Work shall be completed in accordance with and shall be inspected within requirements of the Construction Industries Licensing Act, Chapter 60, Article 13 NMSA 1978.

### **13.2 SUCCESSORS AND ASSIGNS**

**13.2.1** The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, that party shall nevertheless remain legally responsible for all obligations under the Contract.

**13.2.2** The Owner may, without consent of the Contractor, assign the Contract to an institutional lender providing construction financing for the Project. In such event, the lender shall assume the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

**13.2.3** The Contractor shall not assign the Contract or proceeds hereof without written consent of the Owner. If contractor attempts to make such an assignment without such consent, it shall be void and confer no rights to third parties; the Contractor shall nevertheless remain legally responsible for all obligations under the Contract. Any consent of the Owner to such assignment shall be written and include "it is agreed that the funds to be paid to the assignee under this assignment are subject to performance by the Contractor and to claims for services rendered or materials supplied for the performance and of the Work and other obligations of the Contract Documents in favor of any entity rendering such services or providing such materials".

### **13.3 WRITTEN NOTICE**

**13.3.1** Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was

intended, or if delivered at or sent by Registered or Certified Mail, Federal Express, or similar service with proof of delivery to the last business address known to the party giving notice.

### **13.4 RIGHTS AND REMEDIES**

**13.4.1** Duties and obligations imposed by the Contract Documents and rights and remedies available there under, shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

**13.4.2** No action or failure to act by the Owner, Design Professional or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval or acquiescence in a breach there under, except as may be specifically agreed in writing.

**13.4.3** Contractor shall carry out the Work without delay in accordance with the Contract Documents during any and all disputes or disagreements, unless otherwise agreed to by the Owner in writing.



**13.5 TEST AND INSPECTIONS**

**13.5.1** Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided by Subparagraph 2.2.4 or elsewhere in the Contract Documents, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, provided by the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals unless otherwise provided in the Contract Documents. The Contractor shall give the Owner and Design Professional timely notice of when and where tests and inspections and approvals are to be made so that the Design Professional may be present for such procedures. The Owner shall bear costs of tests, inspections or approvals which do not become requirements until after bids are received or negotiations concluded.

**13.5.2** If the Design Professional, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Subparagraph 13.5.1, the Design Professional will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Design Professional of when and where tests and inspections are to be made so that the Design Professional may be present for such procedures. Such costs, except as provided in Subparagraph 13.5.3, shall be at the Owner's expense.

**13.5.3** If such procedures for testing, inspection, or approval under Subparagraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Design Professional's services and expenses shall be at the Contractor's expense.

**13.5.4** Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Design Professional and to the Owner.

**13.5.5** If the Design Professional is to observe tests, inspections or approvals required by the Contract Documents, the Design Professional will do so promptly and, where practicable, at the normal place of testing.

**13.5.6** Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

**13.6 INTEREST**

**13.6.1** Payments due and unpaid undisputed amounts, under the Contract Documents, shall bear interest from the date payment is due in accordance with State statute regulating prompt payment.

**13.7 COMMENCEMENT OF STATUTORY LIMITATION PERIOD**  
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**13.7.1** As between the Owner and Contractor:

1. before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;
2. between Substantial Completion and Final Certificate for Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the final Certificate for Payment; and
3. after Final Certificate for Payment. As to acts or failures to act occurring after the relevant date of issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act of failure to act by the Contractor pursuant to any Warranty provided under Subparagraph 9.8.5, Paragraph 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

**13.8 EMPLOYMENT****13.8.1 Equal Employment Opportunity**

**13.8.1.1** The Contractor agrees not to discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or other in accordance with U.S. Executive Order 11246, as amended, and NM Executive Order 85-15. The Contractor and Subcontractors agree to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of nondiscrimination. and shall in all solicitation or advertisement for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex or national origin.

**13.8.1.2** If the Contract constitutes a federally assisted construction contract within the meaning of 41 CFR 60-1.3 (1987), then the equal opportunity clause of 41 CFR 60-1.4(b) is incorporated herein by reference.

**13.8.2 Wage Rates**

**13.8.2.1** For Contracts in excess of \$60,000, minimum wages will be paid as determined by the Department of Workforce Solutions (formerly the Office of the Labor Commissioner) in accordance with §50-4-20 to 50-4-30 NMSA 1978, entitled "Minimum Wage Act" The Contractor and Subcontractors shall deliver or mail copies of the certified weekly payrolls, prepared in accordance with regulations, to the Labor Commission and to the Design Professional.

**13.8.2.2** The scale of wages to be paid will be posted by the Contractor in a prominent and easily accessible place on the job site.

**13.8.3 Apprentices**

**13.8.3.1** Except as otherwise required by law, the number of apprentices in each trade or occupation employed by the Contractor and Subcontractors, material suppliers and equipment suppliers shall not



exceed the number permitted by the applicable standards of the United States Department of Labor, or, New Mexico Construction Industries Division.

#### **13.8.4 On-the-Job Relations with Contractor**

**13.8.4.1** The Contractor shall at all times have competent superintendent(s) or foremen on the job in immediate charge of the Work who shall receive communications from Design Professional or Owner in the prosecution of the Work, in accordance with the Contract Documents. Any person executing the Work, who in the opinion of the Design Professional or the Owner, appears to be incompetent or act in a disorderly or intemperate manner or violating provisions of the Contract Documents, shall upon written request, be immediately removed from the Project and not again be employed on any part of the Work. Failure to comply with this Subparagraph 13.8.4.1, shall upon the Owner's decision, be cause to immediately stop the Work in accordance with Paragraph 14.2.

#### **13.8.5 Employee Background Checks**

**13.8.5.1** The Contractor shall be responsible for complying with the provisions of §22-10.3.3.B NMSA 1978, regarding employees' having unsupervised access to students. In the event that §22-10.3.3.B NMSA 1978 applies, and upon prior approval by the Owner, reasonable costs for background checks shall be reimbursed without mark-up or fee.

**13.8.5.2** Reservation of Rights and Background Checks: Notwithstanding any other provisions to the contrary, Contractor shall provide workers skilled and specialized in the Work to which they are assigned. Owner reserves the right to require random drug testing and individual background checks of any employee of Contractor and subcontractors as necessary for the life, health and safety of school children. Owner will pay for such testing. **Contractor, by executing this Agreement, represents that no employee of Contractor, or subcontractors, is a convicted sex offender.**

Contractor and its subcontractors and agents shall perform security and background checks (including criminal history and sexual offender status), as well as drug and alcohol tests, for the purpose of determining a worker's suitability for the assignment. Such background checks and tests shall be at Contactor's expense. **Absolutely no worker with a sexual offender history shall be allowed to work on the subject project.**

**13.8.5.3** Owner reserves all rights to deny placement of any of Contractor's workers, or any worker employed by any subcontractor or agent of the Contractor, on Owner's premises, property, equipment or projects at its sole discretion; however, Owner is not responsible for the conduct of Contractor's workers, which is the sole responsibility of the Contractor. Such denial of placement of subject workers shall be conveyed subject to the provisions of notices , and/or in a manner consistent with the normal custom between Owner and Contractor.

#### **13.9 Records**

**13.9.1** In the even of a dispute between Owner and Contractor, the Owner shall have right to discovery and access to and the right to examine any accounting or other records of the Contractor involving transactions and Work related to this Contract for three (3) years after Final Payment or after final resolution of any disputes, whichever is later. The conditions of this paragraph apply



equally to Subcontractors and suppliers.

**13.9.2 Records and Audits:** Contractor shall maintain complete and accurate records concerning the Work and all related transactions for at least three (3) years from the date of Final Acceptance. This includes all records relating to compliance with applicable laws, compliance with a reasonable drug and alcohol policy, financial records related to the Work, employee qualifications and, to the extent applicable, U. S. Department of Transportation requirements. At any time but not later than three (3) years after final payment under this Agreement, Owner may make such audit of the records, invoices and substantiating material (including time records) as deemed necessary by Owner. Each payment made shall be subject to reduction and refund to Owner, or offset on future payments due Contractor, to the extent of amounts which are found by Owner not to have been properly payable or to have been overpaid, and shall also be subject to increase and payment to Contractor for underpayments to the extent of any amounts which are found by Owner to have been underpaid. Upon request by Owner, Contractor shall insert a clause containing all the provisions of this Article xxx, Records and Audits, in all subcontractors to permit Owner to make identical audits and inspections of the records of all subcontractors involved in performance of the Work.

**13.10 Gratuities:** Contractor shall not, under any circumstances, extend any gratuity or special favor to employees of Owner that might be reasonably construed as an attempt to influence the recipients in the conduct of their official duties.

**13.11 No Third-party Beneficiaries:** There are no third-party beneficiaries to this Agreement and no third person or entity shall claim that any portion of this agreement creates a duty running to that third person or entity.

**13.12 Fair Labor Standards Act.** Contractor warrants that any products purchased pursuant to this Agreement have been produced, and that all Work and all wages, hours and other forms or compensation have been provided, in compliance with the requirements of the Fair Labor Standards

Act of 1938, as amended, and regulations and orders pursuant thereto issued by the U.S. Department of Labor.

## **Article 14 TERMINATION OR SUSPENSION OF THE CONTRACT**

### **14.1 Termination by the Contractor**

**14.1.1** The Contractor may terminate the Contract if the Work is stopped for a period of **thirty (30) consecutive days** through no act or fault of the Contractor or a Subcontractor or their agents or any other persons or entities performing portions of the Work under the contract with the Contractor, for any of the following reasons:

1. issuance of an order of a court or other public authority having jurisdiction which requires all



Work to be stopped;

2. an act of government, such as a declaration or national emergency which requires all Work to be stopped;
3. because the Design Professional has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Subparagraph 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
4. the owner has failed to furnish to the Contractor promptly, upon the Contractor's written request, reasonable evidence as required by Subparagraph 2.2.1.

**14.1.2** The Contractor may terminate the Contract if, through no act or no fault of the Contractor or a Subcontractor or their agents or employees or any other persons or entities performing portions of the Work under contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Paragraph 14.3 constitute in the aggregate more than one hundred percent (100%) of the total number of days scheduled for completion, or **one hundred twenty (120) days** in any 365-day period, whichever is less.

**14.1.3** If one of the reasons described in Subparagraph 14.1.1 or 14.1.2 exists, the Contractor may, upon **seven (7) days** written notice to the Owner and Design Professional, terminate the Contract and recover from the Owner payment for Work executed, including overhead and profit in accordance with Article 7 for Work performed, and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery excluding, overhead and profit.

**14.1.4** If the Work is stopped for a period of **sixty (60) consecutive days** through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portion of the Work under contract with the Contractor because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon **seven (7) additional days** written notice to the Owner and the Design Professional, terminate the Contract and recover from the Owner as provided in Subparagraph 14.1.3.

## **14.2 TERMINATION BY THE OWNER FOR CAUSE**

**14.2.1** The Owner may terminate the Contract if the Contractor:

1. refuses or fails to supply enough properly skilled workers or proper materials;
2. fails to make payment to Subcontractors for material or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
3. disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction;
4. disregards the authority of the Owner or Design Professional;
5. fails after commencement of the Work to proceed day-to-day continuously with the construction and completion of the Work for more than **ten (10) days**, except as permitted



under the Contract Documents;

6. fails to maintain owner approved schedule or owner approved recovery schedule; and,
7. otherwise is guilty of substantial breach of a provision of the Contract Documents.

**14.2.2** When any of the above reasons exist, the Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety notice, as required by the surety bonds, if any, **seven (7) days** written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

1. take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
2. accept assignment of subcontracts pursuant to Paragraph 5.4; and
3. finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**14.2.3** When the Owner terminates the Contract for one of the reasons stated in Subparagraph 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**14.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Design Professional's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owners as the case may be, shall be certified by the Design Professional, upon application, and this obligation for payment shall survive termination of the Contract.

**14.2.5** In carrying out the Owner's right to complete the Work in accordance with Paragraph 14.2, the Owner shall have the right to exercise the Owner's sole discretion as to the manner, methods and reasonableness of costs of completing the Work.

### **14.3 SUSPENSION BY THE OWNER BY CONVENIENCE**

**14.3.1** The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

**14.3.2** The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Subparagraph 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

1. that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
2. that an equitable adjustment is made or denied under another provision of the Contract.

### **14.4 TERMINATION BY THE OWNER FOR CONVENIENCE**

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**14.4.1** The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

**14.4.2** Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall:

1. cease operation as directed by the Owner in the notice;
2. take action necessary, or that the Owner may direct, for the protection and the preservation of the Work; and
3. except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing Subcontracts and Purchase Orders.

**14.4.3** In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work completed.

**14.5** Survival of Obligations: Contractor's warranty obligations, compliance representations, indemnity obligations, and all performance obligations and guarantees, and indemnity obligations in the Contract Documents shall survive any termination of the Agreement, and the suspension, completion and acceptance of the Work, or any part thereof, or final payment to Contractor, it being agreed that said obligations and rights are and shall be of a continuing nature. The terms of Article 4.3, Claims and Disputes, shall also survive termination, suspension and completion of this Agreement.

**14.6** Entire Agreement: The Contract Documents represent the entire agreement and understanding between Owner and Contractor with respect to the subject matter hereof and performance of the Work, and supercede any prior understandings, representations or agreements, whether verbal or written, prior to execution of this Agreement. If any Work was performed by Contractor under verbal agreement or under a limited notice to proceed prior to the execution of this Agreement, then this Agreement shall apply thereto in the same manner as if made before such Work was performed.





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01 3510	APS Project Procedures
01 4000	Quality Requirements
01 5000	Temporary Facilities and Controls
01 6000	Product Requirements
01 6300	Product Substitution Procedures
01 6310	Prior Approval Substitution Request Form
01 6320	Contractor Substitution Request Form
01 7000	Execution Requirements
01 7500	Starting and Adjusting
01 7700	Closeout Procedures
01 7800	Closeout Submittals
01 7878	Energy Conservation Closeout Submittals
01 7900	Demonstration and Training
01 8627	Turn-Key Solar Photovoltaic System
01 9100	General Commissioning Requirements
01 9310	Post-Warranty Service & 3-Year Maintenance Agreement
	Post-Warranty Service & 3-Year Maintenance Agreement Form

## **SECTION 01 1000**

### **SUMMARY**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

A. Section Includes:

1. General description of Work and Contractor's duties.
2. Work by others.
3. Work sequence.
4. Contractor use of site.
5. Definitions.
6. Abbreviations.

[Click here to enter text.](#)

##### **1.2 WORK COVERED BY CONTRACT DOCUMENTS**

A. Work of this Contract covers construction of an approximate ?????? SF 2 story [Click here to enter text.](#) and related site work at Digital Arts Academy (DATA) School in Albuquerque, New Mexico.

##### **1.3 CONTRACTOR'S DUTIES**

- A. Except as noted, provide and pay for all labor, materials, and equipment.
- B. Pay required sales, gross receipts, and other taxes. Owner will pay Contractor applicable New Mexico gross receipts tax including local option tax and any increase in tax becoming effective after Contract date.
- C. Secure and pay for permits (including plan checking fees), fees, and licenses necessary for execution of Work as applicable at time of receipt of bids or as otherwise required in other sections of the Specifications.
- D. Give required notices.
- E. Comply with codes, ordinances, regulations, and other legal requirements of public authorities which bear on performance of Work.

- F. Request required inspections from public authorities, correct any noted deficiencies, and obtain certifications of satisfactory inspection. Deliver certificates to Owner in accordance with Section -1 7800 – Closeout Submittals.

[Click here to enter text.](#)

#### **1.4 WORK BY OTHERS**

- A. Owner will award separate construction contracts for purchase and installation of:

1. Moveable furniture and equipment except where noted.
2. Telephone and data cabling and equipment.
3. Fire and security alarm wiring and equipment.
4. Closed circuit television wiring and equipment.
5. Intercom and clock wiring and equipment.
6. Landscaping and irrigation systems.
7. Prefabricated Metal Building
8. Artificial Play Field

- B. Items noted “NOT IN CONTRACT” (NIC) will be supplied and installed by Owner:

1.

- C. Owner will remove and retain possession of the following items prior to start of Work:

1. Existing portables on site.

- D. Future work to be performed by others under separate contract to Owner:

1.

- E. Products supplied by Owner for installation by Contractor:

1.

- F. Owner’s responsibilities:

1. Schedule and assist Contractor in coordination of work by Owner’s own forces and separate contractors.
2. Schedule delivery of Owner supplied products.
3. Obtain and provide to Contractor shop drawings, product data, and installation instructions for Owner supplied products.

4. Arrange and pay for delivery of Owner supplied products to site.
  5. Submit claims for transportation damage and replace damaged, defective, or deficient items.
- G. Contractor's responsibilities:
1. Participate in coordination of work with other installers, including Owner's own forces and separate contractors.
  2. Inform Owner of required delivery dates for Owner supplied products and installation dates for work by others.
  3. Review shop drawings, product data, and installation instructions; coordinate installation with other work; and provide blocking and other preparation required for Owner supplied products.
  4. Unload Owner supplied products require to be installed by Contractor at site and inspect for completeness and damage. Assemble, finish and install products as indicated by Contract Documents.
  5. Repair or replace items damaged after receipt.

[Click here to enter text.](#)

## **1.5 WORK SEQUENCE**

- A. Construct Work in phases to accommodate [Owner's occupancy requirements].
  1. All work to be completed in single phase.
- B. Refer to Document 00 2000 – Instruction to Bidders and Document 00 4000 – Bid Form for time of completion for each phase.
- C. Coordinate construction schedule with Owner and Design Professional.

## **1.6 CONTRACTOR USE OF SITE**

- A. Contractor will have unrestricted use of site.
  1. Access to site by trucks, equipment, and automobiles. Limited to route and entrances designated in Section 01 5000 – Temporary Facilities and Controls. Schedule construction traffic and material deliveries to site during time periods coordinated in advance with Owner.

2. On site construction vehicle and equipment traffic shall be limited to pathways, areas, and time periods approved in advance by Owner to ensure safe site conditions. Special care shall be taken during change of class periods, student arrival/departure times and around playgrounds, bus zones and established student pathways. The Contractor shall strictly maintain close communication with designated school representative(s) on matter of on-site construction traffic scheduling and promptly inform them in advance of any significant changes to related pre-authorized arrangements. Do not proceed with altered arrangements prior to designated school representative(s) approval.
  3. Parking: Contractor and work force may use designated portions of existing site.
  4. Unless otherwise agreed to in advance by Owner, construction shall be performed only during these time periods:
    - a. Normal weekday work hours.
  5. Construction activities shall be limited to areas of actual construction. Unless otherwise agreed to in advance by Owner, restrict workmen from entering adjacent restricted areas.
  6. Existing student and staff toilet rooms are off-limits to Contractor unless they are not available for use by the school due to the approved schedule of work.
- B. Contractor shall make arrangements with Owner to secure any keys necessary for access to existing building and site areas so that the work can be performed. The Contractor assumes sole responsibility for the security and use of school keys obtained from the Owner and shall not reproduce them nor lend them out during the progress of work.
- C. Comply with Owner's procedures for individual visual identification of Contractor's workforce on school site and in occupied areas. If identification badges are required make sure that they are worn at all times on site during the work.
- D. Do not allow dust and debris to blow onto adjacent restricted areas.
- E. Provide 72 hours notice to Owner for any work that may interrupt or otherwise impact the facility's normal operation including noisy dust or odor producing activities.
- F. Emergency exits shall be maintained during construction in a manor satisfactory to the Architect, Owner, and local officials having jurisdiction over emergency procedures and fire safety at the school. Notify Architect and Owner of any proposed modifications to emergency exits in advance of making changes due to construction.

G. Utility outages and shutdowns:

1. Maximum allowable duration: 4 hours or as approved in advance by Owner.
2. Coordinate all utility shutdowns which affect the operation of the school and neighbors with the Architect, Owner, and any entity having jurisdiction over or ownership of impacted public or private utility infrastructure.
3. Schedule outages during off hours to facilitate Owner's operations.
4. Submit written requires for outage to Architect 72 hours before anticipated outage. Outage must be approved in writing by Design Professional.

H. Owner reserves right to place and install equipment and furnishings in completed areas of building prior to Substantial Completion, provided such occupancy does not interfere with construction. Placing of equipment and furnishings does not constitute Substantial Completion of any portion of the Work. An inspection by Contractor, Owner and Architect shall be made prior to such limited occupancy solely for the purpose of establishing the condition of finishes and other items that might be damaged or obscured by placement and installation of Owner's items.

## 1.7 IDENTIFICATION OF ENTITIES

A. Where the term "Design Professional" is used in the Contract Document it is defined as the authorized representative designated by Owner and acting within the scope of the particular duties entrusted to such representative.

1. Design Professional: FBT Architects
2. Project Manage: Susan Johnson
3. Address:  
6501 Americas Parkway NE  
Suite 300
4. Telephone number: 505-883-5200
5. Fax number: 505-884-5390
6. Email address: [sbj@fbtarch.com](mailto:sbj@fbtarch.com)

B. Where the term "Owner" is used in the Contract Documents, it is defined as Albuquerque Public Schools (Albuquerque Municipal School District Number 12, Bernalillo and Sandoval Counties, New Mexico).

1. School District Contact (Staff Architect/Engineer): Myron Johnson

2. Address: 915 Oak Street, SE, Albuquerque, NM 87106
3. Telephone number: 505-848-8811
4. Fax number: 505-246-9020
5. Email address: johnson\_my@aps.edu

## **1.8 DEFINITIONS**

- A. Refer to Document 00 7000 – General Conditions, Article 1.1 for definitions of terms used within Contract Documents.
- B. Additional terms used within Specifications but not defined by Document 00 7000 – General Conditions shall have the following definitions:
  1. Products: Materials, manufactured items, components, fixtures, machinery, equipment, or systems forming the Work but not including machinery, equipment, and other aids used for preparing, fabricating, conveying, and installing the work.
  2. Supply: Furnish, deliver, and unload at Project site. Same meaning as furnish.
  3. Furnish: Supply, deliver, and unload at Project site. Same meaning as supply.
  4. Install: Operations and Project site to incorporate products into the Work such as unpacking, assembling, anchoring, erecting, applying, placing, curing, finishing, and preparing for use.
  5. Provide: To supply or furnish a product and to also install it.
  6. Execution: Operations at Project site including preparatory actions, installing, and post-installation adjusting, testing, cleaning, and demonstrating.

## **1.9 ABBREVIATIONS**

- A. Abbreviations used within the Specifications are defined as follows. For abbreviations not listed, contact Architect for definitions.

ASTM – American Society for Testing and Materials.  
ANSI – American National Standards Institute  
CF – Cubic feet.  
CFM – Cubic feet per minute.  
F – Fahrenheit.  
LF – Linear feet.  
LB – Pound.

- MPH – Miles per hour.  
SF – Square feet.  
SY – Square yards.  
PSI – Pounds per square inch.  
PSF – Pounds per square foot.  
RPM – Revolutions per minute.  
IBC – International Building Code as published by International Code Council.  
UL – Underwriters Laboratory.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION**



## SECTION 01 2000

### PRICE AND PAYMENT PROCEDURES

#### PART 1 - GENERAL

##### **1.1 SUMMARY**

A. Section includes procedures for:

1. Schedule of Values.
2. Applications for Payment.
3. Contract modifications.
4. Unit prices, if any.

##### **1.2 SCHEDULE OF VALUES**

A. Procedures:

1. Submit for review by Design Professional 3 copies of preliminary Schedule of Values within 7 days of Agreement Between Owner and Contractor.
2. Revise to address review comments and resubmit.
3. Final Schedule of Values: Revise Schedule to incorporate review comments and submit 3 copies at least 7 days before submittal of initial Application for Payment.
4. During construction, revise and resubmit 3 copies of Schedule of Values to incorporate approved Change Orders.

B. Format: Typed schedule on standard form or electronic media printout approved by Design Professional. Sum of all values shall equal total Contract Sum.

C. Content: Use Project Manual Table of Contents as basis for line items. Cross reference line items with number and title of corresponding specification section. Provide sufficient detail to allow computation of values for progress payments during construction.

1. Include within each line item a directly proportional amount of Contractor's overhead and profit.
2. Provide separate line items for materials and for installation when materials will be stored on site prior to installation such that cost of stored materials will be included separately on an Application for Payment.

3. Provide separate line items for:
  - a. Each allowance included in Contract Sum.
  - b. Each additive alternate selected by Owner.
  - c. Each Contract modification.
  - d. For bonds.
  - e. Insurance.
  - f. Documentation Closeout.
  - g. New Mexico gross receipts tax.

### **1.3 APPLICATIONS FOR PAYMENT**

- A. Format: AIA Form G702 – Application and Certificate for Payment and AIA G703 or alternative form approved by Design Professional – Continuation Sheet or Contractor’s electronic media driven form as approved by Design Professional.
- B. Payment period: Monthly or as otherwise stipulated in Document – 5000 – Agreement Between Owner and Contractor.
- C. Preparation:
  1. Use Schedule of Values for listing items in Application for Payment.
  2. Complete each entry on Application for Payment form. Incomplete forms will be returned without action.
  3. List each authorized Change Order as a separate line item in same format as other line items.
  4. Provide subtotals and total.
  5. Indicate total percentage of all work completed as of the date of the Application.
  6. Applications shall be signed and dated by authorized officer of Contractor. Signature shall be notarized.
- D. Include with Application for Payment appropriate invoice for materials stored on site.
- E. At request of Design Professional, provide substantiating data justifying dollar amounts in question.
- F. Submittal: Submit 3 executed copies of each Application for Payment.

1. Initial Application for Payment: Submit after the following have been submitted and accepted by Design Professional and Owner.
  - a. Certifications of insurance required by Document 00 7000 – General Conditions of the Contract.
  - b. Copy of building permit.
  - c. Schedule of Values as required by Paragraph 1.2.A.
  - d. Progress schedule as required by Section 01 3100 – Project Management and Coordination.
  - e. Submittal schedule as required by Section 01 3300 – Submittal Procedures.
2. Subsequent Applications for Payment:
  - a. Submit with Applications of Payment:
    - (1) Include the Updated Progress Schedule specified in Section 01 3100 – Project Management and Coordination.
    - (2) Updated Submittal Schedule specified in Section 01 3300 – Submittal Procedures.
  - b. Prior to acceptance of each Application for Payment, Design Professional will review Project Record Drawings specified in Section 01 7700 – Closeout Procedures.
3. Application of Payment at substantial Completion: Submit after issuance of Certificate of Substantial Completion and in accordance with Section 01 7700 – Closeout Procedures.
4. Final Application for Payment: Submit after completion of final cleaning, final inspection, final submittals, and other final completion procedures specified in Section 01 7700 – Closeout Procedures.

#### **1.4 CONTRACT MODIFICATION PROCEDURES**

- A. Changes in the Work shall be determined and Change Orders executed in accordance with Document 00 7000 – General Conditions.
  1. Minor changes: Design Professional will advise of minor changes in Work not involving adjustment to Contract Sum or Time by issuing supplemental instructions on AIA Form G710.

2. Design Professional requested Change Order: Design Professional may issue a Modification/Change Request (MCR) with detailed description of proposed change and supplementary drawings and specifications as required.
  3. Design Professional will prepare Change Orders to adjust Contract Sum for:
    - a. Differences in costs between products purchased and cash allowances stated in Section 01 2100 – Allowances, if applicable.
    - b. Differences in cost for unit price work based on estimated quantities and cost computed with actual measured quantities, if applicable.
  4. Contractor proposed Change Order: Contractor any propose change by submitting a Modification/Change Request to Design Professional (MCR) describing proposed change, reason for change, and its effect on Contract Sum and Time. Complete MCR Worksheet(s) shall be provided by Contractor for each MCR to facilitate checking of itemized costs and percentages (copy of Form 01 2010 MCR Worksheet included after this Section). Document requested substitutions in accordance with Section 01 6300 – Product Substitution Procedures.
  5. A Modification/Change Request signed by the Owner for subsequent inclusion in a Change Order may instruct Contractor to proceed with a change in the Work. Document will describe changes and designate method of determining changes in Contract Sum and Time.
- B. Documentation: Maintain adequate records and provide full information required for evaluation of proposed changes and to substantiate costs. The Contractor shall provide:
1. Itemized product, labor, and equipment quantities and costs.
  2. Amounts for taxes, insurance, and bonds.
  3. Overhead and profit amounts.
  4. Justification for changes in Contract Time.
  5. Documentation credits for deletions.
- C. Methods for determining adjustments to Contract Sum:
1. Stipulated sum: Based on Design Professional’s Modification/Change Request (MCR) and Contractor’s price quotation or Contractor’s MCR as approved by Design Professional. Completed MCR Worksheet(s) shall be provided by

Contractor for each MCR to facilitate checking of itemized cost and percentages (copy of Form 01 2010 MCR Worksheet included after this Section).

2. Unit prices: Computed from unit prices stated in Contract Documents or subsequently agreed upon and actual measured quantities installed.
  3. Time and material: Maintain detailed records for work performed on time and material basis. Submit itemized account and full supporting data after completion of change within stated time limitations. Design Professional will determine allowable change in Contract Sum and Time. Supporting data shall include as follows:
    - a. Names of personnel performing work.
    - b. Dates and times work was performed and by whom.
    - c. Time records and wage rates paid.
    - d. Invoices for products, equipment, and subcontractors.
- D. Revision of documents: After authorization of Change Order revise:
- a. Schedule of Values and Application for Payment forms to record each Change Order as a separate line item and adjust Contract Sum and Time.
  - b. Progress Schedules to reflect changes in Contract Time and to adjust times for other work items affected by changes. Resubmit revised schedule.
  - c. Record changes in Project Record Documents.

## 1.5 UNIT PRICE PROCEDURES

**[\*\*\*\*\*Include this article if certain items of work are to be bid as unit prices. Document 00 300 – Bid Form will need to include a bid item for each unit price item of work and state the estimated quantity. Each specification section which contains unit price work should cross reference to this section for unit price procedures.\*\*\*\*\*]**

- A. Prices: Certain items of work are to be bid as unit prices. Prices are to include all necessary material, labor, equipment, overhead, profit, insurance, applicable taxes, and bond.
- B. Quantities: Quantities set forth in the Bid Form are estimated on which bids will be compared and the Contract Sum determined.
  1. If actual work required more or fewer of an indicated quantity, provide the required quantity at the established unit price.

2. Owner reserves the right to increase or decrease quantities by 15 percent.
  3. If actual work requires a change in a Contract unit price quantity exceeding plus or minus 15 percent, Owner or Contractor may request that an adjustment of the unit price be negotiated.
- C. Measurement: Take all measurements and compute quantities. Design Professional will verify measurements and quantities. Measurement of quantities shall be by weight, volume, area, linear measurement, number of items, or other methods as described in individual sections.
- D. Payment: Payment will be made for work actually performed and will be computed by multiplying verified quantity by unit price.
- E. Adjustment: The final Contract Sum will be adjusted by Change Order to reflect actual approved quantities for unit price items.

## **PART 2 - PRODUCTS**

Not used.

## **PART 3 - EXECUTION**

Not used.

**END OF SECTION**

**MODIFICATION / CHANGE REQUEST NO.** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**PROJECT NO.** \_\_\_\_\_

**DESCRIPTION OF PROPOSED WORK:** [Click here to enter text.](#)

NOTE: Fill out a separate worksheet for each subcontractor on this MCR. The GC shall use this same form to summarize the total of all subcontractor proposals while adding GC costs. Attach all worksheets and

breakdowns to summary sheet for each MCR.

**SUBCONTRACTOR'S COSTS (ATTACH SUBCONTRACTOR'S SHEET AND COST BREAKDOWNS):\***

- |   |   |          |
|---|---|----------|
| 1 | Total of subcontractor's material (attach itemized breakdown):  | \$ _____ |
| 2 | Total of subcontractor's labor cost including fringe benefits and labor burden (attach itemized breakdown): | \$ _____ |
| 3 | Other directly attributable costs allowed (attach itemized breakdown):                                      | \$ _____ |
| 4 | Subtotal:   | \$ _____ |
| 5 | Subcontractor's O&P _____%:   | \$ _____ |
| 6 | Subcontractor's Bond:   | \$ _____ |
| 7 | Permits paid by subcontractor:  | \$ _____ |
| 8 | Subcontractor's Total Costs:  | \$ _____ |

**GENERAL CONTRACTOR'S COSTS (ATTACH WORKSHEETS)\***

- |    |  |          |
|----|--|----------|
| 9  | GC's material (attach itemized breakdown):   | \$ _____ |
| 10 | General Contractor's labor cost including fringe benefits and labor burden @ _____% (attach itemized breakdown): | \$ _____ |
| 11 | Construction equipment (rental).   | \$ _____ |
| 12 | Directly attributable field supervision, insurance, etc. (attach itemized breakdown):                            | \$ _____ |
| 13 | Subtotal:  | \$ _____ |
| 14 | General Contractor's Overhead \$ Profit on subcontractor ( _____ % of Item 8):                                   | \$ _____ |
| 15 | General Contractor's Overhead & Profit on work by General Contractor's forces ( _____ % of Item 13):             | \$ _____ |
| 16 | Subtotal (sum of Items 13, 14 and 15):   | \$ _____ |
| 17 | Bond ( _____ % of Item 16):  | \$ _____ |
| 18 | Permits paid by General Contractor:  | \$ _____ |
| 19 | Subtotal (sum of Items 8, 16, 17 and 18):  | \$ _____ |
| 20 | Gross Receipts Tax _____% of Line 19:  | \$ _____ |
| 21 | General Contractor's total cost (sum of Lines 19 and 20):  | \$ _____ |

\* **Allowable costs and percentages shall not exceed those indicated in Article 7.2.5.**

[DO NOT USE ALLOWANCES WITHOUT PERMISSION OF APS FDC]

**SECTION 01 2100**

**ALLOWANCES**

**PART 1 - GENERAL**

**1.1 SUMMARY**

A. Section includes:

1. Cash allowances: Descriptions, amounts, and procedures for cash allowances covering the following:

a. Pre-selected HAC Equipment

b.

**1.2 CASH ALLOWANCES**

A. Costs included in cash allowances:

1. Cost of product or service to Contractor or subcontractor less applicable trade discounts.

2. Delivery to site or location designated by Architect.

B. Costs not included in cash allowance but included in Contract Sum:

1. Product handling and storage at the site.

2. Contractor's overhead and profit.

3. Installing Subcontractor's overhead and profit.

4. Applicable taxes are applied to the Base Bid and Bid Lots.

C. Depending on the product or service, cost of production, installation, finishing, testing, and demonstration may be included in cash allowance. Refer to individual allowance descriptions.

D. Architect's responsibilities:

1. Consult with Contractor for consideration and selection of allowance products or service.



2. Select products or arrange for service in consultation with Owner and transmit decision to Contractor.
  3. Prepare Change Orders.
- E. Contractor's responsibilities:
1. Assist Architect in selection of allowance products or service.
  2. Obtain proposals from suppliers and offer recommendations.
  3. On notification of selection by Architect and Owner, execute purchase agreement with designated supplier.
  4. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
  5. Promptly inspect allowance products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
- F. Differences in cost between allowances and products purchase will be adjusted by Change Order unless indicated otherwise in Contract.

### **1.3 CASH ALLOWANCE SCHEDULE**

**[\*\*\*\*\*Each specification section that contains work covered by a cash allowance should have a cross reference to this section. Amount of cash allowance should be stated in this section and not repeated in other sections.\*\*\*\*\*]**

- A. Division 23-Heating, Ventilating and Air Conditioning: Include the sum of \$[ ] for Pre-selected HVAC Equipment. Refer to attached Equipment List. The Pre-selected HVAC Equipment is to be provided without substitutions allowed.
- B. Section [ ] – [ ]: Include a sum calculated from required quantity and stated unit price of \$[ ] per [LB] [LF] [SF] [SY] [CF] [CY] [EACH] for purchase of [ ].
- C. Section [ ] – [ ]: Include sum of \$[ ] for installation of [ ].
- D. Section [ ] – [ ]: Include sum of \$[ ] for purchase, delivery, and installation of [ ].
- E. Section [ ] – [ ]: Include sum of \$[ ] for purchase, deliver, installation, testing and demonstration of [ ].

### **PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION**

[Consult APS FDC before using this Section; only Additive Alternates should be used.]

## **SECTION 01 2300**

### **ALTERNATES**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

- A. Section includes: Procedures and descriptions for alternates which decrease or increase scope of project.
- B. Alternates define a modification to a portion of the Base Bid.

##### **1.2 CONDITIONS**

- A. All requirements of General and Supplementary Conditions, applicable sections of Specifications, and applicable portions of Drawings shall govern scope, quality, and execution of alternates.
- B. Alternates will be selected in order listed on Bid Form and as allowed by available funding.

**[\*\*\*\*\*In order to simplify bidding and ensure low competitive prices, avoid or minimize the number of alternates and keep scope of alternates simple and direct. Typically, additive alternates are used. It is also possible to use deductive alternates.\*\*\*\*\*]**

**[\*\*\*\*\*Some alternates can result in either an increase or decrease in the bid amount. An example is bidding an alternative method or substitute material in order to determine the lowest cost for performing a work item. In this instance, alternates would not be described as either additive or deductive.\*\*\*\*\*]**

##### **1.3 ALTERNATE NO. 1 – none**

- A.

##### **1.4 PROCEDURES**

- A. Consider all work that must be accomplished for complete incorporation of alternates including modifications to Base Bid items.
- B. Include in lump sum prices for alternates all costs of labor, materials, equipment, permits, fees, insurance, bonds, overhead, and profit.

C. Immediately after aware of Contract, advise all necessary personnel and suppliers as to which alternates have been selected by Owner. Use all means necessary to alert those personnel and suppliers involved as to all changes in the work caused by Owner's selection or rejection of alternatives.

D. Coordinate related work and modify surrounding work of each alternate.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION**

## **SECTION 01 2301**

### **BID LOTS**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

- A. Section includes: Procedures and descriptions for Bid Lots which decrease or increase scope of project.

##### **1.2 CONDITIONS**

- A. All requirements of General and Supplementary Conditions, applicable sections of Specifications, and applicable portions of Drawings shall govern scope, quality, and execution of Bid Lots.
- B. Bid Lots are individual bids separate from the Base Bid. Bid Lots may or may not be awarded to the Successful Offeror for the Base Bid, or to other Offerors. Bid Lots may or may not be awarded in the order listed on Bid Form. Bid Lots will only be awarded as allowed by available funding.

##### **1.3 BID LOT NO. 1 – HVAC POST-WARRANTY SERVICE AND 3 YEAR MAINTENANCE AGREEMENT**

- A. Bid Lot requires provision of post-warranty service and 3 year maintenance agreement by the mechanical contractor as specified in Section 01 9310 – Post-Warranty Service & 3-Year Maintenance Agreement. (This is a separate contract between APS and the installing Mechanical Contractor [MC]).
- B. If Bid Lot is accepted, include as part of Bid Lot an executed Full Coverage Service & Maintenance Agreement (Section 01 9311).
- C. General Contractor provides MC's quote on the Form of Proposal, Bid Lot No. 1.
- D. General Contractor provides warranty and bonding for the first year installation and product warranty period.
- E. General Contractor is not contractually bound to the MC's separate extended Maintenance Agreement.
- F. MC is not required to bond the Maintenance Agreement, as the Agreement is for services, not installation.

## **BID LOT NO. 2 – TURN-KEY SOLAR PHOTOVOLTAIC SYSTEM**

- A. Bid Lot requires design, construction, and installation of a complete photovoltaic energy system as specified in Section 01 8627 – Turn-Key Solar Photovoltaic System. If Bid Lot is accepted, it becomes part of the Contract for Construction.
- B. Whether or not Bid Lot is accepted, provide quantity of two (2) size 3” inch empty conduits with pull strings from the main electrical room to and interior location near the PV location for future use, as part of Base Bid.
- C. General Contractor provides total proposed price of design/build PV system on the Form of Proposal, Bid Lot No. 2.
- D. General Contractor provides bonding and insurance through first-year installation and product warranty period.

**None**

### **3.4 PROCEDURES**

- A. Consider all work that must be accomplished for complete incorporation of Bid Lots including modifications to Base Bid items.
- B. Include in lump sum prices for Bid Lots all cost of labor, equipment, permits, fees, insurance, bonds, overhead, and profit.
- C. Immediately after award of Contract, advise all necessary personnel and suppliers as to which Bid Lots have been selected by Owner. Use all means necessary to alert those personnel and suppliers involved as to all changes in the work caused by Owner’s selection or rejection of Bid Lots.
- D. Coordinate related work and modify surrounding work to integrate work of each Bid Lot.

### **PART 4 - PRODUCTS**

Not used.

### **PART 5 - EXECUTION**

Not used.

**END OF SECTION**

## **SECTION 01 3100**

### **PROJECT MANAGEMENT AND COORDINATION**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

###### A. Section includes:

1. General requirements for coordination of Work.
2. Field engineering.
3. Construction Coordination.
4. Requirements for participation in and administration of:
  - a. Pre-construction conference.
  - b. Progress meetings.
  - c. Pre-installation conferences.
5. Progress schedule.
6. Construction photographs.

###### B. Related documents and sections:

1. Document 00 2000 – Instructions to Bidders: Pre-Bid Conference.
2. Section 01 1000 – Summary: Work by others.

##### **1.2 SUBMITTALS**

###### A. Provide in accordance with Section 01 3300 – Submittal Procedures:

1. Coordination drawings:
  - a. Provide where coordination is critical for installation of components fabricated off site and where space is limited and maximum utilization of space is required.
  - b. Show relationship and integration of components and construction entities, required installation sequence, dimensions, and tolerances.

###### B. Staff assignment list:

1. Prior to Pre-Construction Conference, provide to Design Professional a list of Contractor's principal staff assignments for Project. Indicate names, duties and responsibilities, addresses, emergency contact information, and telephone number. Include resume of proposed Project Superintendent showing prior experience as superintendent on projects of similar size and scope. Naming more than one Project Superintendent to be in charge depending which is present at the site will not be acceptable. Design Professional shall be informed in writing prior to any proposed change in Project Superintendent during progress of Work.
2. Distribute contact information and post in field office coordination.

### **1.3 GENERAL COORDINATION REQUIREMENTS**

- A. Scheduling: Coordination scheduling, submittals and work of various specification sections to ensure efficient and orderly sequence of installation of interdependent construction elements. Ensure that work of one specification section is not installed in such a manner as to limit, preclude, or restrict work of another section.
- B. Coordinate completion and clean up of work of space specification sections in preparation for final inspections specified in Section -1 7700 – Closeout Procedures.
- C. After acceptance of Work, coordinate access to facility for required maintenance, monitoring, adjusting, and correcting deficiencies to manner to minimize disruption of Owner's activities.
- D. Coordinate with Owner regarding work of Owner's forces and separate contractors. Ensure coordination of such work with Project Schedule.

### **1.4 FIELD ENGINEERING**

- A. Existing control datum for field engineering is indicated on Drawings.
- B. Locate or establish survey control and reference points prior to starting site construction. Protect points during construction and record locations with horizontal and vertical data on Project Record Documents in accordance with Section 01 7800 – Closeout Submittals.
- C. Prior to start of construction, verify location of control points and layout information on Drawings relative to property, setback, and easement lines.
- D. Provide competent field engineering services. Establish elevations, lines, and levels utilizing recognized engineering survey practices. Periodically verify layouts.
- E. Promptly replace dislocated control and reference points based on original survey control.



## **1.5 CONSTRUCTION COORDINATION**

- A. Contractor shall at all times be present at the Work in person, or represented by a competent superintendent who shall supervise and direct the Work, and shall be authorized by the Contractor to receive and fulfill instructions from the Design Professional and/or Owner.
- B. Contractor shall, at all times during working hours, be represented in all matters pertaining to the project by one, and only one, fully competent and experienced general superintendent. Instructions and information given by the Design Professional and/or Owner to the Contractor's superintendent shall be considered as having been given to the Contractor.
- C. Before any Work is done at the job site, Contractor shall give written notice to the Design Professional and Owner stating who the Contractor's superintendent will be, giving his home address and telephone number. The Design Professional and Owner shall be informed in writing prior to any change of general superintendent. A statement naming more than one representative at a time to be in charge and depending upon which is present at the time will not be acceptable.
- D. Verify that characteristics of elements of interrelated operating equipment are compatible and coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- E. With regards to pre-existing improvements or work in place which is not part of the Work under the Agreement, Contractor shall make proper connections with existing services, utilities, pavements and grades as indicated and provide all necessary materials, equipment, anchors, fastenings, etc. required for connections.

## **1.6 PRE-CONSTRUCTION CONFERENCE**

- A. Conference will be held after execution of the Agreement and prior to issuance of Notice to Proceed. Time and location will be coordinated with Owner and Design Professional. Meet at the site or other location convenient to all parties.
- B. Attendance: Owner, school principal or other designated school representative, Design Professional, consultants, Contractor, and major subcontractors and suppliers.
- C. Agenda Topics:
  - 1. Distribution of Contract Documents.
  - 2. Designation and description of roles of responsible personnel representing Owner, Contractor, and Design Professional.

3. Status of permits and Notice to Proceed.
4. User of premises by Contractor and Owner, Owner's occupancy requirements, work hours, regular school schedule and special schools schedule considerations.
5. Construction schedule, work schedule, and delivery priorities.
6. Weekly job meeting schedule.
7. Owner's right to salvage.
8. Presentation and discussion of site mobilization plan specified in Section 01 5000 – Temporary Facilities and Controls.
9. Construction facilities, controls, and temporary utilities.
10. Procedures for processing submittals, applications for payment, substitution requests, field decisions and communications, and contract modifications.
11. Testing and Inspections.
12. Wage rates.
13. Security, Contractor's use of keys, safety, first aid, and housekeeping.
14. Behavior of work force on schools site.
15. Procedures for spotting of utility lines.
16. Procedures for maintaining project record documents.
17. Requirements for start up of equipment.
18. Testing and inspection procedures.
19. Inspection and acceptance of equipment put into service during construction.
20. Contract closeout procedures.
21. Other pertinent items.

## **1.7 PROGRESS MEETINGS**

- A. Schedule and administer construction progress meetings throughout progress of Work. Meetings shall be held bi-weekly or more frequently as required. Location of meetings to be on site or other location approved by Design Professional.

- B. Make arrangements for meetings, prepare agenda, and distribute notice of meetings to participants, Design Professional, and Owner 3 days in advance of meeting.
- C. Preside at meetings. Record minutes and distribute copies within 3 days after meeting to participants, entities affected by meeting decisions, Design Professional, and Owner.
- D. Attendance: Contractor, job superintendent, and subcontractors and suppliers as appropriate to agenda. Owner representative, Design Professional, and consultants may attend as appropriate.
- E. Prepare agenda to cover topics pertinent to continued progress and successful completion of Work. Suggested topics:
  - 1. Review previous meeting minutes.
  - 2. Review schedules and progress, identify impediments, and determine measures to maintain schedules.
  - 3. Review field observations, problems, and decisions.
  - 4. Review status of submittals.
  - 5. Review off-site fabrication and delivery schedules.
  - 6. Quality control.
  - 7. Review proposed MCRs and pending proposals from Contractor including impact on schedule.

## 1.8 PRE-INSTALLATION CONFERENCES

**\*\*\*\*\*Each section requiring pre-installation conference should list items to be covered at conference and cross reference to this section for meeting procedures. If pre-installation conferences are not required, delete this article.\*\*\*\*\***

- A. When required by and individual specification section, convene a pre-installation conference at site.
- B. Require attendance of entities directly concerned with item of work.
- C. Notify Design Professional 4 days in advance of meeting.
- D. Prepare agenda and preside at conference. Record minutes, and distribute copies within 3 days to prepare participants and Design Professionals.

- E. At meeting review conditions of installation, preparation, and installation procedures, and coordination with related work.

## **1.9 PROGRESS SCHEDULE**

### **A. Format: Horizontal bar chart:**

1. Approximate sheet size: 17 x 28 inches.
2. Provide separate bar for each major item of work. Arrange in sequence and identify bars with specification section numbers and titles from Project Manual Table of Contents.
3. Horizontal scale: Time with first work day of each month identified. Adjust scale to show entire construction period plus extension.
4. Vertical spacing: Allow space for notations and revisions.

### **B. Show complete sequence of construction by activity. Indicate:**

1. Dates for beginning and completion of each construction item.
2. Projected percentage of completion for each item as of first work day of each month.
3. Projected percentage of completion for total Work as of first day of each month.
4. [Work of separate construction phases.]
5. Required delivery dates for Owner furnished products and required completion dates for work by others. Include separate Activities for Owner's Separate Contractors whose work is integrated into the construction schedule, milestones and obtaining the Certificate of Occupancy, such as hazardous materials abatement, Testing and Balancing, Commissioning, alarm systems, elevator phone system, Surveyor's certification of as-built grading and drainage, and landscaping where applicable.
6. Required dates for return of specific submittal and for selection of finishes [and products furnished under allowances].

### **C. Procedures:**

1. Submit for review by Design Professional 3 copies of preliminary Progress Schedule within 20 days of date of Agreement between Owner and Contractor but no later than submission of first payment application.

2. Revise to address review comments and resubmit.
3. Update Progress Schedule and submit 3 copies with each Application for Payment.
  - a. Identify progress of each activity to date of submittal and projected completion date.
  - b. Show activities modified since last submittal and other identifiable changes.
  - c. Provide narrative report as needed to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken or proposed and its effect.

## **1.10 COORDINATION DRAWINGS**

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
  1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Indicate functional and special relationship of components of architectural, structural, civil, mechanical, and electrical systems.
    - c. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
    - d. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
    - e. Indicate required installation sequences.
    - f. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating

proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
2. Plenum Space: Indicate sub framing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Mechanical and Plumbing Work: Show the Following:
  - a. Sizes and bottom elevations of ductwork, piping and conduit runs, including insulation, bracing, flanges, and support systems.
  - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
  - c. Fire-rated enclosures around ductwork.
7. Electrical Work: Show the Followings:
  - a. Runs of vertical and horizontal conduit 1-1/4 inches (31.5 mm) in diameter and larger.
  - b. Light fixtures, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.

- c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
  - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
8. Fire-Protection System: Show the following:
- a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
9. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make changes as directed and resubmit.

## **PART 2 - PRODUCTS**

### **2.1 EQUIPMENT**

- A. Verify utility requirements and characteristics of equipment are compatible with facility utilities. Coordinate work of various specification sections having interdependent requirement for installing, connecting to, and placing in service such equipment.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. Space requirements:
  - 1. Coordinate space requirements and installation of mechanical, electrical, and other work shown diagrammatically on Drawings. Follow routing shown for pipes, ducts, and wireways as closely as practicable. Utilize spaces efficiently to maximize accessibility for other installations, maintenance, and repairs.
  - 2. Where space is limited, coordinate installation of components to ensure maximum access for maintenance. Ensure space provided around equipment and fixtures complies with applicable codes.

- B. Concealment: In finished areas, conceal pipes, ducts, and wireways within construction except as otherwise indicated. Where practical, conceal supports, fasteners, and other attachment devices.
- C. Arrangement:
  - 1. Unless otherwise indicated, installations shall be aligned vertically and horizontally. Place piping, conduit, wireways, and other linear items parallel with lines of building.
  - 2. Coordinate mounting heights and spacing of components so that finished work is neat and orderly with organized appearance.
  - 3. Repetitive items such as hangers and fasteners shall be equally spaced unless indicated otherwise.
- D. Blocking, anchors, and supports: Determine and coordinate requirements for blocking, anchors, and supports needed for proper installation of products. Provide necessary components whether or not indicated on Drawings specified.
- E. Finished surfaces: Coordinate locations of fixtures, boxes, and other recessed or surface mounted items with finish elements and grades to ensure proper installation and neat appearance.

### **3.2 COORDINATION WITH INSTALLED CONSTRUCTION**

- A. Openings made in installed exterior surfaces shall be closed to protect construction from weather and extremes of temperature and humidity.
- B. Cutting and patching of installed construction shall be accomplished in accordance with Section 01 7000 – Execution Requirements.
- C. Remove, cut, and patch previously installed construction in a manner to minimize damage and to provide a means of restoring finishes to original or better condition.
- D. Where refinishing is required, provide a neat transition to adjacent surfaces.
- E. Patched work shall match existing adjacent work in texture and appearance.

**END OF SECTION**



**[\*\*\*\*\*The following section 01 3115 – Project Management Software is used on APS funded projects. If PSFA funds all or part of this project delete this section and substitute the second section 01 3115 – Project Management Software\*\*\*\*\*]**

## **SECTION 01 3115**

### **PROJECT MANAGEMENT COMMUNICATIONS**

#### **PART 1 - GENERAL**

##### **1.1 PROJECT MANAGEMENT SOFTWARE**

- A. Albuquerque Public Schools has adopted e-Builder software for project management.

##### **1.2 SUMMARY**

- A. Project Management Communications: The Contractor shall use the Internet web based project management communications tool, E-Builder<sup>®</sup> ASP software, and protocols included in that software during this project. The use of project management communications as herein described does not replace or change any contractual responsibilities of the participants.
  - 1. Project management communications is available through E-Builder<sup>®</sup> as provided by "e-Builder<sup>®</sup>" in the form and manner required by APS, and seat licenses shall be purchased by the Contractor.
  - 2. The project communications database is on-line and fully functional. User registration, electronic and computer equipment, and Internet connections are the responsibility of each project participant. The sharing of user accounts is prohibited.
- B. Training: E-Builder<sup>®</sup> will provide initial training sessions scheduled by APS, the cost of which is included in the initial users fee. Users are required to attend the scheduled training sessions they are assigned to. Requests for specific scheduled classes will be on a first come first served basis for available spaces. Companies may also obtain group training from E-Builder at their own expense, please contact E-Builder<sup>®</sup> for availability and cost.
- C. Support: E-Builder<sup>®</sup> will provide on-going support through on-line help files.
- D. Project Archive: The archive shall be available to each team member at a nominal cost. The archive set will contain only documents that the firm has security access to during construction. All legal rights in any discovery process are retained. Archive material shall be ordered from e-Builder<sup>®</sup>.

- E. Copyrights and Ownership: Nothing in this specification or the subsequent communications supersedes the parties' obligations and rights for copyright or document ownership as established by the Contract Documents. The use of CAD files, processes or design information distributed in this system is intended only for the project specified herein.
- F. Purpose: The intent of using E-Builder® is to improve project work efforts by promoting timely initial communications and responses. Secondly, to reduce the number of paper documents while providing improved record keeping by creation of electronic document files
- G. Authorized Users: Access to the web site will be by individuals who are licensed users.
1. Individuals may use the User Application included in these specifications or may request the User Application.
  2. Submit completed user application forms with check made payable to "e-Builder, Inc."
  3. Authorized users will be contacted directly by the web site provider, E-Builder®, who will assign the temporary user password.
  4. Individuals shall be responsible for the proper use of their passwords and access to data as agents of the company in which they are employed.
- H. Administrative Users: Administrative users have access and control of user licenses and all posted items. **DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE!** Improper or abusive language toward any party or repeated posting of items intended to deceive or disrupt the work of the project will not be tolerated and will result in deletion of the offensive items and revocation of user license at the sole discretion of the Administrative User(s).
- I. Communications: The use of fax, email and courier communication for this project is discouraged in favor of using E-Builder® to send messages. Communication functions are as follows:
1. Document Integrity and Revisions:
    - a. Documents, comments, drawings and other records posted to the system shall remain for the project record. The authorship time and date shall be recorded for each document submitted to the system. Submitting a new document or record with a unique ID, authorship, and time stamp shall be the method used to make modifications or corrections.
    - b. The system shall make it easy to identify revised or superseded documents and their predecessors.

- c. Server or Client side software enhancements during the life of the project shall not alter or restrict the content of data published by the system. System upgrades shall not affect access to older documents or software.
2. Document Security:
  - a. The system shall provide a method for communication of documents. Documents shall allow security group assignment to respect the contractual parties communication except for Administrative Users. **DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE!**
3. Document Integration:
  - a. Documents of various types shall be logically related to one another and discoverable. For example, requests for information, daily field reports, supplemental sketches and photographs shall be capable of reference as related records.
4. Reporting:
  - a. The system shall be capable of generating reports for work in progress, and logs for each document type. Summary reports generated by the system shall be available for team members.
5. Notifications and Distribution:
  - a. Document distribution to project members shall be accomplished both within the extranet system and via email as appropriate. Project document distribution to parties outside of the project communication system shall be accomplished by secure email of outgoing documents and attachments, readable by a standard email client.
6. Required Document Types:
  - a. RFI, Request for Information.
  - b. Submittals, including record numbering by drawing and specification section.
  - c. Transmittals, including record of documents and materials delivered in hard copy.
  - d. Meeting Minutes.
  - e. Application for Payments (final).
  - f. Architect's Supplemental Instructions.
  - g. Modification/Change Requests (MCR's).

- h. Change Orders (final).
  - i. Review Comments.
  - j. Daily Field Reports.
  - k. Construction Photographs.
  - l. Drawings.
  - m. Supplemental Sketches.
  - n. Schedules.
  - o. Specifications.
  - p. Punch Lists.
  - q. Commissioning Reports and Logs.
  - r. Close-Out Documents.
- J. Record Keeping: Except for paper documents, which require original signatures and large format documents (greater than 8½ x 11 inches), all other 8½ x 11 inches documents shall be submitted by transmission in electronic form to the E-Builder® web site by licensed users.
- a. The Owner and his representatives, the Construction Manager (if hired for the project) and his representatives, the Architect and his consultants, and the Contractor and his sub-contractors and suppliers at every tier shall respond to documents received in electronic form on the web site, and consider them as if received in paper document form.
  - b. The Owner and his representatives, the Construction Manager (if hired for the project) and his representatives, the Architect and his consultants, and the Contractor and his sub-contractors and suppliers at every tier reserves the right to and shall reply or respond by transmissions in electronic form on the web site to documents actually received in paper document form.
  - c. The Owner and his representatives, the Construction Manager (if hired for the project) and his representatives, the Architect and his consultants, and the Contractor and his sub-contractors and suppliers at every tier reserves the right to and shall copy any paper document into electronic form and make same available on the web site.
  - d. The following are some but not all of the paper documents which require original signature:
    - 1) Contract
    - 2) Change Orders

### 3) Application & Certificates for Payment

K. Minimum Equipment and Internet Connection: In addition to other requirements specified in this Section, the Owner and his representatives, the Construction Manager (if hired for the project) and his representatives, the Architect and his consultants, and the Contractor and his sub-contractors and suppliers at every tier required to have a user license(s) shall be responsible for the following:

1. Providing suitable computer systems for each licensed user at the users normal work location<sup>1</sup> with high-speed Internet access, i.e. DSL, local cable company's Internet connection, or T1 connection.
2. Each of the above referenced computer systems shall have the following minimum system<sup>2</sup> and software requirements:
  - a. Desktop configuration (Laptop configurations are similar and should be equal to or exceed desktop system.)
    - 1) PC system 2.4 MHz Intel Pentium 4 or equivalent AMD processor
    - 2) 2 GB Ram
    - 3) Display capable of SVGA (1024 x 768 pixels) 256 colors display
    - 4) 101 key Keyboard with mouse.
  - b. Operating system and software shall be properly licensed.
    - 1) Internet Explorer 9 or other browser (current version is a free distribution for download). This specification is not intended to restrict the host server or client computers provided that industry standard HTTP clients may access the published content.
    - 2) Computer Operating System: Microsoft Windows XP, Vista or 7.
    - 3) Adobe Acrobat Reader (current version is a free distribution for download).
    - 4) Or, users intending to scan and upload to the documents area of E-Builder® should have Adobe Acrobat (current version must be purchased).
    - 5) Users should have the standard Microsoft Office Suite (current version must be purchased) or the equivalent.

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<sup>1</sup> The normal work location is the place where the user is assigned for more than one-half of his time working on this project.

<sup>2</sup> The minimum system herein will not be sufficient for many tasks and may not be able to process all documents and files stored in the E-Builder® Documents area.

6) Scheduling Software: Microsoft Project or Primavera

- c. Scanner: minimum 800 x 600 pixels and a digital camera with minimum resolution of one (1) megapixel.
- d. Connection Speed/Minimum Bandwidth: DSL, ADSL, or T1 Line for transferring a minimum of 3 Mbps Downstream and 512 Kbps Upstream.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION**

**[\*\*\*\*\*The following section 01 3115 – Project Management Software is used on projects partially or wholly funded by NM PSFA. Delete the previous section 01 3115 – Project Management Software if this is the case.\*\*\*\*\*]**

## **SECTION 01 3115**

### **PROJECT MANAGEMENT COMMUNICATIONS**

#### **PART 4 - GENERAL**

##### **4.1 PROJECT MANAGEMENT SOFTWARE**

- A. Albuquerque Public Schools and the Public School Facilities Authority (PSFA) have adopted e-Builder software for project management.

##### **4.2 SUMMARY**

- A. Project Management Communications: The Contractor shall use the Internet web based project management communications tool, E-Builder<sup>®</sup> ASP software, and protocols included in that software during this project. The use of project management communications as herein described does not replace or change any contractual responsibilities of the participants.
  - 1. One seat license for E-Builder<sup>®</sup> will be provided by PSFA at no charge to the Contractor. Additional seat licenses can be purchased by the Contractor on an annual fee basis from E-Builder.
  - 2. The project communications database is on-line and fully functional. Electronic and computer equipment, and Internet connections are the responsibility of each project participant. The sharing of user accounts is prohibited.
- B. Training: PSFA will provide initial training.
- C. Support: PSFA will provide on-going technical support.
- D. Project Archive: The archive shall be available to each team member at a nominal cost. The archive set will contain only documents that the firm has security access to during construction. All legal rights in any discovery process are retained. Archive material shall be ordered from e-Builder<sup>®</sup>.
- E. Copyrights and Ownership: Nothing in this specification or the subsequent communications supersedes the parties' obligations and rights for copyright or document ownership as established by the Contract Documents. The use of CAD files, processes or design information distributed in this system is intended only for the project specified herein.

- F. Purpose: The intent of using E-Builder® is to improve project work efforts by promoting timely initial communications and responses. Secondly, to reduce the number of paper documents while providing improved record keeping by creation of electronic document files
- G. Authorized Users: Access to the web site will be by individuals who are licensed users.
1. Individuals may use the User Application included in these specifications or may request the User Application.
  2. Submit completed user application forms with check made payable to "e-Builder, Inc."
  3. Authorized users will be contacted directly by the web site provider, E-Builder®, who will assign the temporary user password.
  4. Individuals shall be responsible for the proper use of their passwords and access to data as agents of the company in which they are employed.
- H. Administrative Users: Administrative users have access and control of user licenses and all posted items. **DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE!** Improper or abusive language toward any party or repeated posting of items intended to deceive or disrupt the work of the project will not be tolerated and will result in deletion of the offensive items and revocation of user license at the sole discretion of the Administrative User(s).
- I. Communications: The use of fax, email and courier communication for this project is discouraged in favor of using E-Builder® to send messages. Communication functions are as follows:
1. Document Integrity and Revisions:
    - a. Documents, comments, drawings and other records posted to the system shall remain for the project record. The authorship time and date shall be recorded for each document submitted to the system. Submitting a new document or record with a unique ID, authorship, and time stamp shall be the method used to make modifications or corrections.
    - b. The system shall make it easy to identify revised or superseded documents and their predecessors.
    - c. Server or Client side software enhancements during the life of the project shall not alter or restrict the content of data published by the system. System upgrades shall not affect access to older documents or software.
  2. Document Security:
    - a. The system shall provide a method for communication of documents. Documents shall allow security group assignment to respect the contractual



parties communication except for Administrative Users. **DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE!**

3. Document Integration:
  - a. Documents of various types shall be logically related to one another and discoverable. For example, requests for information, daily field reports, supplemental sketches and photographs shall be capable of reference as related records.
4. Reporting:
  - a. The system shall be capable of generating reports for work in progress, and logs for each document type. Summary reports generated by the system shall be available for team members.
5. Notifications and Distribution:
  - a. Document distribution to project members shall be accomplished both within the extranet system and via email as appropriate. Project document distribution to parties outside of the project communication system shall be accomplished by secure email of outgoing documents and attachments, readable by a standard email client.
6. Required Document Types:
  - a. RFI, Request for Information.
  - b. Submittals, including record numbering by drawing and specification section.
  - c. Transmittals, including record of documents and materials delivered in hard copy.
  - d. Meeting Minutes.
  - e. Application for Payments (final).
  - f. Architect's Supplemental Instructions.
  - g. Modification/Change Requests (MCR's).
  - h. Change Orders (final).
  - i. Review Comments.
  - j. Daily Field Reports.
  - k. Construction Photographs.

- l. Drawings.
  - m. Supplemental Sketches.
  - n. Schedules.
  - o. Specifications.
  - p. Punch Lists.
  - q. Commissioning Reports and Logs.
  - r. Close-Out Documents.
- J. Record Keeping: Except for paper documents, which require original signatures and large format documents (greater than 8½ x 11 inches), all other 8½ x 11 inches documents shall be submitted by transmission in electronic form to the E-Builder® web site by licensed users.
- a. The Owner and his representatives, the Construction Manager (if hired for the project) and his representatives, the Architect and his consultants, and the Contractor and his sub-contractors and suppliers at every tier shall respond to documents received in electronic form on the web site, and consider them as if received in paper document form.
  - b. The Owner and his representatives, the Construction Manager (if hired for the project) and his representatives, the Architect and his consultants, and the Contractor and his sub-contractors and suppliers at every tier reserves the right to and shall reply or respond by transmissions in electronic form on the web site to documents actually received in paper document form.
  - c. The Owner and his representatives, the Construction Manager (if hired for the project) and his representatives, the Architect and his consultants, and the Contractor and his sub-contractors and suppliers at every tier reserves the right to and shall copy any paper document into electronic form and make same available on the web site.
  - d. The following are some but not all of the paper documents which require original signature:
    - 1) Contract
    - 2) Change Orders
    - 3) Application & Certificates for Payment
- K. Minimum Equipment and Internet Connection: In addition to other requirements specified in this Section, the Owner and his representatives, the Construction Manager (if hired for the project) and his representatives, the Architect and his consultants, and the

Contractor and his sub-contractors and suppliers at every tier required to have a user license(s) shall be responsible for the following:

1. Providing suitable computer systems for each licensed user at the users normal work location<sup>3</sup> with high-speed Internet access, i.e. DSL, local cable company's Internet connection, or T1 connection.
2. Each of the above referenced computer systems shall have the following minimum system<sup>4</sup> and software requirements:
  - a. Desktop configuration (Laptop configurations are similar and should be equal to or exceed desktop system.)
    - 1) PC system 2.4 MHz Intel Pentium 4 or equivalent AMD processor
    - 2) 2 GB Ram
    - 3) Display capable of SVGA (1024 x 768 pixels) 256 colors display
    - 4) 101 key Keyboard with mouse.
  - b. Operating system and software shall be properly licensed.
    - 1) Internet Explorer 9 or other browser (current version is a free distribution for download). This specification is not intended to restrict the host server or client computers provided that industry standard HTTP clients may access the published content.
    - 2) Computer Operating System: Microsoft Windows XP, Vista or 7.
    - 3) Adobe Acrobat Reader (current version is a free distribution for download).
    - 4) Or, users intending to scan and upload to the documents area of E-Builder® should have Adobe Acrobat (current version must be purchased).
    - 5) Users should have the standard Microsoft Office Suite (current version must be purchased) or the equivalent.
    - 6) Scheduling Software: Microsoft Project or Primavera

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<sup>3</sup> The normal work location is the place where the user is assigned for more than one-half of his time working on this project.

<sup>4</sup> The minimum system herein will not be sufficient for many tasks and may not be able to process all documents and files stored in the E-Builder® Documents area.

- c. Scanner: minimum 800 x 600 pixels and a digital camera with minimum resolution of one (1) megapixel.
- d. Connection Speed/Minimum Bandwidth: DSL, ADSL, or T1 Line for transferring a minimum of 3 Mbps Downstream and 512 Kbps Upstream.

**PART 5 - PRODUCTS**

Not used.

**PART 6 - EXECUTION**

Not used.

**END OF SECTION**

## **SECTION 01 3300**

### **SUBMITTAL PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

A. Section includes submittal procedures for:

1. Shop drawings.
2. Product data.
3. Samples.
4. Manufacturer's instructions.
5. Design data and calculations.
6. Manufacturer's certificates.
7. Reports for testing, inspecting, and demonstrating.
8. Refer to individual specification sections for unique submittal requirements related to a specific product.

##### **1.2 SUBMITTAL SCHEDULE**

A. Procedure:

1. Submit for review by Architect 3 copies of Submittal Schedule within 20 days of date of Agreement Between Owner and Contractor but no later than Notice to Proceed.
2. Revise to address review comments and resubmit.
3. Update Submittal Schedule to reflect change orders, Progress Schedule revisions, and status of individual submittals. Submit 3 copies with each Application for Payment.

B. Format: Tabular arrangement indicating:

1. Submittal number and title.
2. Related specification section number and title.

3. Proposed submittal date, actual submittal date, and date reviewed submittal is required.

### **1.3 SUBMITTAL PROCEDURES**

A. Schedule submittals to expedite Work. Unless otherwise noted, submittals shall be submitted within 45 days of date of Agreement between Owner and Contractor.

B. Preparation:

1. Provide separate submittal for each specification section requiring submittals. Include all material requested for that section. Provide folders or binders for material.
2. Coordinate submission of related items. Group submittals of related products or a system in a single transmission.
3. Identify variations from requirements of Contract Documents. State product and system limitations which may adversely affect Work.
4. Mark or show dimensions and values in same units as specified.
5. Provide 4 x 6 inches minimum space for Architect and Contractor review stamps.

C. Contractor review:

1. Review submittals prior to transmittal. Verify compatibility with field conditions and dimensions, product sections and designations, and conformance of submittal with requirements of Contract Documents. Return non-conforming submittals to originator for revision rather than submitting to Architect.
2. Coordinate submittals to avoid conflicts between various items of work.
3. Apply Contractor's stamp with signature certifying that review, verification of products required, field dimensions, adjacent construction, and coordination of information is in accordance with the requirements of the Contract Documents.
4. Failure of Contractor to review submittals prior to transmittal to Architect shall be cause for rejection.

D. Transmittal:

1. Transmit each submittal with a separate Submittal Transmittal Form. Copy of Form follows this Section.
2. Sequentially number transmittal forms. Re-submittals shall have original number with an alphabetic suffix.

3. Identify project, Contractor, subcontractor, supplier, pertinent drawing sheet and detail numbers, and associated specification numbers.
  4. Sign Submittal Transmittal Form and deliver submittals to Architect.
- E. Review: Architect will review and return submittals with comments.
- F. Do not fabricate products or begin work which requires submittals until return of submittal with Architect acceptance.
- G. On return promptly distribute reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- H. Resubmission:
1. Revise and resubmit submittals as required within 15 days of return from Architect.
  2. Make re-submittals under procedures specified for initial submittals.
  3. Identify all changes made since previous submittal.

#### **1.4 SHOP DRAWINGS**

- A. Submission:
1. Submit one reproducible transparency and 3 copies to be retained by Architect.
  2. Fold drawings to fit submittal folders.
- B. Form:
1. Size: 8½ x 11 inches minimum and 36 x 48 inches maximum except for full size details and templates.
  2. Present in a clear and thorough manner. Title each drawing with Project name. Identify each element of drawing with reference number.
  3. Plans, elevations, sections, and detail shop drawings shall be to scale with scale indicated.
  4. Indicate field verified dimensions. Show relationship of products to adjacent work. Note coordination requirements.
  5. Schematics and wiring and other diagrams shall be logically arranged and presented in a clear understandable manner with all items labeled.

#### **1.5 PRODUCT DATA**

A. Submission: Submit the number of copies which Contractor requires plus 3 copies to be retained by Architect.

B. Form:

1. Provide all critical information such as reference standards, performance characteristics, capacities, power requirements, wiring and piping diagrams, controls, component parts, finishes, dimensions, and required clearances.
2. Submit only data which are pertinent. Mark each copy of manufacturer's standard printed data to identify products, models, options, and other data pertinent to project.
3. Colors and patterns: Unless color and pattern is specified for product, submit accurate color and pattern charts or samples illustrating manufacturer's full range for selection by Architect. Submit for Architect's review accurate color and pattern samples as required for specified colors.

## **1.6 SAMPLES**

A. Submission:

1. Submit the number of samples specified in individual specifications sections. One sample will be retained by Architect.
2. Label each sample with identification related to Submittal Transmittal Form.
3. Submit samples at least 30 days prior to date Contractor needs approval for ordering or incorporation into Work.

B. Type: Submit samples to illustrate functional and aesthetic characteristics of the products, with all integral parts and attachment devices. Include full range of manufacturer's standard finishes, indicating colors, textures, and patterns for Architect selection.

C. Reviewed product samples may be used in work with approval of Architect.

## **1.7 MANUFACTURER'S INSTRUCTIONS**

A. Submission: Submit the number of copies which Contractor requires plus 3 to be retained by Architect.

B. Form:

1. Manufacturer's printed instruction for activities such as delivery, storage, assembly, installation, wiring, start-up, adjusting, finishing, and maintaining.



2. Indicate pertinent portions and identify conflicts between manufacturer's instruction and Contract Documents.

## **1.8 DESIGN DATA AND CALCULATIONS**

- A. Submission: Submit the number of copies which Contractor requires plus [3] [4] to be retained by Architect.
- B. Form:
  1. Provide basic calculations, analyses, and data to support design decisions and demonstrate compliance with specified requirements. State assumptions and define parameters. Give general formulas and references. Provide sketches as required to illustrate design method and application.
  2. Arrange calculations and data in a logical manner with suitable text to explain procedure.
  3. Indicate name, title, and telephone number of individual performing design and include professional seal of designer where applicable or required.

## **1.9 MANUFACTURER'S CERTIFICATES**

- A. Submission: Submit the number of copies which Contractor requires plus 3 to be retained by Architect.
- B. Form:
  1. Certificates shall indicate that products conform to or exceed specified requirements. Submit supporting reference data, affidavits, and certifications as required.
  2. Certificates may be based on recent or previous test results if acceptable to Architect.

## **1.10 REPORTS**

- A. Submission:
  1. Submit the number of copies which the Contractor requires plus 3 to be retained by Architect.
  2. Submit reports within 15 days after completion of activity.
- B. Form:
  1. Present complete information in a clear concise manner.

2. Typed or computer printed on 8½ x 11 inch white paper.
3. Bind with titled cover in folder, plastic binder, or three ring binder as appropriate for quality of material.

C. Reports shall include:

1. Time, location, condition, and duration of activity.
2. Names of persons performing and witnessing activity.
3. Description of activity, data record, and results.
4. Deficiencies found, corrective measures, and results of retesting.
5. Other pertinent data.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION**

**SUBMITTAL TRANSMITTAL FORM**

The undersigned, as Contractor for the above project, submits the following and certifies that submittal has been reviewed and it conforms with requirements of Contract Documents except as noted.

SUBMITTAL NUMBER: \_\_\_\_\_ RESUBMITTAL: YES NO

DATE: \_\_\_\_\_ NUMBER OF COPIES SUBMITTED: \_\_\_\_\_

DESCRIPTION:  
\_\_\_\_\_

ASSOCIATED SPECIFICATION SECTION NO: \_\_\_\_\_

REFERENCED DRAWING SHEET NO: \_\_\_\_\_

NAME OF SUBCONTRACTOR/SUPPLIER: \_\_\_\_\_

SUBMITTED  
BY: \_\_\_\_\_ DATE: \_\_\_\_\_

SIGNATURE:  
\_\_\_\_\_  
● \*\*\*\*\*

DATE RECEIVED BY ARCHITECT: \_\_\_\_\_

DISTRIBUTED TO:  
OWNER CIVIL LANDSCAPE STRUCTURAL MECHANICAL ELECTRICAL  
OTHER: \_\_\_\_\_

\*\*\*\*\*

\*\*\*\*\* Architect may modify specific language below in accordance with Architect's review stamp. \*\*\*\*\*

ACTION: No exceptions taken \_\_\_\_\_  
Make corrections noted \_\_\_\_\_ Revise and resubmit \_\_\_\_\_  
Rejected \_\_\_\_\_

COMMENTS:  
\_\_\_\_\_

Submittal review corrections and comments by Architect do not relieve Contractor from compliance with Contract Documents. Review is only for general conformance with design concept and general compliance with information given in Contract Documents. Contractor

is responsible for verifying dimensions, selecting fabrication processes and techniques of construction, coordination with other trades, and performing work in safe and satisfactory manner.

REVIEWED BY: \_\_\_\_\_ DATE:

\_\_\_\_\_  
SIGNATURE:

## **SECTION 01 3510**

### **APS PROJECT PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

A. This section includes special procedures for Albuquerque Public Schools projects.

1. APS Personnel.
2. Work by Others.
3. Access to facilities.
4. Security Procedures.
5. Use of Site.
6. Use of site facilities.
7. Schedule and Hours of Operation.
8. Safety and Appropriate Behavior.
9. Testing and Inspections.
10. Utility Locating.
11. Utility Interruptions.
12. Contractor Certifications.

##### **1.2 APS PERSONNEL**

- A. Construction Administration: provided by APS Facilities Design & Construction (FDC), 915 Oak Street, SE, Albuquerque, NM 87106; (505) 848-8810; fax (505) 246-9020.
- B. Director, FDC: Authorized signatory for contracts and modification to contracts.
- C. Staff Architect (or Engineer), FDC: Responsible for management of project during design and bidding phases. Also coordinates other FDC personnel.
- D. Construction Manager, FDC: Responsible for management of project during construction and occupancy. Also coordinates other FDC personnel.

- E. Site Administration: person, usually a Principal or Assistant Principal, responsible for a particular APS site.
- F. APS Maintenance and Operations: contact point for utility emergencies, M&O Control Center, 765-592-, extension 212.
- G. APS M&O Environmental Management Department: contact point for asbestos and hazardous materials in existing construction.
- H. APS Police: Respond to security incidents at schools, patrol only on occasion. General Contractor is responsible for security of work area.
- I. APS Risk Management: contact point for reporting of accidents and injuries on project.
- J. APS Public Information Office: contact point for media; refer all request by media to this office, or to the Director, FDC.
- K. All official communications from the General Contractor and its subcontractors will route through the General Contractor's Project Manager and/or Superintendent to the Design Professional. The Design Professional then communicates to the APS Construction Manager and/or Staff Architect (or Engineer), unless directed otherwise.
- L. The APS Construction Manager and/or Staff Architect (or Engineer) in turn will communicate with APS entities, vendors, designers and contractors. In emergency situations the General Contractor will directly contact the appropriate APS entity directly, and communicate actions taken to the Construction Manager and/or Staff Architect (or Engineer).

### **1.3 WORK BY OTHERS**

- A. APS will contract for the following work by others for this project: [Edit list].
- B. Asbestos Abatement, if any: contact APS M&O Environmental Management Department.
- C. Collection of PCB-containing ballasts, if any: contact APS M&O Environmental Management Department.
- D. Portable Building Movers and Installers.
- E. Fire Alarm System (infrastructure for system by General Contractor).
- F. Voice Communications System (infrastructure for system by General Contractor).
- G. Data Communications System (infrastructure for system by General Contractor).
- H. Security Alarm System (infrastructure for system by General Contractor).

- I. Testing and Balancing.
- J. Landscaping and Irrigation (irrigation sleeves by General Contractor).
- K. Playground Equipment (playground equipment areas, if any, by General Contractor).
- L. Owner-furnished equipment as identified in the construction documents (utility hook-ups by General Contractor unless noted otherwise).
- M. Furniture: by APS (utility connections to systems furniture, if any, by General Contractor).

#### **1.4 ACCESS TO FACILITIES**

- A. Except for new school construction (site not occupied by APS), contractor shall obtain keys to gates and buildings from the M&O Lockshop, 915 Oak Street, SE.

#### **1.5 SECURITY PROCEDURES**

- A. Except for new school construction (site not occupied by APS), contractor's access to site is limited to normal weekday work hours. For new construction comply with local codes, ordinances and property covenants.
- B. For after-hours and weekend access, contractor must fill out and submit, through the Site Administrator, a security release form to APS Police, to authorize after-hours access. General Contractor's Superintendent or designee calls APS Police immediately before an after-hours access to a site, and again immediately upon departing a site, to clear and reset the site's security alarms.
- C. Contractor Identification
  - 1. Badges: FDC will provide numbered badges for contractor's use within occupied facilities. Identifiable company work gear, safety vests or company vests may be sufficient identification for workers within secured work areas.
  - 2. Contractor's project superintendent shall sign in and out daily with school administration, projects at existing facilities.

#### **1.6 USE OF SITE**

- A. Except for new school construction (site not occupied by APS), various portions of the project site will be use by Owner and the public during the time that the work is performed.
- B. Schedule and coordinate the work to minimize disruption to school and site operations.

- C. Limit use of project site area essential to performance of the work; confine construction operations to areas designated in construction documents.
- D. Keep existing entrances and driveways serving the project site clear and available for use by Owner, public, students and staff, and emergency vehicles.
- E. Store materials and equipment only in designated areas; Contractor assumes full responsibility for the protection and safekeeping of such materials and equipment.
- F. Keep interior areas free from accumulation of waste materials, trash or construction debris.

### **1.7 USE OF SITE FACILITIES**

- A. Where available, contractor may use a site's power and water for construction operations.
- B. Contractor may not use sanitary facilities or drinking water at a school.

### **1.8 SCHEDULE AND HOURS OF OPERATION**

- A. It is anticipated that the Contractor will work normal weekday work hours. Early or late hours may be subject to neighborhood restrictions and noise control ordinances.
- B. APS reserves the right to re-schedule Contractor's operating during testing and examination periods; testing periods vary among schools and will be discussed at the pre-construction conference.
- C. APS reserves the right to re-schedule Contractor's heavy equipment operations during times when children are allowed to be outdoors, if such operations are in close proximity to play areas.
- D. APS reserves the right to re-schedule and control Contractor's movement of vehicles in and out of a construction site during morning drop-off and afternoon dismiss periods, if the site has traffic congestion.

### **1.9 SAFETY AND APPROPRIATE BEHAVIOR**

- A. Post signs limiting access to construction area on perimeter fence.
- B. Wear badges as determined at pre-construction conference.
- C. Implement safety and visitor check-in procedures as appropriate.
- D. Maintain emergency vehicle access, and fire drill routes, at site.



- E. Smoking, alcohol, and illegal drug use are prohibited on APS property. APS has a “no tolerance” policy which will require immediate removal of persons not complying with this requirement.
- F. No direct communication with children permitted. No foul language, sexist or racist comments allowed on APS property. APS has a “no tolerance” policy and will require immediate removal of persons not complying with this requirement.
- G. Report unscheduled tours and visitors to APS FDC.

#### **1.10 TESTING AND INSPECTIONS**

- A. Special Inspections required by code are provided by APS.
- B. Other testing and inspection [will] [will not] be provided by APS.
- C. Testing and balancing of HVAC systems is provided by APS.

#### **1.11 UTILITY LOCATING**

- A. APS is a member of New Mexico One-Call. Contact New Mexico One-Call for utility locations.

#### **1.12 UTILITY INTERRUPTIONS**

- A. Provide a minimum of 72 hours advance notice of planned utility interruptions to allow APS to schedule equipment shut-downs and re-starts associated with the interruptions, and to allow schools to reschedule programs due to shut-downs if necessary. Avoid shut-downs on school days.
- B. Protect facilities, grounds and equipment from damage due to shut-down and start-up of utilities. Repair of damage to APS property due to utility shut-downs is General Contractor’s responsibility.

#### **1.13 CONTRACTOR CERTIFICATIONS**

- A. Contractor shall sign and forward to the Architect/Engineer of record, who will in turn complete and return, the attached Certificate of Asbestos Free Construction (EPA AHERA 40 CFR 763.99 Paragraph (7) c).

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION**

## **SECTION 01 4000**

### **QUALITY REQUIREMENTS**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

A. Section includes:

1. Installation quality control.
2. Reference standards.
3. Mock-ups.
4. Field samples.
5. Inspection and testing laboratory services.
6. Manufacturer's field services and reports.

##### **1.2 INSTALLATION QUALITY CONTROL**

A. Monitor and maintain quality control over manufacturers, suppliers, subcontractors, work force, site conditions, products, and services to ensure Work is of specified, consistent quality.

B. Workmanship:

1. Specified requirements represent a minimum acceptable quality for Work. Comply with industry standards except when more stringent specified requirements and tolerances indicate higher standards or more precise workmanship.
2. Perform work with suitable qualified personnel to produce work of specified quality.
3. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and distortion.

C. Manufacturer's instructions:

1. Comply fully with manufacturer's instructions. Perform steps in manufacturer's recommended sequence.
2. Should instructions conflict with Contract Documents, request clarification from Architect before proceeding.

### 1.3 REFERENCE STANDARDS

**[\*\*\*\*\*Since this paragraph states that current edition of reference standards will apply, it is not necessary to indicate dates for standards in the remainder of the project manual.\*\*\*\*\*]**

- A. When specifications require conformance to a reference standard, applicable standard shall be the edition current at date of receiving bids.
- B. Should specified reference standard conflict with Contract Documents, request clarification from Architect.
- C. Contractual relationship, duties, and responsibilities of the parties to the Contract nor those of the Architect shall not be altered from that stated in the Contract Documents by mention or inference to the contrary in a specified reference standard.

### 1.4 MOCK-UPS

**[\*\*\*\*\*A mock-up is not part of construction. Sections requiring mock-ups should cross reference to this section. If mock-ups are not required, delete this article.\*\*\*\*\*]**

- A. When required by an individual specification section, construct mock-up of construction component or assembly [for review by Architect,] [testing,] [and demonstration].
- B. Assemble and erect mock-up with specified attachments, anchorage devices, flashings, seals, and finishes.
- C. Perform tests as specified in section requiring mock-up. Submit report in accordance with Section 01 3300 – Submittal Procedures.
- D. Mock-up accepted by Architect shall represent quality level for that item of work.
- E. After acceptance and use as quality standard, completely remove mock-up and clean area.

### 1.5 FIELD SAMPLES

**[\*\*\*\*\*A field sample is part of construction. Sections requiring field samples should cross reference to this section. If field samples are not required, delete this article.\*\*\*\*\*]**

- A. When required by an individual specification section, install field samples for review by Architect.
- B. Acceptable installed sample shall remain as part of Work and shall represent quality level for that item of work. Unacceptable sample shall be removed and replaced, repaired, or refinished as directed by Architect.

## 1.6 INSPECTION AND TESTING LABORATORY SERVICES

- A. Unless required otherwise in the Contract, Owner shall appoint, employ, and pay for services of an independent firm to perform routine inspections and compliance for testing and inspection services as specified and/or shown, including Special Inspections required by Authority Having Jurisdiction, and other materials, components, and systems where routine testing to determine compliance with Contract Documents is required.
- B. Testing firm shall perform inspections, tests and other services specified in individual specification sections and as required.
- C. Testing firm shall submit copies of reports indicating observations and results of inspections and tests with indication of compliance or non-compliance with Contract Documents.
- D. Contractor's responsibilities:
  - 1. Cooperate with testing firm and furnish materials and other products to be tested. Provide assistance in accessing and obtaining samples. Provide storage for samples and testing equipment.
  - 2. Notify testing firm 2 days prior to operations requiring testing services.
  - 3. Make arrangements with testing firm and pay for additional samples and tests required for Contractor's use.
- E. Retesting: Retesting required because of non-compliance to specified requirements shall be performed by same testing firm and paid for by Contractor.

## 1.7 MANUFACTURER'S FIELD SERVICES AND REPORTS

**[\*\*\*\*\*Sections requiring a representative of manufacturer to observe installation should cross reference to this section. If manufacturer's field services are not required, delete this article.\*\*\*\*\*]**

- A. When required by an individual specification section, provide services of manufacturer's field representative to observe site conditions, installation, quality of workmanship, starting of equipment, testing and adjusting equipment, and as applicable, to instruct and supervise field operations.
- B. Submit qualifications of manufacturer's field representative to Architect for approval 15 days in advance of required observation.
- C. Manufacturer's field representatives shall report observations, site decisions, and instructions given to installers that are supplemental or contrary to manufacturer's written instructions.

D. Submit report of field representative within 30 days of observation in accordance with Section 01 3300 – Submittal Procedures.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION**

## **SECTION 01 5000**

### **TEMPORARY FACILITIES AND CONTROLS**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

A. Section includes:

1. Site mobilization plan.
2. Temporary services: Electrical, lighting, heating, ventilating, water, telephone, and facsimile.
3. Fencing, barriers, and other temporary controls.
4. Temporary dust, erosion and sediment controls including NPDES-SWPPP requirements.
5. Construction facilities: Temporary buildings, sanitary facilities, access, and parking.
6. Protection of Work and existing facilities.
7. Project sign.
8. Bulletin board.

B. Related documents and sections.

##### **1.2 REFERENCES**

- A. NFPA 10 – Standard for Portable Fire Extinguishers.
- B. NFPA 241 – Safeguarding Building Construction, Alterations, and Demolition Operations.

##### **1.3 SITE MOBILIZATION PLAN**

- A. Coordinate locations for temporary facilities with Architect and Owner.
- B. Based upon information indicated on Drawings, prepare site mobilization plan showing:
  1. Field office.
  2. Storage areas, sheds, and fencing.

3. Project identification sign.
  4. Access routes.
  5. Temporary utility routes and connections.
  6. Sanitary facilities.
  7. Trash and rubbish receptacles.
  8. Parking arrangements.
- C. Present 3 copies of plan at Pre-Construction Conference in accordance with Section 01 3100 – Project Management and Coordination.
- D. Prior to mobilization, revise and resubmit to Architect site mobilization plan incorporating final revisions made at Pre-Construction Conference and approved by Architect and Owner.

#### **1.4 TEMPORARY ELECTRICITY**

Click here to enter text.

- A. Provide and pay for temporary electricity used during construction. Provide service disconnect and overcurrent protection. Provide temporary feeder as required.

Click here to enter text.

- B. Connect to existing power source at site. [Do not disrupt Owner's need for continuous service.] Provide service disconnect and overcurrent protection. Provide temporary feeder as required. [Owner will pay cost of electricity used. Exercise measures to conserve power.] [Provide separate metering and reimburse Owner for cost of energy used.]
- C. Provide power outlets for construction operations with branch wiring, distribution boxes, and flexible power cords as required.
- D. Permanent convenience receptacles may be utilized during construction.

#### **1.5 TEMPORARY LIGHTING**

- A. Provide lighting for construction operations. Lighting levels shall be appropriate for type and difficulty of work. Use these minimums as guidelines:
- B. After dark, provide security lighting for interior and exterior work and storage areas.
- C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.



- D. Maintain lighting and provide routine repairs.
- E. Permanent building lighting may be utilized during construction.

## **1.6 TEMPORARY HEATING AND VENTILATING**

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, and gasses.
- B. Provide temporary fan units to maintain clean air for construction operations.
- C. Maintain minimum ambient temperature of 50 degrees F in interior areas where construction is in progress.

[Click here to enter text.](#)

## **1.7 TEMPORARY WATER SERVICE**

**[\*\*\*\*\*Include the following paragraph if Contractor is to provide and pay for temporary water service.\*\*\*\*\*]**

- A. Provide, maintain, and pay for suitable quality water service required for construction operations.

**[\*\*\*\*\*Include the following paragraph if there is existing water source on site. Edit to reflect payment by Owner or Contractor.\*\*\*\*\*]**

- B. Connect to existing water source for construction operations. [Owner will pay cost of water used. Exercise measures to conserve water.] [Provide separate metering and reimburse Owner for cost of water used.]
- C. Assume responsibility for temporary connections and water lines. Upon completion, remove temporary facilities.

## **1.8 COMMUNICATIONS**

- A. Provide, maintain, and pay for telephone service to field office. School telephones will not be available to Contractor's workforce unless for an emergency.
- B. Provide, maintain, and pay for facsimile service to field office.

## **1.9 FENCING**

- A. Provide temporary fencing around new building and materials storage site. Completely separate construction from existing facilities, student pathways and related exterior areas.

- B. Type: Panelized 6 foot high commercial grade chain link fence. Equip with vehicular and pedestrian gates with locks.

## **1.10 BARRIERS AND PROTECTION**

**[\*\*\*\*\*Edit this article to reflect scope of project, if there are existing buildings and landscaping, and type of barriers and protections specifically required.\*\*\*\*\*]**

- A. Security: Provide to protect Work [and existing facilities] from unauthorized entry, vandalism, and theft. [Coordinate with Owner's security program and personnel.]
- B. Barriers: Provide to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from construction operations.
- C. Barricades and covered walkways: As required by Architect, Owner and governing authorities for safe public access to existing buildings.
- D. Enclosures: Provide temporary, insulated, weather tight closures of exterior openings to provide acceptable working conditions, protect Work, and prevent unauthorized entry. Fit with lockable doors.
- E. Temporary partitions: Provide to separate work areas from [existing building at point of connection.] [completed Work.] Prevent penetration of dust and moisture into [existing] [completed portions of] building.
- F. Emergency exist shall be maintained during construction. Provide separate barriers as appropriate.
- G. Protect existing detection devices such as smoke detectors and sensors from construction dust.
- H. Protect existing trees and plants designated to remain. Replace damaged plant material.
- I. Hand-water existing trees, plants [and grass] ass necessary to maintain them viable in the event that existing irrigation system is made temporarily inoperable due to the Work. Replace dead plan material as required in the event of failure to comply with this provision.

## **1.11 PROTECTION OF INSTALLED WORK**

- A. Protect installed Work. Control activity in immediate work area.
- B. Provide temporary and removable protection for installed products.
- C. Prohibit traffic and storage on roof surfaces and landscaped areas.

## **1.12 TEMPORARY FIRE PROTECTION**

- A. Install and maintain temporary fire protection components. Establish and follow procedures to protect against fire losses. Comply with NFPA 241.
- B. Fire extinguishers: Provide hand carried, portable, UL rated fire extinguishers of type and size recommended by NFPA 10 for building exposure conditions. Place in accessible, convenient locations in clear view with a minimum of one extinguisher per floor.
- C. Access: Maintain unobstructed access to fire hydrants, water supply, fire extinguishers, stairways, and access routes for fighting fires.
- D. Heating devices: Exercise care and monitor use of temporary heaters to minimize fire risk.
- E. Store combustible materials in fire-safe containers.
- F. Volatile products: Do not store paints, varnishes, paint removers, solvents, adhesives, cleaning rags, and other volatile products in building. Take precautionary measures to prevent fire hazards and spontaneous combustion.
- G. Cutting and welding: Approve in advance use of open flame cutting, welding, and soldering equipment. Ensure that safe conditions exist before granting approval.

**[\*\*\*\*\*Include the following paragraph when Project involves construction activities which may cause soils disturbance and erosion on site; required for projects in which one acre or more of area will be disturbed.\*\*\*\*\*]**

### **1.13 TEMPORARY DUST, EROSION AND SEDIMENT CONTROLS**

- A. Prevent temporary collection of sediment on sidewalks, parking lots, streets and driveways. Clean such surfaces promptly if conditions exist due to the Work.
- B. National Pollution Discharge Elimination System (NPDES) permit and procedures for preparing a Storm Water Pollution Prevention Plan (SWPPP).
  - 1. Contractor shall determine whether Project required an EPA NPDES storm water discharge permit in conformance with all regulations governing the disturbance of construction site areas.
  - 2. If storm water discharge permit is required, then both Contractor and Owner shall be designated as separate permittees and the Contractor shall do the following:
    - a. Prepare a Storm Water Pollution Prevention Plan (SWPPP) document as necessary to ensure compliance with any and all NPDES construction storm water permitting plan requirements.
    - b. Prepare and submit all EPA documentation and forms required of Contractor for permit.

- c. Assist Owner with preparation and submittal of all EPA documentation and forms specifically required of Owner for permit. Provide all required project-related information to Owner as necessary.
  - d. At Final Completion of Project, Contractor shall complete and submit documentation to EPA as required and to Architect as part of Project Closeout documentation package. See Section 01 7800 of Specifications.
3. If a storm water discharge permit is not required, then the Contractor shall submit to the Architect and Owner prior to the mobilization a signed statement containing specific written justification why such a permit is not required on the Project.
  4. The Contractor shall manage the discharge of storm water from the site in accordance with NPDES permit and the provisions of SWPPP. The Contractor shall be responsible for installing and maintaining any necessary storm water control measures in accordance with control device manufacturer's recommendations and the provisions of the SWPPP. The Contractor shall monitor the suitability of the designated control measures and management practices to achieve the storm water quality provisions of the NPDES permit, and shall make any necessary changes to the controls and practices in order to meet the permit requirements. The Contractor shall be responsible for updating the SWPPP and maintaining all records related to the SWPPP. A copy of the approved SWPPP shall be kept on the jobsite at all times. Contractor shall be liable for all fines and construction delays resulting from any governmental agency enforcement action due to a failure by the Contractor to satisfy the above requirements.
  5. Contractor is responsible for payment of all applicable fees and permits related to SWPPP approval process and for full cost of control measures for the Project.
- C. Prevent fugitive dust from originating on and blowing from construction site, in accordance with local ordinances and regulations. Failure to do so will subject Contractor to payment of fines assessed against Owner by local agency having jurisdiction.

#### **1.14 ACCESS**

- A. Refer to Drawings for location of acceptable access routes and site entrances. Protect existing curbs and walks traversed by construction vehicles from damage.
- B. Identify access to Contractor's work and office area with appropriate signs so that deliver personnel and others may contact Contractor. School office shall not be use as destination for Contractor's deliveries.
- C. Prevent unauthorized personnel from accessing school building or site through Contractor's work area.

### **1.15 FIELD ACTIVITIES**

- A. Provide and maintain a weather tight, fully equipped field office. [Provide work station for use of Architect during field inspections.]
- B. Provide space for project meetings with table and chairs to accommodate minimum 6 persons.
- C. Provide and maintain storage sheds and other facilities as required.
- D. Arrange for parking for work force in manner approved by Owner. Do not limit Owner's requirements for parking.

### **1.16 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required sanitary facilities for work force.
- B. New and existing toilet facilities shall not be used by work force.

### **1.17 DRINKING WATER**

- A. Provide independent source of drinking water for workforce. Fountains shall not be routinely available for Contractor's use.

### **1.18 PROJECT SIGNS**

- A. School District Construction Sign.
  - 1. Furnish project sign and erect on site at location designated by Architect.
  - 2. Construction: Refer to drawing attached to this Section.
  - 3. Sign shall be prepared by professional sign painter using either painted exhibit lettering or die cut adhesive applied letters.
  - 4. Design, style and sizes of lettering, color, and texts shall be shown on drawing attached to this Section, electronic pdf will be provided by Architect.

### **1.19 BULLETIN BOARD**

- A. Furnish and maintain bulletin board adjacent to field office. Display the following throughout construction period:
  - 1. State wage rates.
  - 2. Safety requirements.
  - 3. Official notices and announcements.

## **1.20 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS**

- A. Remove temporary above grade and buried utilities, equipment, facilities, and excess materials prior to final inspection.
- B. Clean and repair damage caused by installation of temporary facilities.

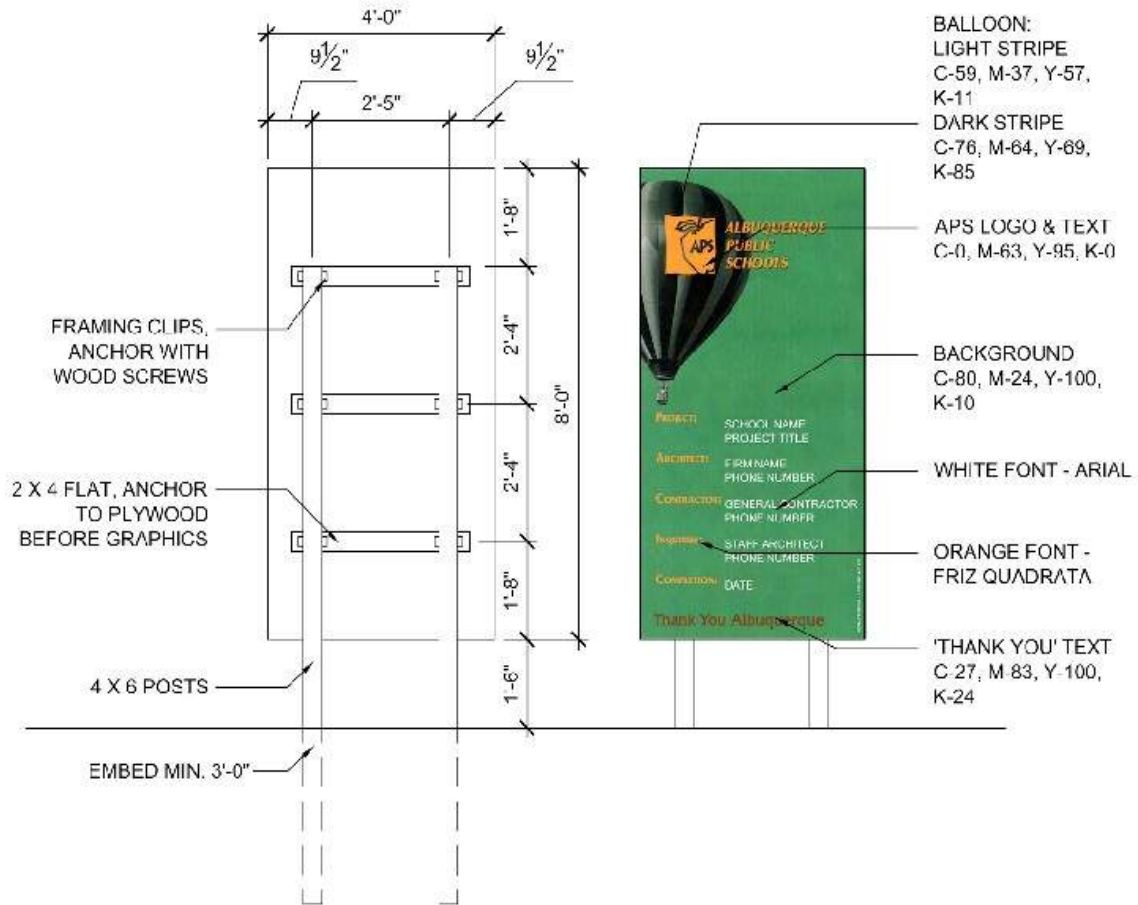
### **PART 2 - PRODUCTS**

Not used.

### **PART 3 - EXECUTION**

Not used.

**END OF SECTION  
[(PROJECT SIGN DRAWINGS FOLLOW)]**



## **SECTION 01 6000**

### **PRODUCT REQUIREMENTS**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

- A. Section includes:
  - 1. General product requirements.
  - 2. Transportation and handling.
  - 3. Storage and protection of products.

##### **1.2 GENERAL PRODUCT REQUIREMENTS**

- A. Products shall be new and currently in production.
- B. Do not use products removed from other facilities except where use of salvaged products is required in Contract Documents.
- C. Products of the same category shall be products of a single manufacturer. Where possible, products under a single specification section shall be of the same manufacturer.
- D. Only non-asbestos containing materials shall be used or incorporated in the Work.

##### **1.3 TRANSPORTATION AND HANDLING**

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, and damage.
- D. Deliver packaged products in unopened and undamaged cartons and wrappings.

##### **1.4 STORAGE AND PROTECTION**

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.



- B. For exterior storage of fabricated products, place on supports above ground, sloped to drain.
- C. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- D. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- E. Arrange storage of products to permit access for inspection. Periodically inspect to ensure products are undamaged and are maintained under specific conditions.

## **PART 2 - PRODUCTS**

Not used.

## **PART 3 - EXECUTION**

Not used.

**END OF SECTION**

## SECTION 01 6300

### PRODUCT SUBSTITUTION PROCEDURES

#### PART 1 - GENERAL

##### **1.1 SUMMARY**

- A. Section includes requirements for product options and substitution procedures.

##### **1.2 PRODUCT OPTIONS**

- A. For products specified by reference standards or by description only, provide any product meeting those standards or description.
- B. For products specified by naming one or more manufacturers with the designation that no substitutions are allowed, provide only named products.
- C. For products specified by naming one or more manufacturers, provide named products and approved substitute products listed in Addenda, or submit a request for substitution in accordance with Paragraph 1.3.

##### **1.3 SUBSTITUTIONS**

- A. During bidding, Architect will consider written request from qualified bidders, subcontractors, and manufacturers for substitutions.
  - 1. Submit separate request for each substitution with form 01 6310 – Prior Approval Substitution Request Form. Copy of form follows this Section.
  - 2. Submit substitution request in accordance with procedures and time limitations stated in Document 00 2000 – Instruction to Bidders.
  - 3. Substitutions approved during bidding will be listed in Addenda.
- B. After Contract award:
  - 1. After signing of Agreement Between Owner and Contractor, Owner will consider written requests for substitutions ONLY if one or more of these conditions exist:
    - a. Unavailability of specified products through no fault of Contractor.
    - b. Qualified installer is not available for specified product.
    - c. Substitution is required for compliance with final interpretation of code requirements or insurance regulations.

- d. Subsequent information discloses inability of specified product to perform properly or to fit in designated space.
  - e. Refusal of manufacturer to certify or guarantee performance of the specified product as required.
2. Submit separate request for each substitution with Form 01 6320 – Contractor Substitution Request Form. Copy of form follows this Section. Provide data documenting need for substitution and substantiating compliance of proposed product with Contract Documents. Include proposed changes to contract amount and time if substitution is accepted.
  3. Architect will determine acceptability of proposed substitutions and notify Contractor in writing. Accepted substitutions will be included by Change Order with associated modifications of contract amount and time.
  4. Substitution will not be considered after contract award if indicated or implied on shop drawings and project data submittals.
- C. Use of approved substitution listed in Addenda or request for substitution after Contract award shall constitute representation that Contractor:
1. Has investigated product and determined it meets or exceeds quality level of specified product.
  2. Will provide same warranty for substitution as for specified product.
  3. Will coordinate installation and make changes to other work required to accommodate accepted substitution and complete Work.
  4. Waives claims for additional costs or time extensions related to substitutions which later become apparent.
- D. Procedure: Submit 3 copies of request for substitution. Limit each request to one proposed substitution. Include in request:
1. Complete data substantiating compliance of proposed substitution with Contract Document.
  2. For products:
    - a. Product identification, including manufacturer's name and address.
    - b. Manufacturer's literature containing product description, performance and test data, and reference standards.
    - c. Samples as required.

3. For construction methods:
  - a. Detailed description of proposed method.
  - b. Drawings illustrating methods.
4. Itemized comparison of proposed substitution with product specified.
5. Data relating to changes in construction schedule.
6. For requests submitted after Contract award, give cost data comparing proposed substitution with specified product and amount of proposed change to Contract Sum.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION – FORMS FOLLOW**

**PRIOR APPROVAL SUBSTITUTION REQUEST FORM**

The undersigned, qualified bidder, subcontractor, manufacturer, or supplier requests that the following product be accepted for use in the Project.

PRODUCT: \_\_\_\_\_

MODEL NO.: \_\_\_\_\_

MANUFACTURER:  
\_\_\_\_\_

ADDRESS:  
\_\_\_\_\_

The above product would be used in lieu of

PRODUCT: \_\_\_\_\_

specified in

SECTION:  
\_\_\_\_\_

PARAGRAPH:  
\_\_\_\_\_

Attached are the following circled items:

1. Product description including specifications, performance and test data, and applicable reference standards.
2. Drawings.
3. Photographs.
4. Samples.
5. Tabulated comparison with specified product.
6. For items requiring color selections, full range of manufacturer's color samples.
7. Other:  
\_\_\_\_\_

The undersigned certifies that the following statements are correct. Explanations for all items which are **not** true are attached.

- |  |            |
|--|------------|
| 1. Proposed substitution has been thoroughly investigated and function, appearance, and quality meet or exceed that of specified product.  | TRUE FALSE |
| 2. Same warranty will be provided for substitution as for specified product.   | TRUE FALSE |
| 3. <b>No</b> aspect of Project will require re-design.   | TRUE FALSE |
| 4. Use of substitution will <b>not</b> adversely affect:   |            |
| a. Dimensions shown on Drawings.   | TRUE FALSE |
| b. Construction schedule and date of completion.   | TRUE FALSE |
| c. Work of other trades.   | TRUE FALSE |
| 5. Maintenance service and replacement parts for proposed substitution will be readily available in [Las Cruces] [El Paso] [Roswell] [Albuquerque] [Southern New Mexico] [Northern New Mexico] [_____] area. | TRUE FALSE |
| 6. Proposed substitution does <b>not</b> contain asbestos in any form.   | TRUE FALSE |

Submitted By:

COMPANY:

\_\_\_\_\_

ADDRESS:

\_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

NAME OF PERSON SUBMITTING REQUEST: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

**CONTRACTOR SUBSTITUTION REQUEST FORM**

The undersigned, as Contractor for the above Project, requests that the following product be accepted for use in the Project

PRODUCT: \_\_\_\_\_

MODEL NO.: \_\_\_\_\_

MANUFACTURER:  
\_\_\_\_\_

ADDRESS:  
\_\_\_\_\_

The above product would be used in lieu of

PRODUCT: \_\_\_\_\_

specified in

SECTION:  
\_\_\_\_\_

PARAGRAPH:  
\_\_\_\_\_

Reason for substitution request: \_\_\_\_\_

---

Attached are the following circled items:

1. Product description including specifications, performance and test data, and applicable reference standards.
2. Drawings.
3. Photographs.
4. Samples.
5. Tabulated comparison with specified product.
6. For items requiring color selections, full range of manufacturer's color samples.



7. Documentation of reason for request.
8. Cost data for comparing proposed substitution with specified product.
9. Other\_\_\_\_\_.

The undersigned certifies that the following statements are correct. Explanations for all items which are **not** true are attached.

- |  |            |
|--|------------|
| 1. Proposed substitution has been thoroughly investigated and function, appearance, and quality meet or exceed that of specified product.  | TRUE FALSE |
| 2. Same warranty will be provided for substitution as for specified product.   | TRUE FALSE |
| 3. <b>No</b> aspect of Project will require re-design.   | TRUE FALSE |
| 4. Use of substitution will <b>not</b> adversely affect:   |            |
| a. Dimensions shown on Drawings.   | TRUE FALSE |
| b. Construction schedule and date of completion.   | TRUE FALSE |
| c. Work of other trades.   | TRUE FALSE |
| 5. Maintenance service and replacement parts for proposed substitution will be readily available in [Las Cruces] [El Paso] [Roswell] [Albuquerque] [Southern New Mexico] [Northern New Mexico] [_____] area.                           | TRUE FALSE |
| 6. Proposed substitution does <b>not</b> contain asbestos in any form.   | TRUE FALSE |
| 7. All changes to Contract Sum related to use of proposed substitution are included in price listed below. Contractor waives claims for additional costs related to acceptance of substitution which may subsequently become apparent. | TRUE FALSE |
| 8. Costs of modifying project design caused by use of proposed substitution which subsequently become apparent will be paid for by Contractor.   | TRUE FALSE |

If substitution request is accepted:

Contract Sum will be [decreased] [increased] by \$ \_\_\_\_\_

Contract Time will be [decreased] [increased] by \_\_\_\_\_  
calendar days.

Submitted By:

CONTRACTOR: \_\_\_\_\_

ADDRESS:  
\_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

NAME OF PERSON SUBMITTING REQUEST: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

## **SECTION 01 7000**

### **EXECUTION REQUIREMENTS**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

A. Section includes:

1. Basic requirements for examination, preparation and installation.
2. Requirements and limitations for cutting and patching incidental to work, including excavation and backfilling, and as required to make several parts fit together.
3. Progressive cleaning.

##### **1.2 SUBMITTALS**

A. Cutting request:

1. Submit advance written request to Architect prior to cutting or other alteration which affects:
  - a. Structural integrity of an element.
  - b. Integrity of weather-exposed or moisture-resistant element.
  - c. Operation, efficiency, maintenance, or safety of an element.
  - d. Visual qualities of exposed elements.
  - e. Work of others under separate contract to Owner.
2. Include in request:
  - a. Project and Contractor identification.
  - b. Location and description of proposed work.
  - c. Necessity for cutting or alteration and alternative to cutting and patching.
  - d. Effect on work of this Contract, existing construction, and work of others under separate contract to Owner.
  - e. Date work will be executed.

### **1.3 LOCATION OF UNDERGROUND UTILITIES**

- A. The Contractor shall arrange for all spotting of lines by New Mexico One Call in advance of any excavation work.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. Patching and replacement materials: Those used for original installation.
- B. Product substitutions: For any proposed change in patching materials, submit request for substitution in accordance with Section 01 6300 – Product Substitution Procedures.

## **PART 3 - EXECUTION**

**[\*\*\*\*\*Edit and modify this part to reflect actual scope, materials, and products of project. Delete items that are not applicable for project.\*\*\*\*\*]**

### **3.1 EXAMINATION**

- A. Prior to commencing a portion of Work:
  - 1. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work.
  - 2. Verify that existing substrate is capable of structural attachment of Work being applied or attached and that required blocking is in place.
  - 3. Verify that existing substrate is compatible with, properly prepared, and otherwise ready to receive subsequent applications and finishes. Ensure that existing conditions conform to requirements of manufacturers of product to be applied.
  - 4. Verify that utility services are available, of correct characteristics, and in correct location.
- B. Prior to commencing removals and cutting and patching, inspect existing building systems and elements subject to damage or movement during subsequent operations. Document and report existing damage and operational condition of existing systems such as telecommunications, data, security, HVAC controls and fire alarm in the location of the anticipated work and in related or adjacent spaces. Such documentation shall provide the basis for conditions to be maintained or re-established by the Contractor and the end of the work.
- C. Beginning of removals, cutting, patching, and new Work implies acceptance of existing conditions.

### **3.2 PREPERATION**

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal crack and opening in substrate prior to applying next material or substance.
- C. Apply manufacturer required substrate primer, sealer, and conditioner prior to applying new material or substance to substrate.

### **3.3 INSTALLATION**

- A. Install, construct, erect, assemble, and apply products in accordance with manufacturer's recommendations and instruction and specified requirements. Notify Architect where manufacturer's instructions conflict with specifications. Do not proceed until clarification is received.
- B. Install products secure, rigid, plumb, and level within specified or industry acceptable tolerances.
- C. Remove excess material such as adhesive, grout, mortar, and sealants, from finished surfaces in a manner which does not stain, corrode, disfigure, or otherwise damage finished surface.
- D. Adjust working parts for smooth, proper operation.
- E. Replace deformed, scratched, cracked, broken, or otherwise damaged products and result of installation.
- F. After installation is complete, protect installed products and finished surfaces from subsequent construction operations in accordance with Section 01 5000 – Temporary Facilities and Controls. Replace or repair subsequently damaged products and surfaces.
- G. Clean and maintain installed products in accordance with manufacturer's recommendations and specifications until Substantial Completion.

### **3.4 CUTTING AND PATCHING**

- A. Execute cutting, fitting patching, excavation, and fill required to:
  - 1. Install new work into existing construction.
  - 2. Fit products together and to integrate them with other work.
  - 3. Uncover work to correct incomplete or deficient work.
  - 4. Remove and replace defective and non-conforming work.

5. Remove samples of installed work for testing.
  6. Provide opening for penetrations of mechanical, electrical, and other work.
- B. Provide temporary supports to ensure structural integrity. Provide devices and methods to protect other portions of Project from damage.
- C. Provide protection from elements for areas which may be exposed by cutting operations.
- D. Method: Execute work by methods to avoid damage to existing building systems and other work and in a manner which will provide appropriate surfaces to receive patching and finishing.
- E. Cutting:
1. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval.
  2. Size openings to exactly fit penetrating item plus allowance for sealant. Form edges of hole even and smooth.
  3. Drill penetrations through concrete for conduit and piping.
  4. Drill round holes and saw cut rectangular opening in concrete unit masonry units. Where block is broken or chipped in process, remove complete face of exposed block and replace with partial block.
- F. Patching:
1. Restore work with new products meeting requirements of Contract Documents.
  2. Fit work tight to pipes, sleeves, ducts, conduits, and other elements penetrating surfaces.
  3. At penetrations of fire rated wall, partitions, ceilings, and floors, completely seal voids with fire-resistant material, in accordance with Section 07 9000 – Joint Sealers, to full thickness of penetrated element.
- G. Finishing: Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- H. Repair: Contractor shall be responsible for repair and/or restoration of existing telecommunication, data, security, HVAC controls and fire alarms systems back to condition documented as existing prior to the commencement of work. Life safety systems and other systems impacting the operations of the school shall be restored immediately and as approved by the Architect and Owner.

### **3.5 ASPHALT PAVEMENT**

- A. Where existing or new pavement is damaged from construction operations, cut to install new underground utilities and where existing items are removed from paved areas:
  - 1. Cut pavement with saw or other means to provide neat, straight joints.
  - 2. Where existing pavement is damaged by removals, remove additional pavement to allow clean cuts.
  - 3. Backfill and sufficiently compact removal area prior to placement of pavement.
  - 4. Place pavement to match existing materials and thickness.
- B. Immediately after placement, protect new pavement from mechanical damage.

### **3.6 ROOF PENETRATIONS**

- A. New roofing.
  - 1. Coordinate, locate and schedule roof penetrations prior to installation of new roof system.
  - 2. Coordinate roof penetrations such that installation does not void roof warranty.
- B. Existing roofing: Prior to penetrating, cutting, and patching existing roofing, verify with Owner if roof is under warranty. If warranted, employ roof contractor certified by manufacturer of roof system, make required inspections and notifications, and perform cutting and patching as required to ensure warranty is not violated. Protect building interior during penetrations and return roof to weathertight condition after work is performed.

### **3.7 PROGRESS CLEANING**

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove waste materials, debris, and rubbish from site weekly and legally dispose off-site.
- C. Remove debris and rubbish from pipe chases, plenums, crawl spaces, above suspended ceilings, and other closed and remote spaces prior to enclosing space.
- D. Prior to surface finishing, broom and vacuum clean interior areas to eliminate dust.
- E. Washing of concrete trucks and dumping of excess cementitious material on site is not allowed. All such materials and contaminated soil shall be removed.

- F. Soils and other site material contaminated by paint residues, oils, fuels, and other construction products shall be removed and replaced with equivalent soil or material.
- G. Existing lawns, landscaped areas, and areas for future landscaping affected by construction operations shall be raked to remove stones, mortars, aggregates, and other construction debris in excess of  $\frac{3}{4}$  inch diameter.
- H. Clean mud and sediment resulting from Contractor's operations or traffic from all sidewalks, public streets and parking areas.

**END OF SECTION**



## SECTION 01 7500

### STARTING AND ADJUSTING

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Section includes: General procedures for starting, monitoring, and adjusting of items of equipment and complete systems.

**[\*\*\*\*\*This section should be coordinated with sections in Mechanical and Electrical Division specifying startup requirements for mechanical and electrical systems.\*\*\*\*\*]**

#### PART 2 - PRODUCTS

Not used.

#### PART 3 - EXECUTION

##### 3.1 SCHEDULING

- A. Coordinate schedule for starting of systems and equipment to ensure proper sequencing.
- B. Notify Architect 7 days prior to startup of each system.

##### 3.2 PREPERATION

- A. Prior to startup, inspect items of equipment and system to ensure that:
  - 1. Installation is in accordance with manufacturer's instructions.
  - 2. No defective items have been installed and there are no loose connections.
  - 3. Power supplies are correct voltage, phasing, and frequency.
  - 4. Grounding and transient protection systems and properly installed.
  - 5. Items have been properly lubricated, belts tensioned, and control sequence and other conditions which may cause damage have been addressed.
- B. Verify that system wiring has been tested.
- C. Verify that provisions have been made for safety of personnel.

##### 3.3 STARTING OF SYSTEMS

- A. Execute starting under supervision of responsible personnel in accordance with manufacturer's instructions.
- B. When specified in individual sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment and system installation prior to startup and to supervise placing equipment and system in operation.
- C. Adjustment: Monitor systems and verify performance. Correct deficiencies. Replace defective components and equipment. Adjust equipment and systems for smooth and proper installation.
- D. Submit written report in accordance with Section 01 3300 – Submittal Procedures that equipment and systems have been properly installed and are functioning correctly.

**END OF SECTION**

## SECTION 01 7700

### CLOSEOUT PROCEDURES

#### PART 1 - GENERAL

##### 1.1 SUMMARY

A. Summary includes:

1. Closeout procedures.
2. HVAC equipment inventory.
3. Final Cleaning.
4. Final inspection.
5. Inspection held immediately prior to end of one year correction period.

##### 1.2 SUBSTANTIAL COMPLETION PROCEDURES

**[\*\*\*\*\*At Substantial Completion all or part of Work is sufficiently complete so that Owner can occupy and use all or a portion of Work. For large projects Work may be completed in phases each with a different date of Substantial Completion. Modify this article as required for specific project.\*\*\*\*\*]**

A. Prior or in conjunction with submission of Contractor's request for Substantial Completion, submit the following items specified in Section 01 7800 – Closeout Procedures.:

1. Project record documents.
2. Operation and maintenance data and manuals.
3. Warranties.
4. Certificates of inspection and Certificate of Occupancy.
5. Insurance certificates.
6. Extra materials.
7. Keys.

B. Comply with Document 00 7000 – General Conditions of the Contract for issuance of Certificate of Substantial Completion. When work is sufficiently complete:

1. Inspect Work and prepare comprehensive list of items to be completed or corrected.
  2. Perform final cleaning of portions of Work for which approval of substantial completion is being requested.
  3. Submit 3 copies of comprehensive list of items (Contractor's Punch List) to be completed and Final Completion Schedule to Design Professional. Indicated portions of Work suitable for Owner occupancy and for which approval of substantial completion is being requested.
  4. Submit Application for Payment in accordance with Section 01 2000 – Price and Payment Procedures.
- C. Full functioning of the HVAC Controls Systems, (including logging and trending of utility data from submeters for electricity, natural gas & heating water, and including APS having remote access and control of a web-based system), shall be a requirement of Substantial Completion of the entire construction project.
- D. After inspection by Design Professional and issuance of Certificate of Substantial Completion, Owner will occupy [all] [designated portions] of [Project] [building] for [installation of equipment and furnishings] [to conduct normal operations] under provisions stated in Certificate of Substantial Completion.

### **1.3 FINAL COMPLETION PROCEDURES**

- A. Perform final cleaning as specified in Paragraph 1.4.
- B. Prior to or in conjunction with submission of Notice of Final Completion, submit the following items:
1. Contractor's Affidavit of Payment of Debts and Claims, AIA G706.
  2. Consent of Surety Company to Final Payment, AIA G707.
  3. Insurance certificates.
  4. Final Application for Payment as specified in Section 01 2000 – Price and Payment Procedures. Identify total adjusted Contract Sum, previous payments, and sum due.
  5. Additional items required in Article 9.11.2 – General Conditions of the Contract.
- C. Submit Notice of Final Completion certifying that Contract Documents have been reviewed, work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Design Professional's inspection.

- D. Remove temporary utilities, controls, and facilities in accordance with section 01 5000 – Temporary Facilities and Controls.
- E. Request Close-Out Meeting and final inspection with Design Professional and Owner.
- F. HVAC Equipment Inventory: Provide a list of the major HVAC equipment and where each major piece of equipment is located, in order to assist APS M&O in a future comprehensive equipment inventory. Major equipment includes items such as air handlers, chillers, cooling towers, VAC or CV terminal units, and location of computer access to HVAC DCC controls (if provided).

#### **1.4 FINAL CLEANING**

- A. Execute final cleaning prior to final inspection by methods and with materials and equipment suitable for commercial/institutional building maintenance.
- B. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances; polish transparent and glossy surfaces; and vacuum carpeted and soft surfaces.
- C. Sanitize equipment and fixtures.
- D. Clean or replace filters of operating equipment.
- E. Clear debris from roof, gutters and drainage systems, ceiling spaces, plenums, storage areas, and interior spaces.
- F. Clean site, sweep paved areas, and rake landscaped areas and other ground surfaces.
- G. Remove waste and surplus materials, rubbish, and construction facilities from the site. Dispose of legally.

#### **1.5 FINAL INSPECTION**

- A. Design Professional and Owner's representative will make inspection within 10 days of receipt of written request for Close-Out Meeting.
- B. If Work is incomplete or defective:
  - 1. Design Professional will provide Contractor written list of deficiencies.
  - 2. Contractor shall immediately correct deficiencies and submit certification that Work is complete.
  - 3. Design Professional and Owner's representative will re-inspect Work.
  - 4. Re-inspection fees:

- a. When status of completion requires re-inspection by Design Professional due to the failure of Work to comply as certified by Contractor, Owner will deduct amount of Design Professional's compensation for re-inspection from final payment.
- b. Re-inspection services will be billed at current rates for Design Professional's personnel.

#### **1.6 CORRECTION PERIOD INSPECTION**

- A. 30 days prior to end of one year correction period, schedule and attend a one year correction period inspection. Appropriate subcontractors shall attend.
- B. Coordinate time of inspection with Design Professional.
- C. Representatives of Owner, Design Professional, and appropriate consultants will attend.
- D. Correct deficiencies noted.

#### **PART 2 - PRODUCTS**

Not used.

#### **PART 3 - EXECUTION**

Not used.

**END OF SECTION**

## **SECTION 01 7800**

### **CLOSEOUT SUBMITTALS**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

A. Section includes procedures for preparing and submitting closeout submittals:

1. Project Record Documents.
2. Operation and maintenance manuals and data.
3. Warranties.
4. Insurance information.
5. Certificates of inspection and compliance.
6. Maintenance tools.
7. Extra materials.
8. Keys.
9. [ ]

##### **1.2 PROJECT RECORD DOCUMENTS**

A. Maintain on site, one set of the following record documents; record actual revisions to work:

1. Contract Documents.
2. Specifications.
3. Addenda.
4. Change Orders and other modifications to the Contract.
5. Reviewed submittals.

B. Store Record Documents separate from documents used for construction. Label "Project Record Documents".

C. Record information concurrent with construction progress. Use erasable colored pencil. Date all entries. Call attention to entry by circling area affected.

- D. Specifications: Legibly mark and record in each section description of actual products installed, including the following:
1. Manufacturer's name and product model and number.
  2. Product substitutions or alternates utilized.
  3. Changes made by Addenda and modifications.
- E. Contract Drawings and shop drawings: Legibly mark each item to record actual construction including:
1. Actual items of equipment and system components installed.
  2. Actual locations of components and routing of piping and raceways.
  3. Measured horizontal and vertical locations of underground water, sewer, irrigation, electrical, and other utilities and appurtenances, referenced to permanent surface improvements.
  4. Measured locations of piping, raceways, and other items concealed in construction, referenced to visible and accessible features.
  5. Field changes of dimensions and detail.
  6. Details not on original Contract Drawings.
- F. Documents will be reviewed by Architect at each submittal of Application for Payment to ensure that entries are current.
- G. Submit documents to Architect prior to or in conjunction with submission of Contractor's request for Substantial Completion and in accordance with Owner's procedures.

### 1.3 OPERATION AND MAINTENANCE DATA

**[\*\*\*\*\*Each specification section requiring operation and maintenance data in manuals should cross reference to this section for general purposes.\*\*\*\*\*]**

- A. Provide operation and maintenance data for:
1. [Landscaping specified in Sections xx-xxxx – Irrigation System and xx-xxxx – Planting.]
  2. [Automatic gate operators specified in Section xx-xxxx – Chain Link Fences and Gates.]



3. [Motorized doors specified in [Section xx-xxxx – Coiling Doors and grilles] [Section xx-xxxx – Coiling Counter Doors] [Section xx-xxxx – Overhead Sectional Doors] [Section xx-xxxx – Automatic door Operator.]]
4. [Operable partitions specified in Section xx-xxxx – Operable Partitions.]
5. [Food service equipment specified in Section xx-xxxx – Food Service Equipment.]
6. [Folding basketball backstops and gymnasium dividers specified in Section xx-xxxx – Athletic Equipment.]
7. [Fume hood specified in Section xx-xxxx – Laboratory Equipment.]
8. [Motorized bleachers specified in Section xx-xxxx – Telescoping Bleachers.]
9. [Elevator specified in Section xx-xxxx – Hydraulic Elevator.]
10. Mechanical equipment, systems, and controls specified in Division 15 – Mechanical.
11. Electrical equipment, systems, and controls specified in Division 16 – Electrical.
12. Other equipment and systems for which operation and maintenance data is requested in individual specification sections.
- 13.
- 14.

B. Submission:

1. Submit data to Architect in one or more binders.
2. Submit for review one draft copy 30 days prior to need date or as otherwise specified. This copy will be returned after review with Architect's comments. Revise content as required.
3. Once approved, submit 2 hard copies and one electronic (PDF) copy of final operation and maintenance manuals to Owner. All manuals shall be submitted prior to or in conjunction with Contractor's request for Substantial Completion and prior to demonstration and training session.

C. Contents:

1. Appropriate design criteria.
2. Equipment and parts list.

3. Operating instructions.
4. Maintenance instruction for equipment and finishes.
5. Shop drawings and product data.
6. Testing, balancing, and other field quality reports.
7. Copies of warranties. Deliver original Roofing Warranties separately to Owner, with copies of the Operations and Maintenance Manuals.
8. Directory listings.
9. Other material and information as indicated in individual specification sections and as necessary for operation and maintenance by Owner's personnel.

D. Form:

1. Hard copies of manuals shall be 8½ x 11 inch text pages bound in three ring expansion binders with a hard durable plastic cover. All documents to be originals unless otherwise noted.
2. Prepare binder covers with printed subject title of manual, title of project, date, and volume number when multiple binders are required. Printing shall be on face and spine.
3. Internally subdivide the binder contents with divider sheets with typed tab titles under reinforced plastic tabs. Place dividers at beginning of each chapter, part, section, and appendix.
4. Provide a table of contents for each volume.
5. Provide directory listing as appropriate with names addresses, and telephone numbers of Architect, Contractor, subcontractors, equipment suppliers, and nearest service representatives. Provide emergency 24-hour service contact information for all subcontractors, service contractors and principal vendors.

## 1.4 WARRANTIES

**[\*\*\*\*\*Each specification section requiring special or extended warranties should cross reference to this section for submittal procedures. When AIA A210 – General Conditions is used, it is unnecessary to specify one-year warranties since there is a one year correction period.\*\*\*\*\*]**

- A. Provide duplicate notarized copies of special and extended warranties as required by individual specification sections.

- B. Submit warranties to Architect prior to or in conjunction with submission of Notice of Substantial Completion.
- C. Execute and assemble warranties from subcontractors, suppliers, and manufacturers.
- D. Provide Table of Contents and assemble in three ring binder with hard durable plastic cover. Internally subdivide binder contents with permanent page dividers, with tab titling clearly typed under reinforced laminated plastic tabs.
- E. For items of work delayed beyond date of Substantial Completion, provide updated warranty submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

### **1.5 CERTIFICATES OF INSPECTION AND COMPLIANCE**

- A. For inspections throughout the construction period required by regulatory agencies, obtain and maintain certificates issued to show compliance.
- B. Assemble certificates and any formal written evidence of regulatory compliance in three ring binder with table of contents and submit to Architect prior to or in conjunction with submission of Notice of Substantial Completion.
- C. Certificate of Occupancy: Prior to Substantial Completion, obtain from authorities having jurisdiction Certificate of Occupancy. Submit with Notice for Substantial Completion.

### **1.6 INSURANCE INFORMATION**

- A. Submit prior to or in conjunction with submission of Contractor's request for Substantial Completion information regarding insurance including change over requirements and insurance extensions.

### **1.7 MAINTENANCE TOOLS**

- A. Provide all special tools, instruments, and other implements required for the functional operation and maintenance of equipment, systems, and other components installed as part of this project. Include screw drivers, crescent wrenches, pliers, and allen wrenches as well as more unique atypical tools.
- B. Tools shall be as provided or recommended by manufacturers of installed equipment and systems. Types and sizes shall be as specifically required for installed products.
- C. Tools shall be available and their use demonstrated during training sessions specified in Section 01 7500 – Starting, Adjusting, and Demonstrating
- D. Prior to or in concurrent with Contractor's request for Substantial Completion, deliver maintenance tools to Owner's representative. Prepare inventory of tools provided and obtain receipt from Owner's representative.

## **1.8 EXTRA MATERIALS**

**[\*\*\*\*\*Each specification section requiring extra materials should cross reference to this section for submittal procedures. Limit use of extra materials, consult APS FDC.\*\*\*\*\*]**

- A. Provide spare parts and maintenance materials in quantities specified in individual sections.
- B. Extra materials shall be produced by the same manufacturer of compatible with the installed products.
- C. Prior to or concurrent with submission of Notice of Substantial Completion deliver extra materials in unopened containers to Owner's representative at designated storage area at project site and place in location as directed. Obtain receipt from Owner's representative.
- D. During one year correction period:
  - 1. Extra materials may be used by Contractor to replace expendable and normally worn parts.
  - 2. Extra materials used by Contractor for replacement of defective products shall be replaced at no additional cost to Owner.

## **1.9 KEYS**

- A. Prior to or in conjunction with submission of Contractor's request for Substantial Completion, provide Owner with all keys for:
  - 1. Door hardware locks after rekeying in accordance with Section 08 7100 – Door Hardware.
  - 2. Access doors and panels.
  - 3. Electrical panelboards and other equipment.
- B. Provide a minimum of three keys for each lock.
- C. Clearly label each key as to function and location of lock.
- D. Obtain receipt from Owner's representative.
- E. Prior to, or in conjunction with Final Completion, return all keys lent out by Owner to Contractor for access to existing spaces, gates, etc. for the Work. Obtain receipt from Owner.

## **1.10 MISCELLANEOUS SECURITY-RELATED MATERIALS AND COMPONENTS**

- A. Prior to or in conjunction with Final Completion and in accordance with General Conditions of the Contract, deliver to Owner and obtain receipt for:
1. All miscellaneous security-related items loaned to Contractor during the progress of the job, including:
    - a. Owner-furnished security badges and passes.
    - b. Owner-furnished construction signs.
    - c.
  2. All security codes and software, if any.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION**

## SECTION 01 7878

### ENERGY CONSERVATION CLOSEOUT SUBMITTALS

#### PART 1 - GENERAL

##### **1.1 SUMMARY**

- A. Section includes procedures for preparing and submitting closeout submittals.
  - 1. PNM Business Energy Efficiency Program.
  - 2. NM Gas Company Energy Efficient Buildings Program
  - 3. Modification/Change Request and Change Order

##### **1.2 PNM BUSINESS ENERGY EFFICIENCY PROGRAM**

- A. A Pre-Notification Application will be submitted by APS Facilities Design + Construction during the Design Development phase of the project, to register the project and reserve the potential rebate funds.
- B. The General Contractor will be a Third Party signatory to the PNM Energy Efficiency Program Application. The final rebate provided by PNM and received by the General Contractor shall be reimbursed in full to APS by means of an MCR to the construction contract.
- C. The General Contractor shall prepare and submit the PNM Energy Efficiency Program Application Checklist, Applicant Information and Agreement Form with Incentives Worksheet (the "Application") as appropriate for the project.
  - 1. Download and complete the "New Construction Prescription Application"; do not download the "Whole Building Application".
  - 2. Submit a completed DRAFT of the Application to Design Professional and APS Facilities Design and Construction for review.
  - 3. Submit the final Application, within six (6) months of Substantial Completion, to PNM with electronic copy uploaded to e-Builder®.
- D. Application Information:
  - 1. Check "Final" Application.
  - 2. Name as is appears on the Utility Bill: *obtain from APS Facilities Design + Construction.*
  - 3. PNM Account Number: *obtain from APS Facilities Design + Construction.*

4. Select Building Type (usually “School/K-12”).
  5. Name of Company: Albuquerque Public Schools
  6. Name of Contact Person: *insert name of Staff Architect/Engineer*; Title: Staff Architect/Engineer.
  7. Phone #: *insert phone number of Staff Architect/Engineer*; Fax #: (505) 246-9020; Email: *insert email address of Staff Architect/Engineer*.
  8. Installation Address, City, State, Zip: *insert project address*.
  9. Mailing Address: APS Facilities Design + Construction, 915 Oak Street, SE, Albuquerque, NM 87106.
  10. Taxpayer ID: *obtain from APS Facilities Design + Construction*. Tax Status: *leave this space blank*.
  11. Contractor Information: insert all requested information.
  12. Third Party Payment Release: check the box to request that the incentive check be sent to the third party. Complete the third party information same as for General Contractor.
  13. Total Incentive Requested: automatically filled in by Incentive attachments.
  14. Total Project Cost: *obtain from APS Facilities Design + Construction*.
  15. Project Completion Date: insert Date of Substantial Completion.
- E. Agreement Form:
1. Customer Signature: to be completed by APS Facilities Design + Construction Staff Architect.
  2. Third Party Signature: complete this signature before submitting to APS Staff Architect for signature.
  3. When complete Application has been reviewed and executed by APS Staff Architect, submit to PNM via electronic and/or hardcopy submittal.
- F. Incentive Worksheets: Complete Incentive Worksheet for each applicable measure:
1. Download the “New Construction Prescriptive Application” Incentive Worksheets as appropriate for the project.
  2. Lighting Incentives and Lighting Specifications.
  3. LED Lighting Incentives.

4. HVAC Incentives and Specifications.
  5. Refrigeration Incentives and Specifications.
  6. Food Service Equipment Incentives and Specifications.
  7. Motors and VSD's Incentives and Specifications.
  8. The applicable Incentives Worksheets will populate the Application Total Incentive Requested field in the Application Form.
- G. Documents will be reviewed by the Design Professional and APS Facilities Design + Construction before submission to PNM.
- H. Additional Documentation:
1. Invoices: submit invoices dated no more than six (6) months prior to the rebate application form.
    - a. List the installation address on the invoices.
    - b. Ensure invoices show correct model number for each measure installed.
    - c. Ensure invoices indicated payment by the Customer (APS).
  2. Specification Sheets:
    - a. Provide a manufacturer's specification sheet for each measure installed (for example, lamps, ballasts, controls, equipment).
    - b. Ensure specification sheets include all program eligibility requirements for the measure (for example, CRI of lamps, ballast factors IPLV for AC units).
    - c. Ensure the model numbers of all installed components match those listed on the invoices.

### **1.3 NM GAS COMPANY ENERGY EFFICIENCY PROGRAM**

- A. The project's equipment list will be submitted by APS Facilities Design + Construction during the Design Development phase of the project, to register the project and reserve potential rebate funds.
- B. The General Contractor will be a Third Party signatory on the NM Gas Company Program. As such, GC must provide a W-9 tax form to the utility company. The final rebate provided by NM Gas Company and received by the GC shall be reimbursed in full to APS by means of MCR to the construction contract.



- C. The General Contractor shall participate with CLEAResult, NM Gas Company's Energy Efficiency Program Administrator, to provide all necessary site and equipment information for the project.
  - 1. Arrange a Pre-Inspection walk-thru to document and verify any existing equipment to be removed, replaced, or retro-fitted as a result of the project. (Does not apply to new construction.)
  - 2. Prepare and submit the As-Built equipment list, along with product submittals, for all gas-consuming equipment and energy recovery units on the project.
  - 3. Notify CLEAResult upon project completion.
  - 4. Arrange a Post-Inspection walk-thru to document and verify project installation and quantify final rebate.

**1.4 MODIFICATION/CHANGE REQUEST AND CHANGE ORDER:**

- A. Prepare an MCR refunding the full amount of PNM and Gas Company rebates to Albuquerque Public Schools via the construction contract balance remaining.
- B. Provide a copy of the final rebate check(s) (sent to the General Contractor as Third Party signatory), as an attachment to the MCR.
- C. The MCR must be submitted to APS within thirty (30) days of receipt of each rebate check.
- D. Five percent (5%) of the Schedule of Values Closeout Line Item (see General Conditions) will be allocated to the Energy Conservation Closeout activity, and paid upon approval of the MCR and Change Order which refunds the energy conservation rebate.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**END OF SECTION**

## SECTION 01 7900

### DEMONSTRATION AND TRAINING

#### PART 1 - GENERAL

**[\*\*\*\*\*This section should be edited to reflect, size, type of project, and complexity of systems being installed. It needs to be verified that Owner has facility management staff that will attend and benefit from demonstration and training. Training should be focused on experience, job designation, and knowledge of staff. Do not over specify.\*\*\*\*\*]**

#### **1.1 SUMMARY**

- A. Section includes: Training of Owner's designated personnel in operation and maintenance of equipment and systems.

#### **1.2 SUBMITTALS**

- A. Provide in accordance with Section 01 3300 – Submittal Procedures:

1. List of names, resumes, and qualifications of personnel conducting training sessions.
2. Preliminary schedule listing times, dates, and outline showing organization and proposed contents of training session for approval by Architect and Owner.
3. Copies of training manuals and other materials to be used in training sessions for approval by Architect and Owner.
4. Provide Owner additional copy of audio visual material on the same media used in training sessions.
5. 3 copies of training manuals for future use in training by Owner.
6. Submit report within 1 week after completion of training that sessions have been satisfactorily completed. Give times, dates, list of persons trained, and summary of instructions.
7. Recording of ALL training sessions in one of the following common video file format: .wmv, .mpg, .mp4 submitted on a CD as part of the closeout requirements.

#### **1.3 QUALITY ASSURANCE**

- A. Personnel conduction demonstration and training sessions shall be knowledgeable of installation, operation, and maintenance of specific project equipment and systems. Where appropriate manufacturer's representative shall conduct training.

## **PART 2 - PRODUCTS**

### **2.1 TRAINING MATERIALS**

- A. Training manuals: Loose leaf notebook format with agenda and objectives of each lesson.
  - 1. Manuals shall describe function, operation, and maintenance of various items of equipment and be suitable for personnel with high school education.
  - 2. Manuals shall be suitable for future training of Owner personnel by Owner staff.
  - 3. Manuals shall be useful reference for staff maintaining facility.
- B. Visual aids: Provide charts, handouts, overhead projector slides, electronic presentation, and other visual aids required to make effective presentation and facilitate training.
  - 1. Equipment needed for showing visual training aids shall be provided by Contractor.
  - 2. Visual aids shall be suitable for use by Owner's staff to train additional personnel in the future.

## **PART 3 - EXECUTION**

### **3.1 SCHEDULING**

- A. Schedule demonstration and training sessions after equipment and systems have been completely installed, startup completed, and adjustments made. Single demonstration and training session shall be conducted of all items prior to substantial completion. Schedule with Architect to accommodate Owner's representatives.

### **3.2 DEMONSTRATION AND TRAINING**

**[\*\*\*\*\*Each specification section requiring demonstrating for Owner's representatives should cross reference to this section for general procedures.\*\*\*\*\*]**

- A. Provide demonstration and training session to emphasize operation, use, and maintenance of installed items and systems:
  - 1. [Automatic gate operators specified in Section xx xxxx – Chain Link Fences and Gates.]
  - 2. [Motorized doors specified in [Section xx xxxx – Coiling Doors and grilles] [Section xx xxxx – Coiling Counter Doors] [Section xx xxxx – Overhead Sectional Doors] [Section xx xxxx – Automatic Door Operator].]

3. [Operable partitions specified in Section xx xxxx – Operable Partitions.]
  4. [Motorized projection screens and projector mounts specified in Section xx xxxx – Audio-Visual Equipment.]
  5. [Food service equipment specified in Section xx xxxx – Food Service Equipment.]
  6. [Folding basketball backstops and gymnasium dividers specified in Section xx xxxx – Athletic Equipment.]
  7. [Fume hood specified in Section xx xxxx – Laboratory Equipment.]
  8. [Motorized bleachers specified in Section xx xxxx – Telescoping Bleachers.]
  9. [Elevator specified in Section xx xxxx – Hydraulic Elevator.]
  10. Mechanical systems specified in Mechanical Divisions.
  11. Electrical systems specified in Electrical Divisions.
  12. Other items and systems as designated by Architect or requested by Owner.
  - 13.
  - 14.
- B. Conduct at project using actual installed equipment and systems.
- C. Owner shall be responsible for designating and notifying personnel to attend and ensuring attendance at schedule sessions.
- D. Have copies of operation and maintenance manuals specified in Section 01 7800 – Closeout Submittals available. Use as training aids.
- E. Owner requires the GC to record all training sessions in an acceptable electronic format (.wmv, .mpg, .mp4) to be submitted as part of the closeout documents.
- F. Provide a combination of classroom and walk-through training of HVAC and Controls systems, digitally record in accordance with 1.2 Submittals, Paragraph A, Item 7, above.
1. Trainers shall include manufacturer’s representatives and systems installers of the components installed.
  2. Classroom training shall cover all systems and components in accordance with Paragraph B – E above. In addition, classroom training shall explain the sequence of operations of each HVAC component and the interfaces with the Controls

system. Also, train attendees on the use of the Operations and Maintenance Manuals.

3. Walk-through training shall review each component, operation device and controller, and as part of the training attendees will operate each operating item under supervision of the trainer.

**END OF SECTION**

## SECTION 01 8627

### TURN-KEY SOLAR PHOTOVOLTAIC SYSTEM

#### PART 1 - GENERAL

##### **1.1 SUMMARY**

- A. Section includes: Criteria for delegated design and installation of solar photovoltaic energy systems.
- B. Related documents and information:
  - 1. APS Solar PV Systems Guidelines.
  - 2. Sheet Notes for PV systems (incorporated by the Design Professional into the preliminary solar PV Drawings).
  - 3. City of Albuquerque Fire Department Solar Photovoltaic System Installation Guidelines.
  - 4. Preliminary solar PV drawing (labeled "PV-100") showing panel area, inverter location(s) and one-line connection diagram.
  - 5. Section 01 2301 – Bid Lots for scope included in Bid Lot #2.

##### **1.2 SYSTEM DESCRIPTION**

- A. Provide a complete, turn-key, solar photovoltaic energy system, connected to the local utility power grid, approved for operation by the local utility, and connected to the APS energy monitoring website.
- B. Features include all equipment, web-linked energy-monitoring system, life-cycle calculations(s), demonstration and training, plus on-site computer and display monitor installed at project site.

##### **1.3 PERFORMANCE REQUIREMENTS**

- A. Provide a system capable of delivering the percentage, indicate in the preliminary solar PV drawings, of the project's target anticipated electrical energy usage.
- B. Design and install a complete turn-key system that is fully operational, and integrated into the APS energy monitoring website (via CSV output data), at Substantial Completion.

##### **1.4 SUBMITTALS**

- A. Product Data: Submit the manufacturer's product data and installation instruction on each component of the PV system.
- B. Shop Drawings: Submit shop drawings showing panel layout and installation details, with structural load data indicated.
- C. Wiring Diagrams: Submit wiring diagrams showing connections to PV panels, collector boxes, grid-tie inverter, electrical power panels, disconnect switches and feeders. Indicate wiring which is manufacturer- installed and wiring which is field-installed.

## **1.5 QUALITY ASSURANCE**

- A. PV Contractor must be certified as a North America Board of Certified Energy Practitioners (NABCEP) Solar Installer.
- B. PV Contractor must have successfully installed and commissioned at least three (3) commercial PV systems within the past (3) years, each system being at least 50kW in capacity and interconnected to three-phase electric service.
- C. Applicable Codes:
  - 1. National Electric Code, edition adopted by Authority Having Jurisdiction.
  - 2. New Mexico Electrical Code.
  - 3. Underwriters Laboratory (UL) Standard 1703, The Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources.
- D. All electrical components must have UL or equivalent (ass acceptable to the Authority Having Jurisdiction) listing, and appropriate voltage, current and temperature ratings for the intended application.
- E. PV system will be included in commissioning process for project.

## **1.6 MAINTENANCE**

- A. During the installation warranty period (first year following installation), include monitoring and any required maintenance to ensure the performance and quality of the PV system.
- B. Provide at least two (2) site visits, including cleaning of solar panels, inspection of electrical components and equipment, preventative maintenance, and analysis of anticipated power versus actual power produced.

## **1.7 WARRANTY**

- A. Provide warranties as indicated in the Sheet Notes.

## **PART 2 - PRODUCTS**

Not used.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Installer shall examine areas and conditions under which the Solar PV system is to be installed. Notify construction general contractor and Owner in writing of conditions detrimental to proper completion of the Work. Do not proceed with Work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.
- B. Interface with Other Work:
  - 1. When components of the Solar PV system are installed on or in other construction, coordinate and cooperate with the general contractor of other construction regarding structural or roof penetrations, electrical tie-ins, and access to spaces under control of the general contractor.
  - 2. Protect work of general and other contractors during Solar PV system installation and start-up

### **3.2 DEMONSTRATION AND TRAINING**

- A. Upon completion of installation of the Solar PV system, and associate electrical supply circuitry, energize system to demonstrate capability and compliance with requirements. Where possible, correct malfunctioning units at site, the retest to demonstrate compliance, otherwise, remove and replace malfunctioning units with new units, and proceed with retesting.
- B. Prepare and deliver to Owner one electronic and two hardcopy sets of Operations and Maintenance Manuals for the Solar PV system and major equipment installed. Include catalog data, shop drawings, wiring diagrams, performance curves and rating data where applicable, spare parts lists, and manufacturer's operating and maintenance data.
- C. Provide videotaped demonstration and training sessions for Owner's maintenance and energy conservation staff (separate sessions); explain emergency shutdown procedures and monitoring of power production from a remote computer, in addition to general maintenance and operation procedures.

**END OF SECTION**



## SECTION 01 9100

### GENERAL COMMISSIONING REQUIREMENTS

#### PART 1 - GENERAL

##### **1.1 DESCRIPTION**

- A. Commissioning is a systematic process of ensuring that building systems and equipment function in accordance with design intent and the owner's operational needs. This will be achieved in the construction, acceptance and warranty phases with actual verification of performance and compliance. The commissioning process encompasses and coordinates the traditionally separate functions of equipment Startup, control systems calibration and adjustments, testing and balancing, performance testing, system documentation and training.
- B. The commissioning process does not take away from or reduce the responsibility of installing contractors to provide a finished and fully functioning product.
- C. Commissioning during the construction phase is intended to achieve the following specific objectives according to the Contract Documents:
1. Verify that applicable equipment and systems are installed according to the manufacturer's recommendations and to industry accepted minimum standards and that they receive adequate operational checkout by installing contractors.
  2. Verify and document proper operational checkout by installing contractors.
  3. Verify and document proper operation and performance of equipment and systems.
  4. Verify that O&M documentation provided by the Contractor is complete.
  5. Verify that the Owner's operating personnel are adequately trained by the Contractor, Subs or other designated parties.
- D. The following are common abbreviations used in these specifications and the Commissioning Plan. Definitions are found in Article 1.4.

A/E	Architect and Design Engineers	FPT	Functional Performance Test
CC	Controls Contractor	GC	General Contractor (Prime)
CM	APS Construction Manager	MC	Mechanical Contractor
Cx	Commissioning	OR	Owner's Representative
CxA	Commissioning Authority	PFC	Prefunctional Checklist
Cx Plan	Commissioning Plan Document	Subs	Subcontractors to General
EC	Electrical Contractor	TAB	Test and Balance Contractor

## **1.2 RELATED DOCUMENTS**

- A. Drawings and General Conditions of the Contract and other Division 01 Specification Sections apply to this Section.
- B. Related Sections:
  - 1. Division 01 Section 01 3300 “Submittal Procedures” for submittal requirements.
  - 2. Division 01 Section 01 7700 “Closeout Procedures” or 01 7800 “Closeout Submittals” for requirements of project record drawings, Operations and Maintenance manuals, warranties, certifications of inspection, extra materials and other closeout submittals.
  - 3. Division 23 Section 23 0593 “Testing, Adjusting and Balancing” for TAB requirements.
  - 4. Division 23 Section 23 0800 “Commissioning of HVAC Systems” for HVAC commissioning requirements.
  - 5. Division 22 Section 22 0800 “Commissioning of Plumbing Systems” for plumbing commissioning requirements.
  - 6. Division 26 Section 0800 “Commissioning of Electrical Systems” for electrical and lighting control commissioning requirements.

## **1.3 SUMMARY**

- A. Section includes general requirements that apply to implementation of commissioning without regard to specific systems, assemblies, or components.
- B. While building commissioning is a pre-requisite of LEED certification, it is APS’s policy to commission any project for which major mechanical equipment is included, regardless of LEED certification intent. For LEED-specific requirements, see separate applicable specification sections(s).

## **1.4 DEFINITIONS**

- A. Acceptance Phase: Phase of construction after Startup and initial checkout when functional performance tests, O&M documentation review and training occurs.
- B. Approval: Acceptance that a piece of equipment or system has been properly installed and is functioning in the tested modes according to the Contract Documents.
- C. “As-Builts” (also referred to as Record Documents): Shop drawings, commissioning documentation (including PFCs and FPTs), factory start-up data, graphics, operation manuals, training documentation, and field reports which become part of the

documents provided to Commissioning Authority and turned over to the Owner, which are maintained by the General Contractor and Subcontractors.

- D. Architect / Engineer (A/E): The prime consultant (architect) and sub-consultants who comprise the design team, including the HVAC mechanical designer/engineer and the electrical designer/engineer.
- E. Basis of Design (BOD): A document that records concepts, calculations, decisions, and product selections used to meet the OPR and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual criteria that support the design process. For APS projects, the Design Development Submittal approved by the Board of Education may serve as the BOD.
- F. Commissioning Plan: A document that outlines the organization, schedule, allocation of resources, tasks and documentation requirements of the commissioning process.
- G. Contractor: The General Contractor or authorized representative.
- H. Commissioning Authority (CxA): The CxA is an independent third party entity that directs and coordinates the commissioning process.
- I. Datalogging: Monitoring and storing data such as flow, power, temperature, pressure, lighting levels, etc. for equipment, systems, and/or environments using stand-alone equipment (dataloggers) separate from the building control system.
- J. Daylighting: The placement of windows, or other transparent media, and reflective surfaces so that, during the day, natural light provides effective illumination to the building interior.
- K. Daylighting Controls: Devices, sensors and control systems that regulate the level of illumination within a building as provided by electric lights in response to the presence and level of daylight.
- L. Deficiency: A condition in the installation or function of a component, piece of equipment or system that does not perform properly according to specifications, manufacturer's performance data, sequence of operations, or other operational capabilities. This includes but is not limited to damage or flaws, impaired or limited functionality, manufacturer's defects, installation defects, or non-compliance with the design intent.
- M. Functional Performance Test (FPT): Test of the dynamic function and operation of equipment and systems using direct observation or monitoring methods. In cooperation with others, the CxA develops the Functional Performance Tests in a sequential written form, coordinates, oversees, and documents the actual testing, which is performed by qualified subcontractors as designated by the Contractor.

FPT's are performed after Prefunctional Checklists and Startup are complete and TAB activities are finished.

- N. HVAC Systems (also Mechanical Systems): Heating, ventilation, and air conditioning systems, subsystems and assemblies. This includes all components, devices, controls, sensors, hardware, and other items related to the function and operation of such systems.
- O. Non-Compliance / Non-Conformance: see Deficiency.
- P. Owner's Project Requirements (OPR): A document that details the functional requirements of a project and the expectations of how it will be used and operated. These include Project goals, measurable performance criteria, cost considerations, benchmarks, success criteria, and supporting information. For APS projects, the Design Development Submittal approved by the Board of education may serve as the OPR.
- Q. Prefunctional Checklist (PFC): List of inspection tasks and elementary component test procedures for verifying proper installation and operation of equipment. PFCs are collaboratively developed, approved by the CxA and completed by the installing and/or TAB contractor or vendor. Prefunctional Checks include static inspections and procedures that prepare the equipment and systems for initial operation (e.g. belt tension, oil levels, labeling, gauges, calibrated sensors, etc.). Some Prefunctional Checklist items entail testing the function of a component, piece of equipment or system (e.g. checking rotation and/or measuring voltage imbalance on a motor).
- R. Sampling (also "Statistical Testing"): Functionally testing a fraction of the total number of identical or near identical pieces of equipment, systems, or components.
- S. Startup: The initial starting or activating of dynamic equipment and systems in accordance with industry recognized procedures, standards, Best Practices, and manufacturer's recommendations. This may include execution of Prefunctional Checks.
- T. Systems, Subsystems, Equipment, and Components: Where these terms are used together or separately, they shall mean "as-built" or "as-constructed" systems, subsystems, equipment, and components.
- U. Vendor: System, equipment, and/or device supplier. This also includes service and software providers.
- V. Warranty Period: Warranty period for entire project, including equipment components. Warranty begins at Substantial Completion and extends for at least one year, unless specifically noted otherwise in the Contract Documents and accepted submittals (e.g. HVAC Controls include a 2-year warranty).

## **1.5 COMMISSIONING TEAM**

- A. Individuals, each having the authority to act on behalf of the respective entities the represent, organized to implement the commissioning process through coordinated action. The commissioning team shall consist of, but not be limited to, the following:
- B. Members appointed by the Contractor:
  - 1. Project Superintendent.
  - 2. Subcontractors.
  - 3. Installers.
  - 4. Suppliers.
  - 5. Specialists deemed appropriate by the CxA.
- C. Members appointed by the Owner:
  - 1. Commissioning Authority (CxA): Owner will engage the CxA under a separate contract.
  - 2. Representative(s) of the facility user (if feasible).
  - 3. Maintenance and Operations personnel.
  - 4. Architect and engineering design professionals.

## **1.6 OWNER'S RESPONSIBILITIES**

- A. Provide OPR documentation to CxA and Contractor for information and use.
- B. Assign Maintenance and Operations personnel to the project and schedule them to participate in commissioning team activities and trainings as requested.
- C. Provide BOD documentation (prepared by A/E and approved by Owner) to the CxA and Contractor for use in developing Cx Plan, Systems Manual (LEED Enhanced Cx only), and M&O training plan.

## **1.7 CONTRACTOR'S RESPONSIBILITIES**

- A. Contractor shall assign representatives and/or subcontractors with expertise and authority to act on its behalf, and shall schedule them to perform and fulfill commissioning process activities including, but not limited to , the following:
  - 1. Attend commissioning team and other related meetings held on a variable basis (weekly once equipment reaches start-up phase).
  - 2. Provide to CxA complete copies of all submittals related to commissioned systems.

3. Review and accept commissioning process requirements and test procedures provided by the CxA.
  4. Integrate and coordinate commissioning process activities within construction schedule.
  5. Review and accept content and format PFCs, FPTs, test forms, reports and other documents provided by the CxA.
  6. Complete PFCs, test forms, reports and other documentation as work is completed, and provide to the CxA on a prompt and regular basis.
  7. Provide successful completion of commissioning responsibilities, tests, procedures, documentation and related tasks in accordance with Cx Plan and Contract Documents, as required of Contractor, Subs, and Vendors.
  8. Evaluate and installation or performance deficiencies, identified in the commissioning process and, in collaboration with entity responsible for system and equipment installation, recommend corrective action. Upon approval, provide means and corrective measures for deficiencies.
  9. Cooperate with the CxA for resolution of issues recorded in the Issues Log.
  10. Furnish to the CxA copies of all required construction phase documentation including, but not limited to, addenda, change orders, approved submittals, shop drawings, and as-builts related to commissioned systems.
  11. Provide and coordinate the training of Owner's personnel.
  12. Prepare O&M manuals, according to the Contract Documents, including clarifying and updating the original sequences of operation to as-built conditions and provide to CxA.
- B. Only individuals that have direct knowledge and have witnessed that a line item task has actually been performed shall initial and/or check off tasks on respective commissioning related forms, checklists, test protocols and other associated documentation. It is not acceptable for uninvolved supervisors, individuals or parties to fill out and check off items.

## **1.8 CxA'S RESPONSIBILITIES**

- A. Organize and lead the commissioning team.
- B. Provide commissioning plan.
- C. Convene commissioning team meetings.

- D. Provide project-specific construction checklists and commissioning process test procedures.
- E. Verify the execution of commissioning process activities by project team members using random sampling. The sampling rate may vary from 1 to 100 percent. Verification will include, but is not limited to, equipment to verify compliance with OPR. When random sample does not meet the requirement, the CxA will report the failure in the Issue Log.
- F. Verify successful completion of checklists and tests.
- G. Prepare and maintain the Issues Log.
- H. Prepare and maintain completed construction checklist log.
- I. Witness systems, assemblies, equipment, component Startup, Prefunctional Checks.
- J. Compile test data, inspection reports, and certificates; include them in the Systems Manual and Commissioning Report.
- K. Witness Functional Performance Tests of commissioned systems, equipment and components (statistical sampling in some cases). Test results shall be documented. Approval of the Functional Performance Test results shall be made after review by CxA and Owner's Rep (OR) as needed.
- L. Verify and document that the requirements for training of M&O personnel and building occupants have been completed.
- M. On projects where APS's Extended Maintenance Agreement with the MC is contracted, CxA shall participate in annual site walks to review and document system performance (at 11-month warranty and for two (2) subsequent years).

## **PART 2 - COMMISSIONED SYSTEMS (AS APPLICABLE)**

### **2.1**

- A. Chilled Water System: Chillers and Chilled Water Systems including:
  - 1. Chillers.
  - 2. Pumps.
  - 3. Towers.
  - 4. Heat exchangers.
  - 5. VFDs.

6. Miscellaneous piping components.
  7. Compressors.
- B. Heating Water System: Boilers and Hot Water Systems including:
1. Boilers.
  2. Pumps.
  3. Heat exchangers.
  4. VFDs.
  5. Miscellaneous piping components.
- C. Ventilation Systems:
1. HVAC Air Handling Systems
  2. Terminal Units:
    - a. Fancoils, heat pumps, VAVs, etc.
    - b. Miscellaneous unit heaters, radiation and heating coils.
- D. Computer room air conditioning units (CRAC)
- E. Mini-split systems.
- F. Exhaust and Supply Systems:
1. General & Toilet.
  2. Refrigerant purge.
- G. Facility Management System (Building Automation System)
1. Includes connection/communication with APS FMS server(s).
- H. Plumbing Systems:
1. Domestic Hot Water.
  2. Circulation pumps.
- I. Electrical Systems:
1. Normal Power as it relates to the mechanical systems.



2. Lighting Control Systems.
  3. Emergency Power.
- J. Renewable energy systems:
1. Photovoltaic.
  2. Solar hot water.

## **PART 3 - EXECUTION**

### **3.1 MEETINGS**

- A. Scoping Meeting (Cx ‘Kickoff’): The CxA will schedule, plan and conduct a commissioning scoping meeting early in the Construction phase with the commissioning team in attendance, including Contractor, Owner’s Rep. (OR) and involved Subs.
- B. Routine Meetings: Meetings will be planned and conducted by the CxA as construction progresses. These meetings will involve Contractor and/or Subs and cover coordination, deficiency resolution, planning and other issues. Meetings may be convened to focus on specific systems or issues and invited attendees will be selected accordingly. These meetings will be held routinely through the course of construction, and whenever practical be conducted as extensions of other scheduled meetings. In the final months of construction, these meetings may be held as frequently as once per week.

### **3.2 COORDINATION AND SCHEDULING**

- A. In general, Functional Testing is conducted after Prefunctional Testing and Startup have been satisfactorily completed, controls have been sufficiently tested, and commissioned systems are fully operational. The CxA is notified before systems and equipment undergo further testing or to verify performance of other components or systems. As part of Prefunctional activities, adjustments are made to provide basic operation at specific levels, flows, and/or conditions. Functional Testing then proceeds methodically from components, to subsystems, to systems. Once the proper performance of all interacting individual systems has been achieved, the interface and coordinated responses between systems is checked.
- B. Contractor shall provide a Letter of Readiness to the CxA (through the OR) prior to Functional Testing stating that the commissioned systems are installed, connected, and otherwise ready for testing per the PFCs.
- C. Contractor and Subs shall provide a minimum of fourteen (14) days notice to the CxA regarding their scheduled dates for installation, Startup, Prefunctional Checks, and TAB tasks for all related equipment and systems. Additionally, Contractor and Subs shall accommodate CxA’s tasks of inspecting work, witnessing Prefunctional Checks

and Startup procedures, and any other associated tasks related to the commissioned systems.

- D. The CxA shall provide a minimum of fourteen (14) days notice to the OR, GC and affected Subs for scheduling of Functional Performance Tests. The CxA shall direct, witness and document the Functional Testing of all equipment and systems. The installing Sub(s) shall execute the tests.

### **3.3 DEFICIENCIES AND NON-CONFORMANCE**

- A. The CxA shall produce and maintain a project-specific Issues Log to capture any deficiencies or non-conformance of the commissioned systems. The Log will be updated throughout the project and will track issues from discovery through resolution by the responsible party (or acceptance by the Owner). The Issues Log shall become a permanent record in the Final Cx Report.
- B. The installing Sub, vendor, or other responsible party shall, in a timely manner, correct all items that are deficient or incomplete in the PFCs and FPTs, and shall notify the CxA as soon as outstanding items have been corrected. The CxA shall update the Issues Log as necessary to reflect the corrections.
- C. The CxA may assist with problem resolution regarding non-conformance and deficiencies, but ultimately that responsibility resides with the design/construction management team, Contractor, Subs, and vendors.
- D. Items left incomplete which later cause deficiencies or delays during Functional Testing may result in backcharges to the responsible contractor.
- E. Retesting
  - 1. The CxA is responsible for initial testing and up to one (1) retest of included equipment/systems. Any items that fail upon retest shall be corrected and retested at Contractor's expense.
  - 2. Retesting of deficiencies determined to be design related shall be the responsibility of the A/E design professionals.
  - 3. Equipment/systems that are found not to be ready for testing (despite receipt of the Contractor's Letter of Readiness) and requiring a separate visit by the CxA will have their initial test considered a retest.

### **3.4 DEFERRED TESTING**

- A. Seasonal Testing: During the warranty period, seasonal testing (testing delayed until weather conditions are closer to the system's design) may be required as part of this contract. The CxA shall coordinate such activity. Tests will be executed by the appropriate Sub(s), and witnessed/documentated by the CxA. Any identified

deficiencies shall be corrected by the Sub, and final adjustments made to the O&M manuals, as-builts and Cx Report.

- B. Unforeseen Deferred Tests: If any check or test cannot be completed due to the building structure, required occupancy condition or other issue, completion of PFCs and FPTs may be delayed upon approval of the OR. These tests will be conducted in the same manner as the seasonal tests, and as soon as practical. Services of necessary parties will be negotiated.

### **3.5 TRAINING**

- A. The CxA shall be responsible for overseeing and approving the content and adequacy of Owner personnel training for commissioned equipment and systems.
- B. The GC shall be responsible for training coordination and scheduling, and ultimately for ensuring that complete training is provided. The CxA shall document completion of training per the Contract Documents.
- C. Adequate copies of the standard operating manual for all system(s) and any special training manuals will be available for each trainee, three (3) copies of these documents will be retained for the O&M manuals. In addition, any system technical manual(s) will be reviewed as part of training, and three (3) copies retained for the O&M manuals. Training materials shall cover all control sequences and include a definitions section that fully describes all relevant terms and abbreviations. Training materials shall be approved by the CxA.

**END OF SECTION**

## SECTION 01 9310

### POST-WARRANTY SERVICE & 3-YEAR MAINTENANCE AGREEMENT

**\*\*\*\*\*The Design Professional shall include the following requirements as noted and complete this section with information for the specific project in coordination with Section 00 7200 – General Conditions.\*\*\*\*\***

#### PART 1 - GENERAL

##### 1.1 SUMMARY

**\*\*\*\*\*Specifier to list all Sections below that include equipment and systems to be covered under the separate 3-Year Service & Maintenance Agreement.\*\*\*\*\***

- A. This specification outlines provisions of the full coverage Service & Maintenance Agreement to be provided under a separate 3-year contract with the Mechanical Contractor. The Agreement is project-specific, and includes the following equipment and systems.
  - 1. [HVAC and controls systems specified in Sections – [ ].]
  - 2. [Other Systems as identified \_]
  - 3. Section 01 2301 – Bid Lots for scope included in Bid Lot No. 1.
- B. The purpose and intent of the Agreement is to ensure reliable, continuous operation of the identified building systems by the party responsible for installing them, and to do so for an adequate period of time to remedy any performance or systemic issues that emerge after the systems have been in use for one or more seasonal cycles. The purpose is further to provide practical, realistic, hands-on training to the APS staff who will ultimately take over operation of the building.
- C. The Mechanical Contractor shall be responsible for all Service & Maintenance requirements included in this section through a direct contract with the Owner, which is separate from the contract for Construction. Inclusion of qualified subcontractors needed to complete this work (e.g. controls contractor, etc.) is the responsibility of the Mechanical Contractor.
- D. Service and maintenance responsibilities must cover complete operation of these systems, including HVAC control system(s) programmed to the specified Sequence(s) of Operation.
- E. Administration of this extended service contract will be by APS's Maintenance & Operations Department. All work performed will be initiated, logged and tracked in School Dude, APS online project tracking system.

## **1.2 TIME PERIOD**

- A. Contractor shall furnish maintenance coverage for three full years, plus service/repair for two years beyond the project's one-year warranty period. Agreement's time frame shall begin upon completion of Test & Balance and Commissioning functional testing.

## **1.3 SUBMITTALS**

- A. Submit in accordance with Section 01 3300 – Submittal Procedures:
  - 1. Copy of completed Service & Maintenance Agreement at Substantial Completion of the project, showing specific systems and equipment being covered along with the manufacturer's recommended Preventative Maintenance schedule(s). This will be reviewed by Owner and adapted as needed for use by School Dude. Use form provided as Section 01 9311.
  - 2. Copy of fully-extended Service & Maintenance Agreement at Project Closeout.
  - 3. Completed Maintenance Checklists as required by this Section and all final maintenance records at completion of 3-year Service & Maintenance Agreement period.

## **1.4 QUALITY ASSURANCE**

- A. Perform service and maintenance work using competent and appropriately licensed/certified personnel. Service personnel shall be familiar with all aspects of installed systems and knowledgeable of equipment and its maintenance/repair procedures.
- B. Provide Owner names of service supervisor and other designated personnel. Immediately notify Owner of any changes in personnel.
- C. Provide Owner with single emergency service telephone number as well as telephone number where service supervisor can be reached at all times.
- D. Service and maintenance shall not be assigned or transferred to any agent or subcontractor without prior written consent of Owner. Work must always be performed only by appropriately licensed/certified personnel.
- E. Display Service & Maintenance Contractor contact information listed in 1.4-B & C above by providing (8½ X 11 inch) framed document mounted prominently in central custodial area or office for duration of Agreement.

## **1.5 OWNER'S RESPONSIBILITIES**

- A. Operate HVAC and controls systems according to instructions provided in training sessions, as well as Operations and Maintenance manuals.

- B. Provide Service & Maintenance Contractor access to site, all Covered Equipment, and School Dude website for purposes of maintenance, inspection, service, repair, and other work specified in this section. Provide keys to site, if needed. Ensure that Contractor is adequately trained on use of School Dude.
- C. Report to Service & Maintenance Contractor any failures, defects, or other problems associated with systems to be maintained.
- D. Participate fully in training/hand-off activities outlined in Section 3.2 B.

## **PART 2 - PRODUCTS**

### **2.1 PARTS**

- A. Maintain adequate stock of parts for replacement and emergency purposes.
- B. Use original equipment (OEM) parts whenever available.
- C. Contractor must provide at their expense any temporary heating or cooling needed during repairs to Covered Equipment.

## **PART 3 - EXECUTION**

### **3.1 SERVICE & MAINTENANCE – GENERAL**

- A. Service & Maintenance Contractor shall offer, as an Alternate to the construction Base Bid, the total cost proposal for three years of the contract period. (See Section 3.1 C for exclusions.) Service & Maintenance Contractor shall invoice an equal portion of the fixed fee quarterly, unless specified otherwise in the Contract Documents.
- B. Service & Maintenance Contractor shall provide all labor, parts and materials to repair, service, and maintain HVAC and controls equipment installed under this Agreement. If beyond the manufacturer's warranty period, Contractor will be reimbursed for equipment deemed defective through no fault or negligence of the Contractor. Controls system components (including software, programming, wiring, panels, actuators, sensors and other devices) are to be covered in full at no charge to APS for the life of the contract. [NOTE: Per APS' standard contract, the controls systems are fully warranted for two (2) years by the Controls Contractor.]
- C. Any costs for service or repair work normally required to fulfill standard first year warranty responsibilities shall not be included in the Service & Maintenance Agreement fee, but shall instead be included in the Base Bid amount of the Construction contract.
- D. Maintenance/repairs shall be accomplished in a manner and time schedule that minimizes discomfort to building occupants and potential damage to the building or systems.

- E. Refrigerant shall be handled in accordance with U.S. Environmental Protection Agency (EPA) Clean Air Act of 1990 with amendments. Any recovery of refrigerant shall be executed by and EPA certified technician and delivered to and EPA certified reclaimer.
- F. Trash and debris from maintenance, service or repair activities shall be removed from the site and the end of each working day.
- G. Care shall be taken to minimize impact to the roof surface when servicing roof-mounted equipment. This includes walking, spills, dropping of materials/tools, etc. Contractor will be held liable for negligent damages.
- H. Upon completion of work, Contractor is responsible for ensuring that all utilities are restored to equipment shut down for maintenance, service or repair, and that equipment is returned to normal operating mode.

### **3.2 PREVENTATIVE MAINTENANCE – MAINTENANCE CONTRACTOR’S RESPONSIBILITIES**

#### **A. General Responsibilities:**

1. For the full three (3) years of this Agreement, Contractor is responsible for labor and materials to perform all maintenance (preventative and otherwise) associated with the Covered Equipment. In addition, Contractor shall provide all necessary repair services for two years after the construction project Warranty Period expires.

#### **B. Years 1 – 3 Responsibilities:**

1. Check in with APS Maintenance & Operations Department and sign in at the school’s Administrative office upon arrival for service or maintenance.
2. Review equipment logs, operational problems, and any emergency work performed by Maintenance & Operations personnel.
3. Perform required service or maintenance on equipment. Update project status on School Dude as directed.
4. Complete a Maintenance Checklist form for each piece of equipment. Include copies of Maintenance Checklist(s) with each payment request.
5. Check out with Maintenance & Operations Department and sign out at Administrative office upon completion of service or maintenance. Return any checked out keys that have been issued by the Lock Shop.
6. Maintain a log of all maintenance completed during the contract period.

7. On an annual basis, conduct a site walk with Maintenance & Operations Dept. and project Commissioning Agent to review system performance.

C. Year 3 Additional Responsibilities:

1. Deliver maintenance log for each major piece of equipment, including required maintenance schedule, repairs made during the contact period, and any unique problems or considerations with the equipment. To effectively transfer knowledge and history, walk Maintenance & Operations Department technician and/or Supervisor through each operational procedure required for the equipment.
2. Provide repeat or refresher training for Owner personnel as specified in the Contract.

**3.3 SERVICE AND REPAIR – MAINTENANCE CONTRACTOR RESPONSIBILITIES**

- A. Respond to service requests send directly from the Maintenance & Operations Department to the Service & Maintenance Contractor, via phone, School Dude, facsimile, etc., within the following timelines:
  1. Initial contact within two (2) hours of receipt.
  2. Service representative on site for repairs within 48 hours of receipt.
  3. On site within (2) hours in cases of equipment emergencies.
- B. Check in with Maintenance & Operations Department and sign in at school's Administrative office upon arrival for service or repairs.
- C. Maintain a log of each service call and actions taken for each piece of equipment. Include copies of service call log(s) with each payment request.
- D. Review service and repair work performed with Maintenance & Operations Department personnel.
- E. Check out with Maintenance & Operations Department and sign out at school's Administrative office upon completion of service call.

**3.4 MAINTENANCE CHECKLISTS**

- A. Maintenance Checklist forms to be completed by Service & Maintenance Contractor for various equipment types are available on School Dude, and will be automatically generated at the required intervals established at Substantial Completion of the construction project (see Section 1.3 A 1).



- B. The Service & Maintenance Contractor shall have personnel with direct knowledge complete the individual checklists to verify that proper Preventative Maintenance procedures have been performed during each scheduled visit.
- C. *These checklists do not replace any manufacturer-recommended procedures or repairs due to system malfunction.*
- D. Any work performed outside the scheduled Preventative Maintenance procedures still requires a Work Order through School Dude for proper tracking. In such cases, Contractor is to contact APS Maintenance & Operations HVAC Supervisor to describe scope and request Work Order.

**END OF SECTION**

# Service & Maintenance Agreement

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

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

## Agreement Documents

**Service and Maintenance Agreement** consists of this two-page contract, specification section 01 9310 "POST WARRANTY SERVICE & 3-YEAR MAINTENANCE" (Attachment 1), and the APS General Terms and Conditions as outlined on Work Orders and Purchase Orders (collectively, the "Service Agreement" or "Agreement").

\_\_\_\_\_ agrees to service and maintain the Covered Equipment hereof according to the terms of this Agreement and those included in "Attachment 1," and further agrees to give preferential service availability to Owner over non-contract customers.

## Service Fee

Albuquerque Public Schools agrees to pay to \_\_\_\_\_ the sum \$ \_\_\_\_\_ for the entire 3-Year Term, payable in equal installments of \$ \_\_\_\_\_ per quarter, as the fee for services described in "Attachment 1" with respect to the Covered Equipment.

## Term

The initial term of this Service Maintenance Agreement shall be 3 years, effective \_\_\_\_\_ and expiring on \_\_\_\_\_.

OWNER	SERVICE AND MAINTENANCE CONTRACTOR
Albuquerque Public Schools Maintenance & Operations Dept. 915 Locust St. SE Albuquerque, NM 87106	Company Name & Address:

### Accepted by:

APS FD&C	APS M&O	Contractor
Printed Name	Printed Name	Printed Name
Title	Title	Title
Date	Date	Date

The Scope of Services to be performed on Covered Equipment is described in the attached document entitled "Section 01 9310 – Post-Warranty Service & 3-Year Maintenance Agreement" (Attachment 1), excerpted from the Project Manual for:

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Project Name

**The following "Covered Equipment" will be serviced and maintained under this Service Agreement.**  
[Indicate all covered equipment included on the completed Equipment Data Collection Sheet filled out at Substantial Completion.]

**[ATTACH FORMS HERE]**

# APS DATA CHARTER SCHOOL REROOF

## SECTION 051200 - STRUCTURAL STEEL

### PART 1 GENERAL

#### 1.01 WORK INCLUDED

- A. This section includes the fabrication and erection of structural steel.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Metal Decking - Section 05 30 00
- B. Metal Fabrication - Section 05 50 00

#### 1.03 QUALITY ASSURANCE

- A. Qualifications of Fabricator: Fabricator shall have a minimum of 5 years experience in the fabrication of structural steel and have a current AISC Certification for the fabrication facility.
- B. Qualifications of Erector: Erector shall have a minimum of 5 years experience in the erection of structural steel.
- C. Qualifications of Field Welders: Welders shall be certified in accordance with AWS D1.1 within the last 12 months.

#### D. Reference Standards:

##### 1. American Society for Testing and Materials (ASTM)

- a. ASTM A 36      Standard Specification for Carbon Structural Steel.  
    A 992
- b. ASTM A 53-95    Standard Specification for Pipe, Steel, Black and  
                          Hot-Dipped, Zinc-coated Welded and Seamless.
- c. ASTM A 307-94   Standard Specification for Carbon Steel Bolts and Studs,  
                          60,000 PSI Tensile Strength.
- d. ASTM A 325-94   Standard Specification for Structural Bolts, Steel, Heat  
                          Treated, 120/105 ksi Minimum Tensile Strength.
- e. ASTM A 500-93,   Standard Specification for Cold-Formed Welded and  
                          Seamless Carbon Steel Structural Tubing in Rounds and  
                          Shapes.

##### 2. American Welding Society (AWS), latest edition.

## APS DATA CHARTER SCHOOL REROOF

- a. AWS D1.1-92 Structural Welding Code-Steel.
3. American Institute of Steel Construction (AISC), Steel Construction Manual, latest edition.
  - a. Specification for Structural Steel Buildings
  - b. AISC Code of Standard Practice
  - c. Specification for Structural Joints Using ASTM A 325 or A 490 , Classes 10.9 and 10.9.3.

### 1.04 SUBMITTALS

- A. Shop Drawings: Submit shop drawings including complete details and schedules for fabrication and assembly of structural steel members. Include details of cuts, connections, camber, holes, and other pertinent data. Indicate welds by standard AWS symbols, and show size, length, and type of each weld. Shop drawings shall not be made by reproduction of the Contract Drawings.
- B. Provide setting drawings and directions for installation of anchor bolts and other anchorages to be installed by others.
- C. Welder Certification: Submit affidavit stating that all welders are certified in accordance with AWS.

### 1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Support structural steel above ground on skids, pallets, platforms, or other supports.
- B. Protect steel from damage.
- C. Store packaged materials in original unbroken package or container.
- D. Do not store materials on structure in a manner that might cause distortion or damage to members or supporting structures.
- E. Replace damaged shapes or members.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. Structural Steel Shapes, Plates, and Bars: ASTM A 36 and A 992.
- B. Structural Steel Pipe: ASTM A 53, Type E or S, Grade B.

## APS DATA CHARTER SCHOOL REROOF

- C. Structural Steel Tubing: ASTM A 500, Grade B,  $F_y = 46$  ksi.
- D. Anchor Bolts: ASTM A 307 or ASTM A 36
- E. High Strength Tension Control Threaded Fasteners: Meet requirements of ASTM A 325.
- F. Headed Anchor Shear Studs: By the Nelson Division of TRW.
- G. Welding Electrodes: E 70 Series.
- H. Shop Primer Paint: Fabricators standard rust inhibitive primer.
- I. Non-Metallic, Non-Shrink Grout: Meets the requirements of Corp of Engineers specifications CRD-C621.

### 2.02 FABRICATION

- A. Fabrication shall be in accordance with the AISC "Code of Standard Practice for Buildings and Bridges".
- B. Connections: Weld or bolt shop connections as indicated on the approved shop drawings. Design connections to support reactions and forces where indicated on the drawings.
- C. Shop Welds: Shall be visually inspected by the Fabricator's quality control department.

### 2.03 SHOP PAINTING

- A. General: Shop paint structural steel, except those members or portions of members to be embedded in concrete or mortar. Paint embedded steel which is partially exposed on exposed portions and initial 2" of embedded areas only.
- B. Do not paint surfaces which are to be welded or high-strength bolted with friction-type connections.
- C. Surface Preparation: After inspection and before shipping, clean steel work to be painted. Remove loose rust, loose mill scale, and spatter, slag or flux deposits. Clean steel in accordance with Steel Structures Painting Council (SSPC) as follows:
  - 1. SP-1 "Solvent Cleaning"
  - 2. SP-2 "Hand Tool Cleaning"
- D. Painting: After surface preparation, apply structural steel primer paint in accordance with manufacturer's instructions. Provide one coat.

## PART 3 EXECUTION

## APS DATA CHARTER SCHOOL REROOF

### 3.01 COORDINATION

- A. Field Measurements: Verify all elevations, locations, and dimensions of surfaces to receive structural steel.
- B. Anchor Bolts and Other Embedded Items: Verify locations and positions of anchor bolts and other embedded items used to support structural steel.
- C. Correct any unsatisfactory conditions prior to erection of structural steel.

### 3.02 PREPARATION

- A. Clean surfaces to receive structural steel prior to erection.

### 3.03 ERECTION

- A. General: Erect structural steel in accordance with AISC "Code of Standard Practice for Steel Buildings and Bridges".
- B. Field Assembly: Assemble structural steel accurately to the lines and elevations shown on the drawings. Align and adjust components accurately before fastening.
- C. Temporary Bracing: Provide temporary bracing or guys to secure structural steel against wind, seismic, or construction loads. It is the responsibility of the Contractor to maintain stability of the structure during erection.
- D. Field Bolted Connections: Install high strength tension control bolts in accordance with AISC Specifications for Structural Joints Using ASTM A325 and A490 Bolts and the manufacturer's instructions. Where clearance within a connection does not permit the use of tension control bolts, standard A325 bolts shall be used and inspected in accordance with the AISC Specification for Structural Joints.
- E. Field Welding: Perform all welds in accordance with AWS.
- F. Inspection of Field Welds: Perform visual inspection of all field welds. If any welds appear to be unsatisfactory, they shall be tested in accordance with ASTM E160 and/or replaced at the expense of the Contractor.
- G. Gas Cutting: Do not use gas cutting torches in field to cut structural framing.
- H. Do not enlarge unfair holes by burning. Ream holes that must be enlarged to admit bolts.
- I. Field Touch-up Painting (Primer): Paint all bolts, washers, and nuts after connections have been tightened and checked. Paint field welds. Paint all abrasions in shop coat. Use same paint as for shop painting.
- J. Grout Placement: Comply with the manufacturer's instructions.

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K. Tighten anchor bolts after supported members have been positioned and plumbed.

END OF SECTION 051200



# APS DATA CHARTER SCHOOL REROOF

## SECTION 053000 - METAL DECKING

### PART 1 GENERAL

#### 1.01 WORK INCLUDED

- A. Provide all metal decking complete in place as shown on the drawings, specified herein, and needed for a complete and proper installation.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Structural Steel - Section 05 12 00
- B. Miscellaneous Metal – Section 05 50 00
- C. Lightgage Metal Framing - Section 05 40 00

#### 1.03 QUALITY ASSURANCE

- A. Reference Standards:
  - 1. Qualification of Field Welders: Welders shall be certified in accordance with AWS D1.3 within the last 12 months.
  - 2. American Society of Testing and Materials (ASTM) Standard Specification, latest edition.
    - a. ASTM A 570/ Standard Specification for Steel, Sheet and Strip, Carbon, Hot Rolled,  
A 570 M-97 Structural Quality.
    - b. A 611-97 Steel, Cold-Rolled Sheet, Carbon, Structural Quality.
    - c. ASTM A 653/ Standard Specification for Steel Sheet, Zinc-Coated  
A 653M-97 (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
  - 3. American Welding Society (AWS), latest edition.
    - a. D1.3-92, Structural Welding Code - Sheet Steel
  - 4. Steel Deck Institute.
    - a. SDI Design Manual for Floor Decks and Roof Decks

#### 1.04 SUBMITTALS

## APS DATA CHARTER SCHOOL REROOF

- A. Product Data: Submit manufacturer's specifications and installation instructions for each type of decking and accessories.

## APS DATA CHARTER SCHOOL REROOF

- B. Shop Drawings: Submit detailed drawings showing layout and types of deck panels, anchorage details, and conditions requiring closure panels, supplementary framing, sump pans, cant strips, cut openings, special jointing or other accessories. Shop Drawings shall not be made by reproduction of the Contract Drawings.

### 1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Support metal deck above ground on skids, pallets, platforms or other supports.
- B. Protect metal deck from damage.
- C. Store packaged materials in original unbroken package or container.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. Metal Roof Deck: ASTM A 611, Grade C. See plans for type, size and finish.
- B. Metal Floor Deck: ASTM A 570 with galvanized finish. See plans for type and size.
- C. Finishes:
  - 1. Painted: Manufacturer's baked-on, rust-inhibitive paint.
  - 2. Galvanized: Conform to ASTM A 653, G60.

## PART 3 EXECUTION

### 3.01 COORDINATION

- A. All edge angle shall be in place with proper attachment prior to installation of metal deck. All roof and floor opening frames shall be installed prior to deck installation.

### 3.02 INSTALLATION

- A. General: Install deck units and accessories in accordance with manufacturer's recommendations and final shop drawings, and as specified herein. Locate deck bundles to prevent overloading of structural members.
- B. Place deck units on supporting steel framework and adjust to final position with ends accurately aligned and bearing on supporting members before being permanently fastened. Do not stretch or contract side lap interlocks.

## APS DATA CHARTER SCHOOL REROOF

- C. Place deck units in straight alignment for entire length of run.
- D. Place deck units flat and square, secured to adjacent framing without warp or excessive deflection.
- E. Lap ends of deck units a minimum of 2" over supports.
- F. Place deck units to permit proper attachment to the perimeter deck angle.
- G. Do not use deck units for storage or working platforms until permanently secured.
- H. Cut and neatly fit deck units and accessories around other work projecting through or adjacent to the decking, as shown.
- I. Fasten deck units to steel supporting members as shown on the structural drawings.
- J. Fasten side laps of units as called for on the structural drawings.
- K. Care shall be exercised in the selection of electrodes and amperage to provide positive welds and to prevent high amperage blowholes.
- L. Comply with AWS D1.3 requirements and procedures.
- M. Provide additional metal reinforcement and closure pieces as required for strength, continuity of decking and support of other work shown.
- N. Install closure strips at all locations as recommended by the manufacturer to provide a complete installation.
- O. Provide cleaning and touch-up painting of field welds, abraded areas and rust spots, as required for all exposed areas after erection and before proceeding with field painting.

END OF SECTION 053000

# APS DATA CHARTER SCHOOL REROOF

## SECTION 054000 – LIGHTGAGE METAL FRAMING

### PART 1 GENERAL

#### 1.01 WORK INCLUDED

- A. This section includes all lightgauge studs, joists and track, 20 gauge or heavier, including bridging, and related accessories as indicated on the Contract Drawings and specified herein.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Structural Steel - Section 05 12 00
- B. Drywall Studs - Section 09 26 0 0

#### 1.03 QUALITY ASSURANCE

- A. Reference Standards:
  - 1. American Iron and Steel Institute (AISI) Design of Cold Formed Steel Structural Members, 1980.
  - 2. American Welding Society of (AWS) D1.3, 1992 Structural Welding Code.
  - 3. American Society of Testing and Materials (ASTM).
    - a. ASTM A 570/  
A 570M-95                      Standard Specification for Steel, Sheet and Strip, Carbon, Hot Rolled, Structural Quality.
    - b. ASTM A 611-94                      Standard Specification for Steel, Sheet, Carbon, Cold Rolled, Structural Quality.
    - c. ASTM A 653/  
Coated  
A 653M-95                      Standard Specification for Steel Sheet, Zinc-  
(Galvanized) or Zinc-Iron Alloy-Coated  
(Galvannealed) by the Hot-Dip Process

#### 1.04 SUBMITTALS

- A. Submit manufacturer's product information and installation instructions for each item of lightgauge framing. Submit shop drawings for all prefabricated lightgauge systems.

#### 1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

## APS DATA CHARTER SCHOOL REROOF

- A. Protect metal framing units from rusting and damage. Deliver to project site in manufacturer's unopened containers or bundles, fully identified with name, brand, type, and grade. Store off ground in a dry ventilated space or protect with suitable waterproof coverings.

### PART 2 PRODUCTS

#### 2.01 MATERIALS

- A. Metal Framing:
  - 1. All 12, 14, and 16 gage steel studs and joists shall be formed from steel that meets the requirements of one of the following standards with a minimum yield strength of 50,000 psi:
    - a. Painted Material - ASTM A 570, Grade 50.
    - b. Galvanized Material - ASTM A 653 Grade 50.
  - 2. All 18 and 20 gage steel studs and joists; all track, bridging and accessories shall be formed from steel that meets the requirements of one of the following with a minimum yield strength of 33,000 psi:
    - a. Painted Material - ASTM A 611, Grade C.
    - b. Galvanized Material - ASTM A 653.
- B. Material Finishes: All stud and joist components shall be primed with paint meeting the performance requirements of TT-P-1636C, or shall be formed from steel having a G-60 galvanized coating or better.

#### 2.02 FABRICATION

- A. Framing components may be prefabricated into panels prior to erection. Prefabricated panels shall be square, with components attached to prevent racking. Handling and lifting of panels shall be done in a manner as to not cause distortion in any member.
- B. All framing components shall be cut squarely for attachment to perpendicular members, or as required for an angular fit against abutting members. Members shall be held positively in place until properly fastened.

### PART 3 EXECUTION

#### 3.01 INSTALLATION

## APS DATA CHARTER SCHOOL REROOF

- A. Install metal framing systems in accordance with manufacturer's printed instructions and recommendations, unless otherwise indicated on Contract Drawings.
- B. Install and align tracks accurately to layout at base and tops of studs. Secure tracks as indicated on Contract Drawings. Provide fasteners at corners and ends of tracks.
- C. Install supplementary framing, blocking and bracing in metal framing system to support fixtures, equipment, etc. Comply with stud manufacturer's recommendations and industry standards, considering weight and loading of each item.
- D. Secure studs to top and bottom tracks by welding at both inside and outside flanges unless noted otherwise.
- E. Frame wall openings larger than 2'-0" square with double studs at each jamb of frame except where more than 2 are either shown or indicated in manufacturer's instructions. Install tracks and jack studs above and below wall openings. Anchor tracks to jamb studs with stud shoes or by welding, and space jack studs same as full-height studs of wall. Secure stud system wall opening frame in manner indicated.
- F. Install horizontal bridging in stud system, spaced (vertical distance) at no more than 4'-0" o.c. Weld at each intersection.
- G. Touch-up shop-applied protective coatings damaged during handling and installation. Use compatible primer for prime coated surfaces; use galvanizing repair paint for galvanized surfaces.

END OF SECTION 054000

# APS DATA CHARTER SCHOOL REROOF

## SECTION 055000 MISCELLANEOUS METAL FABRICATIONS

### PART 1 GENERAL

#### 1.01 WORK INCLUDED:

- A. Furnish and install all metal fabrications as shown on Drawings and as specified under this Section.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE:

- A. Section 054000: LIGHT GAGE METAL FRAMING
- B. Section 051200: STRUCTURAL STEEL
- C. Section 053000: METAL DECKING

#### 1.03 REFERENCES:

- A. The references listed below are declared to be a part of these specifications, the same as if fully set forth, except as modified herein. Unless specifically stated otherwise, the edition or revision of each document in effect at the beginning of work on this project shall be used.
- B. American Society for Testing and Materials (ASTM):
  - 1. ASTM A6 - General Requirements of Rolled Steel Plates, Shapes, Sheet Piling, and Bars for Structural Use
  - 2. ASTM A36 - Structural Steel
  - 3. ASTM A53 - Pipe, Steel, Black and Hot-Dipped, Zinc, Coated, Welded and Seamless
  - 4. ASTM A108 - Steel Bars, Carbon, Cold-Finished, Standard Quality
  - 5. ASTM A307 - Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength
  - 6. ASTM A386 - Zinc-Coating (Hot-Dip) on Assembled Steel Products
  - 7. ASTM A569 - Steel, Carbon (0.15 Maximum, Percent), Hot-Rolled, Sheet and Strip, Commercial Quality
  - 8. ASTM A668 - Steel Forgings, Carbon and Alloy, for General Industrial Use
- C. American Welding Society (AWS)
  - 1. AWS D1.1 - Structural Welding Code - Steel
  - 2. AWS D1.3 - Structural Welding Code - Sheet Steel
- D. American Institute of Steel Construction (AISC)
  - 1. Manual of Steel Construction (1989)
- E. Steel Structures Painting Council (SSPC)
  - 1. SSPC-SP2 - Hand Tool Cleaning
  - 2. SSPC-SP6 - Commercial Blast Cleaning

#### 1.04 DEFINITIONS:

- A. Definitions in ASTM E985 for railing-related terms apply to this section.

#### 1.05 QUALITY ASSURANCE:

- A. Codes and Standards: Comply with the provisions of the latest edition or revision of the following codes, standards and specifications, except as otherwise shown and specified.
  - 1. AISC "Manual of Steel Construction – Allowable Stress Design"
  - 2. AISI "Specification for the Design of Cold-Formed Steel Structural Members".



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3. AWS D1.1, "Structural Welding Code - Steel" and D1.3 "Structural Welding Code - Sheet Steel".
  4. ASTM A6, "General Requirements for Delivery of Rolled Steel Plates, Sheet Piling and Bars for Structural Use".
- B. Qualifications for Welding Work: Qualify welding processes and welding operators in accordance with AWS "Standard Qualification Procedures".
- C. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible, to ensure proper fitting of the work. Allow for trimming and fitting wherever the taking of field measurements before fabrication might delay the work.
- D. Inserts and Anchorages:
1. Furnish inserts and anchoring devices which must be set in concrete for the installation of miscellaneous metal work. Coordinate delivery with other work to avoid delay.
  2. See concrete section of these specifications for installation of inserts and anchorage devices.
- E. Shop Assembly: Preassemble items in the shop to the greatest extent possible, so as to minimize field splicing and assembly of units at the project site. Disassemble units only to the extent necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

### 1.06 SYSTEM PERFORMANCE REQUIREMENTS:

- A. Structural Performance: Design, engineer, fabricate, and install the following metal fabrications to withstand the following structural loads without exceeding the allowable design working stress of the materials involved, including anchors and connections. Apply each load to produce the maximum stress in each respective component of each metal fabrication.

### 1.07 SUBMITTALS:

- A. General: Comply with requirements of Section 01340.
- B. Manufacturer's Data: Manufacturer's specifications, load tables, dimension diagrams, anchor details and installation instructions for products to be used in the fabrication of miscellaneous metal work, including paint products. Indicate by transmittal that copy of instructions has been distributed to the installer.
- C. Shop Drawings: Submit shop drawings for the fabrication and erection of all assemblies of miscellaneous metal work which are not completely shown by the manufacturer's data sheets. Include profile, elevations, sizes, connections, reinforcing and accessories at required for complete installation. Show welded connections using standard AWS welding symbols.

### 1.08 PROJECT CONDITIONS:

- A. Field Measurements: Check actual locations of walls and other construction to which metal fabrications must fit, by accurate field measurements before fabrication; show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of Work.

### 1.09 PRODUCT DELIVERY, STORAGE, AND HANDLING:

- A. Deliver to site as required to avoid interruption of work.
- B. Store on blocking under shelters with supports as necessary to avoid damage due to self-weight or superimposed loads.

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## PART 2 PRODUCTS

### 2.01 MATERIALS:

- A. Steel
  - 1. Plates and Shapes: ASTM A36 unless otherwise shown. ASTM A572, grade 50 where shown.
  - 2. Pipe: ASTM A53, type E or S, grade B, black or galvanized as shown.
  - 3. Steel Bars and Bar-Size Shapes: ASTM A283, Grade D or ASTM A36.
  - 4. Bolts, nuts, washers:
    - a. Standard bolts: ASTM A307, grade A for general use, grade B for use at flanged joints of piping systems, plain or zinc coated as shown.
    - b. Anchor bolts: Except as otherwise shown, L-shaped with minimum 3" hook, 8" embedment in concrete, 4" threaded projection, double nutted, ASTM A307 or A36, plain or zinc coated as shown.
- B. Primer Paint:
  - 1. For general use in shop and field: FS TT-P-31, brown
  - 2. For touch-up of galvanized surfaces: FS TT-P-641
  - 3. For aluminum to be in contact with steel: FS TT-P-645
  - 4. For aluminum to be in contact with concrete: BuRec CTP-1
- C. Brackets, Flanges and Anchors: Cast or formed metal of the same type material and finish as supported rails, unless otherwise indicated.
- D. Concrete Inserts: Threaded or wedge type; galvanized ferrous castings, either malleable iron, ASTM A47, or cast steel, ASTM A27. Provide bolts, washers, and shims as required, hot-dip galvanized per ASTM A153.
- E. Welding Rods and Bare Electrodes: Select in accordance with AWS specifications for the metal alloy to be welded.

### 2.02 FABRICATION - GENERAL:

- A. Use materials of size and thickness shown, or, if not shown, of required size and thickness to produce adequate strength and durability in the finished product for the intended use. Work to dimensions shown or accepted on shop drawings, using proven details of fabrication and support. Use type of materials shown or specified for the various components of work.
- B. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32 inch unless otherwise shown. Form bent-metal corners without otherwise impairing the work.
- C. Weld corners and seams continuously and in accordance with the recommendations of AWS. Grind exposed welds smooth and flush to match and blend with adjoining surfaces.
- D. Form exposed connections with hairline joints which are flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type shown or, if not shown, use Phillips flathead (countersunk) screws or bolts.
- E. Provide for anchorage of type shown, coordinated with supporting structure. Fabricate and space anchoring devices as shown and as required to provide adequate support for intended use of the work.
- F. Cut, reinforce, drill and tap miscellaneous metal work as may be required to receive finish hardware and similar items of work.

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### 2.03 STEEL FABRICATION:

- A. General:
  - 1. Conform to following standards of the American Institute of Steel Construction (AISC):
    - a. "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings."
    - b. "Code of Standard Practice for Steel Buildings and Bridges," with following exceptions:
      - 1) Connections shall be as shown on the Drawings except as specifically and individually approved otherwise by the Architect.
  - 2. Welding shall conform to the AWS D1.1 "Structural Welding Code Steel" and AWS D1.3 "Structural Welding Code - Sheet Steel" and shall be performed by welders currently certified in accordance with AWS certification procedures to perform the type of welding required.
  - 3. Mill bearing surfaces to true plane.
  - 4. Shop connections: Welded, unless otherwise shown.
  - 5. Field connections: Provide bolts for all field connections except where shown otherwise on Drawings.
- B. Shop Painting:
  - 1. Paint all steel items which are not specified or shown to be galvanized except as specified below. Paint after fabrication is complete. Exception: If portions of assemblages will not be accessible to painting after fabrication, paint those portions before fabrication.
  - 2. Remove oil and grease, dirt, rust, loose mill scale, and other foreign elements by "Commercial Blast Cleaning" in accordance with SSPC-SP6 or by "Hand Tool Cleaning" in accordance with SSPC-SP2 as required.
  - 3. Apply one or more coats of primer paint of specified type in accordance with paint manufacturer's directions as required to achieve recommended coverage and coating thickness for items to be used in a corrosive environment. Use painting methods which will result in full coverage of joints, corners, edges and all exposed surfaces.
  - 4. Omit shop prime coat from contact surfaces of connections, from surfaces to be field welded, from parts to be embedded in concrete, and other parts which will not be exposed to view or weather after construction is complete.
- C. Galvanizing:
  - 1. Galvanize after fabrication all steel members and assemblages which are shown or specified to be galvanized.
  - 2. Galvanize each item as specified. If coating type and thickness is not specified, provide hot-dipped galvanized coating equivalent to a G90 coating as specified in ASTM A525.
  - 3. Protection of dissimilar materials:
    - a. Aluminum surfaces in contact with steel shall be given one coat of zinc chromate primer in accordance with FS TT-P-645.
    - b. Aluminum surfaces in contact with concrete shall be given coat of alkali-resistant bituminous paint meeting requirements of BuRec Specification CTP-1 (coal tar paint).

### 2.04 MISCELLANEOUS METAL ITEMS:

- A. General: Provide and install items listed below and shown on drawings together with anchorage, attachment and accessories necessary for a complete installation. Items listed are principal items only. See drawing details for items not specifically listed.
- B. Nosings: Furnish and install as detailed on Architectural Drawings.
- C. Steel Pipe Railings and Handrails:
  - 1. General: Fabricate pipe railings and handrails to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including wall thickness of pipe, post spacings, and anchorage, but not less than that required to support structural loads.
  - 2. Interconnect railing and handrail members by butt-welding or welding with internal connectors, at fabricator's option, unless otherwise indicated.

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- a. At tee and cross intersections, notch ends of intersecting members to fit contour of pipe to which end is joined and weld all around.
3. Form changes in direction of railing members as follows:
  - a. By insertion of prefabricated elbow fittings.
  - b. By radius bends of radius indicated.
  - c. By mitering at elbow bends.
  - d. By bending.
  - e. By any method indicated above, applicable to change of direction involved.
4. Form simple and compound curves by bending pipe in jigs to produce uniform curvature for each repetitive configuration required; maintain cylindrical cross-section of pipe throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of pipe.
5. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated.
6. Close exposed ends of pipe by welding 3/16 inch thick steel plate in place or by use of prefabricated fittings, except where clearance of end of pipe and adjoining wall surface is 1/4 inch or less.
7. Toe Boards: Where indicated, provide toe boards at railings around openings and at the edge of open-sided floors and platforms. Fabricate to dimensions and details indicated, or if not indicated, use 4 inches high x 1/8 inch steel plate welded to, and centered between, each railing post.
8. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, end closures, flanges, miscellaneous fittings, and anchors for interconnections of pipe and attachment of railings and handrails to other work. Furnish inserts and other anchorage devices for connecting railings and handrails to concrete or masonry work.
  - a. For railing posts set in concrete fabricate sleeves from steel pipe not less than 6 inches long and with an inside diameter not less than 1/2 inch greater than the outside diameter of post, with steel plate closure welded to bottom of sleeve.
  - b. Provide friction fit, removable covers designed to keep sleeves clean and hold top edge of sleeve 1/2 inch below finished surface of concrete.

### 2.05 CONCRETE FILL AND REINFORCING MATERIALS:

- A. Concrete Materials and Properties: Comply with requirements of Division 3 section "Concrete Work" for normal weight, ready-mix concrete with minimum 28-day compressive strength of 3000 psi, unless higher strengths indicated.
- B. Nonslip Aggregate Finish: Factory-graded, packaged material containing fused aluminum oxide grits or crushed emery as abrasive aggregate; rust- proof and nonglazing; unaffected by freezing, moisture, or cleaning materials.
- C. Reinforcing Bars: ASTM A615, Grade 60, unless otherwise indicated.

## PART 3 EXECUTION

### 3.01 PREPARATION:

- A. Prior to beginning installation of metal fabrications, inspect field conditions under which work is to be done. If conditions are not satisfactory, do not begin work until unsatisfactory conditions have been corrected to the satisfaction of the Contractor and the Architect. Beginning of installation represents Contractor's acknowledgement and certification that all conditions are satisfactory.
- B. Furnish setting drawings, diagrams, templates, instructions and directions for the installation of anchorages, such as concrete inserts, anchor bolts and miscellaneous items having integral anchors, which are to be embedded in concrete or masonry construction. Coordinate delivery of such items to the project site.
- C. Thoroughly clean all parts which will be in contact.

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- D. Paint with specified paint all surfaces of dissimilar metals and any surfaces of aluminum fabrications which will be embedded in concrete.

### 3.02 INSTALLATION - GENERAL:

- A. Install metal fabrication plumb and level or on slope as shown in their correct positions within specified tolerances.
- B. Design, provide, install and maintain all temporary handrails, kickplates and other items as required by OSHA and as necessary to provide a safe workplace.
- C. Use light drifting as necessary to draw holes together. Drifting to enlarge unfair holes is not permitted. If necessary to enlarge holes to make connections, use twist drills.
- D. Weld steel members in accordance with AWS D1.1. Provide certification that all welders are currently qualified in accordance with AWS procedures.
- E. Anchor handrails, ladders and miscellaneous items securely to supporting work as shown on the Drawings. Where attachments are not shown, anchor items using appropriate anchors subject to approval by the Architect.
- F. Grout under baseplates to provide full bearing area after framing or equipment has been plumbed, leveled and aligned. Place grout in accordance with the manufacturer's directions using the damp-pack method. Do not apply loads to structural framing until grout under baseplates has been placed and properly cured.
- G. Provide anchorage devices and fasteners where necessary for securing miscellaneous metal items to in-place construction, including threaded fasteners for concrete and masonry inserts, toggle bolts, lag bolts, wood screws and other connectors as required.
- H. Cutting, Fitting and Placement:
  - 1. Perform cutting, drilling and fitting required for the installation of miscellaneous metal items. Set work accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels. Provide temporary bracing or anchors in formwork for items which are to be built into concrete, masonry, or similar construction.
  - 2. Fit exposed connections accurately together to form tight hairline joints. Weld connections which are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Grind joints smooth and touch-up shop paint coat. Do not weld, cut or abrade surfaces of exterior units which have been hot-dip galvanized after fabrication and are intended for bolted or screwed field connections.
- I. Field Welding: Comply with AWS Code for procedures of manual shielded metal-arc welding, appearance and quality of welds made and methods used in correcting welding work.

### 3.03 INSTALLATION OF STEEL PIPE RAILINGS AND HANDRAILS:

- A. Adjust railings prior to anchoring to ensure matching alignment at abutting joints. Space posts at spacing indicated, or if not indicated, as required by design loadings. Plumb posts in each direction. Secure posts and railing ends to building construction as follows:
  - 1. Anchor posts in concrete by means of pipe sleeves preset and anchored into concrete. After posts have been inserted into sleeves, fill annular space between post and sleeve solid with the following anchoring material, mixed and placed to comply with anchoring material manufacturer's directions.
  - 2. Nonshrink, nonmetallic grout or anchoring cement.
  - 3. Cover anchorage joint with a round steel flange attached to post as follows:

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- A. Welded to post after placement of anchoring material.
  - 1. Leave anchorage joint exposed, wipe off surplus anchoring material, and leave 1/8 inch build-up, sloped away from post. For installations exposed on exterior, or to flow of water, seal anchoring material to comply with grout manufacturer's directions.
- B. Anchor rail ends into concrete and masonry with steel round flanges welded to rail ends and anchored into wall construction with lead expansion shields and bolts.
  - 1. Install removable railing sections where indicated in slip-fit metal sockets cast into concrete. Accurately locate sockets to match post spacing.
- C. Secure handrails to wall with wall brackets and end fittings. Provide bracket with not less than 1-1/2 inch clearance from inside face of handrail and finished wall surface. Locate brackets as indicated, or if not indicated, at spacing required to support structural loads. Secure wall brackets and wall return fittings to building construction as follows:
  - 1. Use type of bracket with pre-drilled hole for exposed bolt anchorage.
  - 2. For concrete and solid masonry anchorage, use drilled-in expansion shield and either concealed hanger bolt or exposed lag bolt, as applicable.
  - 3. For steel framed gypsum board assemblies, fasten brackets directly to steel framing or concealed anchors using self-tapping screws of size and type required to support structural loads.

### **3.04 INSTALLATION OF WALL HANDRAILS:**

- A. Mount handrails only on completed walls. Do not support handrails temporarily by any means not satisfying structural performance requirements.
- B. Mount handrails only on gypsum board assemblies reinforced to receive anchors, and where the location of concealed anchor plates has been clearly marked for benefit of Installer.

### **3.05 FIELD PAINTING:**

- A. Apply one or more coats of the primer paint specified to cleaned surfaces of bolts, to new welds and to abrasions to shop coat after erection. Apply as many coats as necessary to achieve protection of the metal surfaces at least equal to that provided by the shop paint.
- B. Apply finish paints and coatings as specified in Division 9 Sections of these specifications.

### **3.06 PROTECTION AND REPAIR OF WORK:**

- A. Take all measures necessary to protect the work during the life of the contract.
- B. If any portion of the work is found to be defective or is damaged by the Contractor's operations after it has been installed, it shall be repaired by the Contractor at his expense as directed by and to the satisfaction of the Architect. If, in the opinion of the Architect, the work has been damaged to the extent that satisfactory repairs are not possible or if repairs have been made which are not acceptable, the Contractor shall remove the damaged items and replace with new undamaged items.

**END OF SECTION**

SECTION 061000 - ROUGH CARPENTRY

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. Section Includes:
  - 1. Rooftop equipment bases and support curbs.
  - 2. Wood blocking and nailers.
  - 3. Wood furring and grounds.
  - 4. Plywood backing panels.

1.3 DEFINITIONS

- A. Exposed Framing: Framing not concealed by other construction.
- B. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater but less than 5 inches nominal (114 mm actual) in least dimension.
- C. Lumber grading agencies, and the abbreviations used to reference them, include the following:
  - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
  - 2. NLGA: National Lumber Grades Authority.
  - 3. RIS: Redwood Inspection Service.
  - 4. SPIB: The Southern Pine Inspection Bureau.
  - 5. WCLIB: West Coast Lumber Inspection Bureau.
  - 6. WWPA: Western Wood Products Association.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
  - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.

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3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
5. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

### B. LEED Submittals:

1. Certificates for Credit MR 6 and Credit MR 7: Chain-of-custody certificates indicating that products specified to be made from certified wood comply with forest certification requirements. Include documentation that manufacturer is certified for chain of custody by an FSC-accredited certification body. Include statement indicating cost for each certified wood product.
2. Product Data for Credit IEQ 4.1: For adhesives, documentation including printed statement of VOC content.
3. Product Data for Credit IEQ 4.4: For composite wood products, documentation indicating that product contains no urea formaldehyde.
4. Laboratory Test Reports for Credit IEQ 4: For adhesives and composite-wood products, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

### C. Fastener Patterns: Full-size templates for fasteners in exposed framing.

## 1.5 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. Evaluation Reports: For the following, from ICC-ES:
  1. Wood-preservative-treated wood.
  2. Fire-retardant-treated wood.

## 1.6 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.



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### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

## PART 2 - PRODUCTS

### 2.1 WOOD PRODUCTS, GENERAL

- A. Certified Wood: Materials shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship for the following:
  - 1. Dimension lumber framing.
  - 2. Miscellaneous lumber.
- B. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  - 1. Factory mark each piece of lumber with grade stamp of grading agency.
  - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
  - 3. Provide dressed lumber, S4S, unless otherwise indicated.

### 2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
  - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
  - 2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat all rough carpentry unless otherwise indicated.

### 2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet (3.2 m) beyond the centerline of the burners at any time during the test.
  - 1. Use treatment that does not promote corrosion of metal fasteners.
  - 2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
  - 3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.
  - 4. Design Value Adjustment Factors: Treated lumber shall be tested according ASTM D 5664 and design value adjustment factors shall be calculated according to ASTM D 6841.
- C. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Kiln-dry plywood after treatment to a maximum moisture content of 15 percent.
- D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
- E. Application: Treat all rough carpentry unless otherwise indicated.

### 2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
  - 1. Blocking.
  - 2. Nailers.
  - 3. Rooftop equipment bases and support curbs.
  - 4. Furring.
  - 5. Grounds.
- B. For items of dimension lumber size, provide Construction or No. 2:
- C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:
  - 1. Mixed southern pine; No. 2 grade; SPIB.

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2. Hem-fir or hem-fir (north); Construction or No. 2 Common grade; NLGA, WCLIB, or WWPA.
  3. Spruce-pine-fir (south) or spruce-pine-fir; Construction or No. 2 Common grade; NeLMA, NLGA, WCLIB, or WWPA.
  4. Western woods; Construction or No. 2 Common grade; WCLIB or WWPA.
- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

### 2.5 PLYWOOD BACKING PANELS

- A. Equipment Backing Panels: DOC PS 1, Exterior, AC, fire-retardant treated, in thickness indicated or, if not indicated, not less 3/4-inch (19-mm) nominal thickness.
1. Plywood shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

### 2.6 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry assemblies and equal to four times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
  2. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 (ASTM F 738M and ASTM F 836M, Grade A1 or A4).

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### 2.7 MISCELLANEOUS MATERIALS

- A. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch (0.6 mm).
- B. Adhesives for Gluing Furring and Sleepers to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.
  - 1. Adhesives shall have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
  - 2. Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chloropyrifos as its active ingredient.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels. Install fire-retardant treated plywood backing panels with classification marking of testing agency exposed to view.
- C. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- D. Comply with AWWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
  - 1. Use inorganic boron for items that are continuously protected from liquid water.
  - 2. Use copper naphthenate for items not continuously protected from liquid water.
- E. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - 1. NES NER-272 for power-driven fasteners.
  - 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
  - 3. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

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- F. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

### 3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.
- C. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- D. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches (38 mm) wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

### 3.3 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
- B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes sufficiently wet that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

SECTION 061600 - SHEATHING

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. Section Includes:

1. Wall sheathing.
2. Sheathing joint and penetration treatment.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for plywood backing panels.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review air-barrier and water-resistant glass-mat gypsum sheathing requirements and installation, special details, transitions, mockups, air-leakage testing, protection, and work scheduling that covers air-barrier and water-resistant glass-mat gypsum sheathing.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Include physical properties of treated materials.
3. For fire-retardant treatments, include physical properties of treated plywood both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D5516.
4. For products receiving waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
5. For air-barrier and water-resistant glass-mat gypsum sheathing, include manufacturer's technical data and tested physical and performance properties of products.

- B. Sustainable Design Submittals:
1. Complete Material Data Worksheets provided by Owner's LEED Consultant.
  2. Provide the overall cost of materials and separate cost breakout for materials that contribute to Materials and Resources credits on the LEED worksheets.
  3. MRc4-Recycled Content: for products having recycled content, product specific documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.
  4. MRc5 Regional Content: For products and materials sourced and manufactured within 500 miles of the jobsite, provide certificates indicating location of material manufacturer and point of extraction, harvest or recovery for each raw material.
  5. Certificates for Credit MR 6 and Credit MR 7: Chain-of-custody certificates indicating that products specified to be made from certified wood comply with forest certification requirements. Include documentation that manufacturer is certified for chain of custody by an FSC-accredited certification body. Include statement indicating cost for each certified wood product.
  6. Product Data for Credit EQ4.2; for adhesives and sealants (field applied within the vapor barrier) documentation including printed state of VOC content.
  7. Product Data for Credit EQ 4.4: For composite wood products, documentation indicating that product contains no urea formaldehyde.
  8. Laboratory Test Reports for Credit EQ 4: For adhesives and composite-wood products, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Shop Drawings: For air-barrier and water-resistant glass-mat gypsum sheathing assemblies.
1. Show locations and extent of sheathing, accessories, and assemblies specific to Project conditions.
  2. Include details for sheathing joints and cracks, counterflashing strips, penetrations, inside and outside corners, terminations, and tie-ins with adjoining construction.
  3. Include details of interfaces with other materials that form part of air barrier.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer, including list of ABAA-certified installers and supervisors employed by Installer, who work on Project.
- B. Product Certificates: From air-barrier and water-resistant glass-mat gypsum sheathing manufacturer, certifying compatibility of sheathing accessory materials with Project materials that connect to or that come in contact with the sheathing.
- C. Product Test Reports: For each air-barrier and water-resistant glass-mat gypsum sheathing assembly, indicating compliance with specified requirements, for tests performed by a qualified testing agency.
- D. Evaluation Reports: For the following, from ICC-ES:
1. Wood-preservative-treated plywood.
  2. Fire-retardant-treated plywood.

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3. Air-barrier and water-resistant glass-mat gypsum sheathing.

E. Field quality-control reports.

### 1.6 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer of air-barrier and water-resistant glass-mat gypsum sheathing.

1. Installer shall be licensed by ABAA according to ABAA's Quality Assurance Program and shall employ ABAA-certified installers and supervisors on Project.
2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

B. Testing Agency Qualifications:

1. For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.
2. For testing and inspecting agency providing tests and inspections related to air-barrier and water-resistant glass-mat gypsum sheathing: an independent agency, qualified according to ASTM E329 for testing indicated, and certified by Air Barrier Association of America, Inc.

### 1.7 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Owner will engage a qualified testing agency to perform preconstruction testing on field mockups.

### 1.8 DELIVERY, STORAGE, AND HANDLING

A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance Ratings: As tested according to ASTM E119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.



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- B. Air-Barrier and Water-Resistant Glass-Mat Gypsum Sheathing Performance: Air-barrier and water-resistant glass-mat gypsum sheathing assembly, and seals with adjacent construction, shall be capable of performing as a continuous air barrier and as a liquid-water drainage plane flashed to discharge to the exterior incidental condensation or water penetration. Air-barrier assemblies shall be capable of accommodating substrate movement and of sealing substrate expansion and control joints, construction material changes, penetrations and transitions at perimeter conditions without deterioration and air leakage exceeding specified limits.
- C. Factory and field applied adhesives must contain no-added urea formaldehyde and comply with LEED VOC level requirements.
- D. Certified Wood: Wood products shall be certified as "FSC Pure" or "FSC Mixed Credit".

### 2.2 WOOD PANEL PRODUCTS

- A. Emissions: Products shall meet the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.
- C. Factory mark panels to indicate compliance with applicable standard.

### 2.3 PRESERVATIVE-TREATED PLYWOOD

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with ground.
  - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
- C. Application: Treat all plywood unless otherwise indicated.

### 2.4 FIRE-RETARDANT-TREATED PLYWOOD

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet (3.2 m) beyond the centerline of the burners at any time during the test.

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1. Use treatment that does not promote corrosion of metal fasteners.
  2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated plywood by pressure process after being subjected to accelerated weathering according to ASTM D2898. Use for exterior locations and where indicated.
  3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D3201/D3201M at 92 percent relative humidity. Use where exterior type is not indicated.
  4. Design Value Adjustment Factors: Treated lumber plywood shall be tested according to ASTM D5516 and design value adjustment factors shall be calculated according to ASTM D6305. Span ratings after treatment shall be not less than span ratings specified.
- C. Kiln-dry material after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- D. Identify fire-retardant-treated plywood with appropriate classification marking of qualified testing agency.

### 2.5 WALL SHEATHING

- A. Plywood Sheathing: DOC PS 1, sheathing.
1. Span Rating: Not less than 16/0.
  2. Nominal Thickness: Not less than 1/2 inch (13 mm).
- B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1, Structural I sheathing.
1. Span Rating: Not less than 16/0.
  2. Nominal Thickness: Not less than 1/2 inch (13 mm).
- C. Paper-Surfaced Gypsum Sheathing: ASTM C1396/C1396M, gypsum sheathing; with water-resistant-treated core and with water-repellent paper bonded to core's face, back, and long edges.
1. Type and Thickness: Type X, 5/8 inch (15.9 mm) thick.
  2. Edge and End Configuration Square.
  3. Size: 24 by 96 inches (610 by 2438 mm) for horizontal, 48 by 96 inches (1219 by 2438 mm) for vertical installation.
- D. Glass-Mat Gypsum Sheathing: ASTM C1177/C1177M.
1. Type and Thickness: Type X, 5/8 inch (15.9 mm) thick.
  2. Size: 48 by 96 inches (1219 by 2438 mm for vertical installation).
- E. Air-Barrier and Water-Resistant Glass-Mat Gypsum Sheathing: ASTM C1177/C1177M, Type X, coated fiberglass mat gypsum sheathing with integral weather-resistant barrier and air barrier complying with ASTM E2178.
1. Thickness: 5/8 inch (15.9 mm) thick.
  2. Size: 48 by 96 inches (1219 by 2438 mm for vertical installation).
  3. Edges: Square.
  4. Flashing and Transitions Strips: As acceptable to sheathing manufacturer.

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5. Air Permeance: Maximum 0.004 cfm/sq. ft. of surface area at 1.57-lbf/sq. ft. (0.02 L/s x sq. m of surface area at 75-Pa) pressure difference when tested according to ASTM E2178.
  6. Vapor Permeance: Minimum 20 perms (580 ng/Pa x s x sq. m) when tested according to ASTM E96/E96M, Desiccant Method, Procedure A.
  7. Sheathing Assembly Air Leakage: Maximum 0.04 cfm/sq. ft. of surface area at 1.57 lbf/sq. ft. (0.2 L/s x sq. m of surface area at 75 Pa) when tested according to ASTM E2357.
  8. Fire Propagation Characteristics: Complies with NFPA 285 testing as part of an approved assembly.
  9. UV Resistance: Can be exposed to sunlight for **30** days according to manufacturer's written instructions.
  10. Provide primers, transition strips, termination strips, joint reinforcing fabric and strips, joint sealants, counterflashing strips, flashing sheets and metal termination bars, termination mastic, substrate patching materials, adhesives, tapes, foam sealants, lap sealants, and other accessory materials that are recommended in writing by sheathing manufacturer to produce a complete air-barrier assembly and that are compatible with primary air-barrier material and adjacent construction to which they may seal.
- F. Cellulose Fiber-Reinforced Gypsum Sheathing: ASTM C1278/C1278M, gypsum sheathing.
1. Product: Subject to compliance with requirements, provide "Fiberock Sheathing with Aqua-Tough" by United States Gypsum Co.
  2. Type and Thickness: Type X, 5/8 inch (15.9 mm) thick.
  3. Size: 48 by 96 inches (1219 by 2438 mm).
- G. Cementitious Backer Units: ASTM C1325, Type A.
1. Thickness: As indicated.
- H. Fiberboard Sheathing: ASTM C208, Type IV, Grade 1 (Regular) cellulosic fiberboard sheathing with square edges, 1/2 inch (13 mm) thick.
- 2.6 FASTENERS
- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
1. For wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M.
- B. Nails, Brads, and Staples: ASTM F1667.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Screws for Fastening Sheathing to Wood Framing: ASTM C1002.
- E. Screws for Fastening Wood Structural Panels to Cold-Formed Metal Framing: ASTM C954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.

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- F. Screws for Fastening Gypsum Sheathing to Cold-Formed Metal Framing: Steel drill screws, in length recommended by sheathing manufacturer for thickness of sheathing to be attached.
  - 1. For steel framing less than 0.0329 inch (0.835 mm) thick, use screws that comply with ASTM C1002.
  - 2. For steel framing from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick, use screws that comply with ASTM C954.
- G. Screws for Fastening Composite Nail Base Insulated Roof Sheathing to Metal Roof Deck: Steel drill screws, in type and length recommended by sheathing manufacturer for thickness of sheathing to be attached, with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B117. Provide washers or plates if recommended by sheathing manufacturer.

### 2.7 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

- A. Sealant for Paper-Surfaced or Glass-Mat Gypsum Sheathing: Elastomeric, medium-modulus, neutral-curing silicone joint sealant compatible with joint substrates formed by gypsum sheathing and other materials, recommended by sheathing manufacturer for application indicated and complying with requirements for elastomeric sealants specified in Section 079200 "Joint Sealants."
- B. Sealant for Glass-Mat Gypsum Sheathing: Silicone emulsion sealant complying with ASTM C834, compatible with sheathing tape and sheathing and recommended by tape and sheathing manufacturers for use with glass-fiber sheathing tape and for covering exposed fasteners.
  - 1. Sheathing Tape: Self-adhering glass-fiber tape, minimum 2 inches (50 mm) wide, 10 by 10 or 10 by 20 threads/inch (390 by 390 or 390 by 780 threads/m), of type recommended by sheathing and tape manufacturers for use with silicone emulsion sealant in sealing joints in glass-mat gypsum sheathing and with a history of successful in-service use.
- C. Sheathing Tape for Foam-Plastic Sheathing: Pressure-sensitive plastic tape recommended by sheathing manufacturer for sealing joints and penetrations in sheathing.

### 2.8 MISCELLANEOUS MATERIALS

- A. Adhesives for Field Gluing Panels to Wood Framing: Formulation complying with APA AFG-01 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.
  - 1. Do not use adhesives that contain urea formaldehyde.
- B. VOC limits for installation of adhesives and glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - 1. Wood glues: 30 g/L

2. Contact Adhesive: 2.50 g/L

### PART 3 - EXECUTION

#### 3.1 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
  1. Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.
  2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in the ICC's International Residential Code for One- and Two-Family Dwellings.
  3. ICC-ES evaluation report for fastener.
- D. Use common wire nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.
- E. Coordinate wall sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- F. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.
- G. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

#### 3.2 GYPSUM SHEATHING INSTALLATION

- A. Comply with GA-253 and with manufacturer's written instructions.
  1. Fasten gypsum sheathing to cold-formed metal framing with screws.
  2. Install panels with a 3/8-inch (9.5-mm) gap where non-load-bearing construction abuts structural elements.
  3. Install panels with a 1/4-inch (6.4-mm) gap where they abut masonry or similar materials that might retain moisture, to prevent wicking.
- B. Apply fasteners so heads bear tightly against face of sheathing, but do not cut into facing.

- C. Horizontal Installation: Install sheathing with V-grooved edge down and tongue edge up. Interlock tongue with groove to bring long edges in contact with edges of adjacent panels without forcing. Abut ends over centers of studs, and stagger end joints of adjacent panels not less than one stud spacing. Attach at perimeter and within field of panel to each stud.
  - 1. Space fasteners approximately 8 inches (200 mm) o.c. and set back a minimum of 3/8 inch (9.5 mm) from edges and ends of panels.
  - 2. For sheathing under stucco cladding, panels may be initially tacked in place with screws if overlying self-furring metal lath is screw-attached through sheathing to studs immediately after sheathing is installed.
  
- D. Vertical Installation: Install vertical edges centered over studs. Abut ends and edges with those of adjacent panels. Attach at perimeter and within field of panel to each stud.
  - 1. Space fasteners approximately 8 inches (200 mm) o.c. and set back a minimum of 3/8 inch (9.5 mm) from edges and ends of panels.
  - 2. For sheathing under stucco cladding, panels may be initially tacked in place with screws if overlying self-furring metal lath is screw-attached through sheathing to studs immediately after sheathing is installed.
  
- E. Seal sheathing joints according to sheathing manufacturer's written instructions.
  - 1. Apply elastomeric sealant to joints and fasteners and trowel flat. Apply sufficient amount of sealant to completely cover joints and fasteners after troweling. Seal other penetrations and openings.
  - 2. Apply glass-fiber sheathing tape to glass-mat gypsum sheathing joints and apply and trowel sealant to embed entire face of tape in sealant. Apply sealant to exposed fasteners with a trowel so fasteners are completely covered. Seal other penetrations and openings.
  
- F. Air-Barrier and Water-Resistant Glass-Mat Gypsum Sheathing:
  - 1. Install accessory materials according to sheathing manufacturer's written instructions and details to form a seal with adjacent construction, to seal fasteners, and ensure continuity of air and water barrier.
    - a. Coordinate the installation of sheathing with installation of roofing membrane and base flashing to ensure continuity of air barrier with roofing membrane.
    - b. Install transition strip on roofing membrane or base flashing, so that a minimum of 3 inches (75 mm) of coverage is achieved over each substrate.
  - 2. Connect and seal sheathing material continuously to air barriers specified under other Sections as well as to roofing-membrane air barrier, concrete below-grade structures, floor-to-floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings, using accessory materials.
  - 3. Apply joint sealants forming part of air-barrier assembly within manufacturer's recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
  - 4. Wall Openings: Prime concealed, perimeter frame surfaces of windows, curtain walls, storefronts, and doors. Apply transition strip or preformed silicone extrusion, so that a minimum of 3 inches (75 mm) of coverage is achieved over each substrate. Maintain 3

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inches (75 mm) of full contact over firm bearing to perimeter frames, with not less than 1 inch (25 mm) of full contact.

- a. Transition Strip: Roll firmly to enhance adhesion.
  - b. Preformed Silicone Extrusion: Set in full bed of silicone sealant applied to walls, frame, and air-barrier material.
5. Fill gaps in perimeter frame surfaces of windows, curtain walls, storefronts, doors, and miscellaneous penetrations of sheathing material with foam sealant.
  6. Seal strips and transition strips around masonry reinforcing or ties and penetrations with termination mastic.
  7. Seal top of through-wall flashings to sheathing with an additional 6-inch- (150-mm-) wide, transition strip.
  8. Seal exposed edges of strips at seams, cuts, penetrations, and terminations not concealed by metal counterflashings or ending in reglets with termination mastic.
  9. Repair punctures, voids, and deficient lapped seams in strips and transition strips extending 6 inches (150 mm) beyond repaired areas in strip direction.

### 3.3 CEMENTITIOUS BACKER UNIT INSTALLATION

- A. Install panels and treat joints according to ANSI A108.11 and manufacturer's written instructions for type of application indicated.

### 3.4 FIBERBOARD SHEATHING INSTALLATION

- A. Comply with ASTM C846 and with manufacturer's written instructions.
- B. Install sheathing vertically with long edges parallel to, and centered over, studs. Install solid wood blocking where end joints do not occur over framing. Allow 1/8-inch (3-mm) open space between edges and ends of adjacent units. Stagger horizontal joints if any.
- C. Cover sheathing as soon as practical after installation to prevent deterioration from wetting.

### 3.5 FIELD QUALITY CONTROL

- A. ABAA Quality Assurance Program: Perform examinations, preparation, installation, testing, and inspections under ABAA's Quality Assurance Program.
- B. Testing and Inspecting Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- C. Inspections: Air-barrier and water-resistant glass-mat gypsum sheathing, accessories, and installation are subject to inspection for compliance with requirements. Inspections may include the following:
  1. Continuity of air-barrier system has been achieved throughout the building envelope with no gaps or holes.

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2. Laps in strips and transition strips have complied with minimum requirements and have been shingled in the correct direction (or mastic has been applied on exposed edges), with no fishmouths.
  3. Termination mastic has been applied on cut edges.
  4. Strips and transition strips have been firmly adhered to substrate.
  5. Compatible materials have been used.
  6. Transitions at changes in direction and structural support at gaps have been provided.
  7. Connections between assemblies (sheathing and sealants) have complied with requirements for cleanliness, surface preparation and priming, structural support, integrity, and continuity of seal.
  8. All penetrations have been sealed.
- D. Tests: As determined by testing agency from among the following tests:
1. Air-Leakage-Location Testing: Air-barrier sheathing assemblies will be tested for evidence of air leakage according to ASTM E1186, chamber pressurization or depressurization with smoke tracers.
  2. Air-Leakage-Volume Testing: Air-barrier assemblies will be tested for air-leakage rate according to ASTM E783 or ASTM E2357.
- E. Air barriers will be considered defective if they do not pass tests and inspections.
- F. Repair damage to air barriers caused by testing; follow manufacturer's written instructions.
- G. Prepare test and inspection reports.

END OF SECTION 061600



SECTION 070150.19 - PREPARATION FOR REROOFING

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. Section Includes:

1. Re-cover preparation of roof areas indicated on Drawings.
2. Removal of flashings and counterflashings.
3. Temporary roofing.
4. Patching of existing roofing.

B. Related Requirements:

1. Section 011000 "Summary" for use of premises and for phasing requirements.
2. Section 015000 "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for reroofing preparation.

1.3 DEFINITIONS

- A. EPS: Molded (expanded) polystyrene.
- B. Full Roof Tear-off: Removal of existing roofing system down to existing roof deck.
- C. OSB: Oriented strand board.
- D. Partial Roof Tear-off: Removal of selected components and accessories from existing roofing system.
- E. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to work of this Section.
- F. Roof Re-Cover Preparation: Existing roofing system is to remain and be prepared for new roof installed over it.

1.4 PREINSTALLATION MEETINGS

- A. Preliminary Roofing Conference: Before starting removal Work, conduct conference at Project site.

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1. Meet with Owner, Architect, and Construction Manager, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing tear-off, including, but not limited to, the following:
  - a. Reroofing preparation, including roofing system manufacturer's written instructions.
  - b. Temporary protection requirements for existing roofing system components that are to remain.
  - c. Existing roof drains and roof drainage during each stage of reroofing, and roof-drain plugging and plug removal.
  - d. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to avoid delays.
  - e. Existing roof deck conditions requiring Architect notification.
  - f. Existing roof deck removal procedures and Owner notifications.
  - g. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
  - h. Structural loading limitations of roof deck during reroofing.
  - i. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that affect reroofing.
  - j. HVAC shutdown and sealing of air intakes.
  - k. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
  - l. Asbestos removal and discovery of asbestos-containing materials.
  - m. Governing regulations and requirements for insurance and certificates if applicable.
  - n. Existing conditions that may require Architect notification before proceeding.

### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Temporary Roofing Submittal: Product data and description of temporary roofing system.
  1. If temporary roof remains in place, include surface preparation requirements needed to receive permanent roof, and submit a letter from roofing manufacturer stating acceptance of the temporary roof and that its inclusion does not adversely affect the new roofing system's resistance to fire and wind or specified special warranty.

### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
  1. Include certificate that Installer is approved by warrantor of existing roofing system.
  2. Include certificate that Installer is licensed to perform asbestos abatement.
- B. Field Test Reports:

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1. Fastener pull-out test report.
- C. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations.
  1. Submit before Work begins.
- D. Landfill Records: Indicate receipt and acceptance of demolished roofing materials and hazardous wastes, such as asbestos-containing materials, by a landfill facility licensed to accept them.

### 1.7 CLOSEOUT SUBMITTALS

- A. Certified statement from the manufacturer for existing warranted roof system stating that existing roof warranty has not been affected by Work performed under this Section.

### 1.8 QUALITY ASSURANCE

- A. Installer Qualifications: Approved by warrantor of existing roofing system to work on existing roofing.
- B. Regulatory Requirements:
  1. Comply with governing EPA notification regulations before beginning roofing removal.
  2. Comply with hauling and disposal regulations of authorities having jurisdiction.

### 1.9 FIELD CONDITIONS

- A. Existing Roofing System: Built Up Roofing with Modified Cap Sheet.
- B. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- D. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
  1. A roof moisture survey of existing roofing system is available for Contractor's reference.
  2. The results of an analysis of test cores from existing roofing system are available for Contractor's reference.
  3. Construction Drawings for existing roofing system are provided for Contractor's convenience and information, but they 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.
- E. Limit construction loads on existing roof areas to remain, and existing roof areas scheduled to be reroofed.

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- F. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.

### 1.10 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during reroofing, by methods and with materials so as not to void existing roofing system warranty.
  - 1. Notify warrantor before proceeding with the Work.
  - 2. Notify warrantor of existing roofing system on completion of reroofing, and obtain documentation verifying that existing roofing system has been inspected and warranty remains in effect.
    - a. Submit documentation at Project closeout.

## PART 2 - PRODUCTS

### 2.1 TEMPORARY PROTECTION MATERIALS

- A. EPS Insulation: ASTM C578.
- B. Plywood: DOC PS 1, Grade CD, Exposure 1.
- C. OSB: DOC PS 2, Exposure 1.

### 2.2 TEMPORARY ROOFING MATERIALS

- A. Design and selection of materials for temporary roofing are Contractor's responsibilities.
- B. Sheathing Paper: Red-rosin type, minimum 3 lb/100 sq. ft. (0.16 kg/sq. m).
- C. Base Sheet: ASTM D4601/D4601M, Type II, nonperforated, asphalt-impregnated and -coated, glass-fiber sheet.
- D. Glass-Fiber Felts: ASTM D2178/D2178M, Type IV, asphalt-impregnated, glass-fiber felt.
- E. Asphalt Primer: ASTM D41/D41M.
- F. Roofing Asphalt: ASTM D312/D312M, Type III or IV.
- G. Base Sheet Fasteners: Capped head, factory-coated steel fasteners, listed in FM Approvals' RoofNav.

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### 2.3 INFILL AND REPLACEMENT MATERIALS

- A. Use infill materials matching existing roofing system materials unless otherwise indicated.
  - 1. Infill materials are specified in Section 075423 "Thermoplastic-Polyolefin (TPO) Roofing" unless otherwise indicated.
- B. Steel deck is specified in Section 053000 "Steel Decking."
- C. Wood blocking, curbs, and nailers are specified in Section 061000 "Rough Carpentry."
- D. Plywood roof sheathing is specified in Section 061600 "Sheathing."
- E. Parapet Sheathing:
  - 1. ASTM C1177/C1177M or ASTM C1278/C1278M water-resistant gypsum substrate; 1/2 inch (13 mm) thick.
- F. Fasteners: Factory-coated steel fasteners with metal or plastic plates listed in FM Approvals' RoofNav, and acceptable to new roofing system manufacturer.

### 2.4 AUXILIARY REROOFING MATERIALS AND PATCHING

- A. General: Use auxiliary reroofing and patching of existing roof preparation materials recommended by roofing system manufacturer for intended use and compatible with components of existing and new roofing system.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Protection of In-Place Conditions:
  - 1. Protect existing roofing system that is not to be reroofed.
  - 2. Loosely lay 1-inch- (25-mm-) minimum thick, EPS insulation over existing roofing in areas not to be reroofed.
    - a. Loosely lay 15/32-inch (12-mm) plywood or OSB panels over EPS. Extend EPS past edges of plywood or OSB panels a minimum of 1 inch (25 mm).
  - 3. Limit traffic and material storage to areas of existing roofing that have been protected.
  - 4. Maintain temporary protection and leave in place until replacement roofing has been completed. Remove temporary protection on completion of reroofing.
  - 5. Comply with requirements of existing roof system manufacturer's warranty requirements.
- B. Seal or isolate windows that may be exposed to airborne substances created in removal of existing materials.
- C. Shut off rooftop utilities and service piping before beginning the Work.

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- D. Test existing roof drains to verify that they are not blocked or restricted.
  - 1. Immediately notify Architect of any blockages or restrictions.
- E. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work.
  - 1. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- F. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- G. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday.
  - 1. Prevent debris from entering or blocking roof drains and conductors.
    - a. Use roof-drain plugs specifically designed for this purpose.
    - b. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
  - 2. 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.
    - a. Do not permit water to enter into or under existing roofing system components that are to remain.

### 3.2 DECK PREPARATION

- A. Inspect deck after tear-off of roofing system.
- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Architect.
  - 1. Do not proceed with installation until directed by Architect.
- C. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect.
  - 1. Do not proceed with installation until directed by Architect.
- D. Provide additional deck securement as indicated on Drawings.
- E. Replace steel deck as indicated on Drawings.
- F. Replace steel deck as directed by Architect.
  - 1. Deck replacement will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.

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### 3.3 INFILL MATERIALS INSTALLATION

- A. Immediately after roof tear-off, and inspection and repair, if needed, of deck, fill in tear-off areas to match existing roofing system construction.
  - 1. Installation of infill materials is specified in Section 075423 "Thermoplastic-Polyolefin (TPO) Roofing."
  - 2. Installation of wood blocking, curbs, and nailers is specified in Section 061000 "Rough Carpentry."
- B. Install new roofing patch over roof infill area.
  - 1. If new roofing is installed the same day tear-off is made, roofing patch is not required.

### 3.4 TEMPORARY ROOFING

- A. Install approved temporary roofing over area to be reroofed.
- B. Install temporary roofing over area to be reroofed.
- C. Remove temporary roofing before installing new roofing.

### 3.5 ROOF RE-COVER PREPARATION

- A. Remove blisters, ridges, buckles, mechanically attached roofing fastener buttons projecting above roofing, and other substrate irregularities from existing roofing that inhibit new recover boards from conforming to substrate.
  - 1. Remove loose aggregate from aggregate-surfaced, built-up bituminous roofing with a power broom.
  - 2. Scarify surface of sprayed polyurethane foam as necessary to achieve a sufficiently uniform plane to receive new recover boards.
  - 3. Broom clean existing substrate.
  - 4. Coordinate with Owner's inspector to schedule times for tests and inspections.
  - 5. Verify that existing substrate is dry.
    - a. Spot check substrates with an electrical capacitance moisture-detection meter.
  - 6. Remove materials that are wet or damp.
    - a. Removal will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.

### 3.6 BASE FLASHING REMOVAL

- A. Remove existing base flashings.
  - 1. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.

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- B. Do not damage metal counterflashings that are to remain.
  - 1. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish as existing.
- C. Inspect parapet sheathing, wood blocking, curbs, and nailers for deterioration and damage.
  - 1. If parapet sheathing, wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.
- D. Remove existing parapet sheathing and replace with new parapet sheathing to comply with Section 061600 "Sheathing."
  - 1. If parapet framing, wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.
- E. When directed by Architect, replace parapet framing, wood blocking, curbs, and nailers to comply with Section 061000 "Rough Carpentry."

### 3.7 DISPOSAL

- A. Collect demolished materials and place in containers.
  - 1. Promptly dispose of demolished materials.
  - 2. Do not allow demolished materials to accumulate on-site.
  - 3. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION 070150.19



SECTION 075423 - THERMOPLASTIC POLYOLEFIN (TPO) 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. Section Includes:

1. Adhered TPO membrane roofing system.
2. Vapor retarder.
3. Roof insulation.

- B. Section includes the installation of acoustical roof deck rib insulation strips furnished under Section 053100 "Steel Decking."

C. Related Sections:

1. Section 061000 "Rough Carpentry for wood nailers, curbs, and blocking.
2. Section 072100 "Thermal Insulation" for insulation beneath the roof deck.
3. Section 076200 "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counterflashings.
4. Section 077129 "Manufactured Roof Expansion Joints" for proprietary manufactured roof expansion-joint assemblies.
5. Section 079200 "Joint Sealants" for joint sealants, joint fillers, and joint preparation.

1.3 DEFINITIONS

- A. TPO: Thermoplastic polyolefin.
- B. Roofing Terminology: See ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definitions of terms related to roofing work in this Section.

1.4 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.

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- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.
- C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.
  - 1. Corner Uplift Pressure 77.3 lbf/sq. ft.
  - 2. Perimeter Uplift Pressure: 51.2 lbf/sq. ft..
  - 3. Field-of-Roof Uplift Pressure: 30.7 lbf/sq. ft..
- D. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E 1980, based on testing identical products by a qualified testing agency.
- E. Energy Performance: Provide roofing system that is listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low-slope roof products.

### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Sustainable Design Submittals:
  - 1. Complete Material Data Worksheets provided by Owner's LEED Consultant.
  - 2. Provide the overall cost of materials and separate cost breakout for materials that **contribute to Materials and Resources credits on the LEED worksheets.**
  - 3. MRc4-Recycled Content: for products having recycled content, product specific **documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.**
  - 4. Product Data for Credit EQ4.2; for adhesives (field applied within the vapor **barrier) documentation including printed state of VOC content.**
- C. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
  - 1. Base flashings and membrane terminations.
  - 2. Tapered insulation, including slopes.
  - 3. Roof plan showing orientation of steel roof deck and orientation of membrane roofing and fastening spacings and patterns for mechanically fastened membrane roofing.
  - 4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
- D. Samples for Verification: For the following products:
  - 1. Sheet roofing, of color specified, including T-shaped side and end lap seam.
  - 2. Roof insulation.
  - 3. Walkway pads or rolls.
  - 4. Metal termination bars.
  - 5. Battens.
  - 6. Six insulation fasteners of each type, length, and finish.
  - 7. Six roof cover fasteners of each type, length, and finish.

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### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer and manufacturer.
- B. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
  - 1. Submit evidence of compliance with performance requirements.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of membrane roofing system.
- D. Field quality-control reports.
- E. Warranties: Sample of special warranties.

### 1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.

### 1.8 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is UL listed for membrane roofing system identical to that used for this Project.
- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- C. Source Limitations: Obtain components including roof insulation, fasteners for membrane roofing system from same manufacturer as membrane roofing or approved by membrane roofing manufacturer.
- D. Exterior Fire-Test Exposure: ASTM E 108, Class C; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- E. Fire-Resistance Ratings: Where indicated, provide fire-resistance-rated roof assemblies identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- F. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project site.
  - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.

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3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review deck substrate requirements for conditions and finishes, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

### G. Pre-installation Roofing Conference: Conduct conference at Project site.

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

## 1.9 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.
- 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. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

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- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

### 1.10 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

### 1.11 WARRANTY

- A. Manufacturer's warranty: Provide roofing manufacturer's total system leak-tight 20-year labor and 20-year material "No Dollar Limit Warranty" including insulation and all components. The warranty shall contain no exclusion or limitation for improper installation, damage from water that ponds, or does not drain freely. Provide all details necessary to qualify for manufacturer's "No Dollar Limit Warranty" and the manufacturer will respond within 48 hours and repair within 5 business days any leaks in the roofing assembly for the warranty period stated at no cost to the Owner, unless the leak is determined to be caused by others.
- B. Roofers Guarantee: provide written guarantee from the Contractor stating that the Contractor will respond with 24 hours and repair within 5 business days any leaks or defects in the roofing assembly for 2 years at no cost to the Owner.

## PART 2 - PRODUCTS

### 2.1 TPO MEMBRANE ROOFING

- A. Fabric-Reinforced Thermoplastic Polyolefin Sheet: ASTM D 6878, internally fabric or scrim reinforced, uniform, flexible fabric backed TPO sheet.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following
    - a. Carlisle SynTec Incorporated.
    - b. Firestone Building Products Company.
    - c. Johns Manville.
  - 2. Thickness: 80 mils nominal.
  - 3. Exposed Face Color: White.
- B. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E 1980, based on testing identical products by a qualified testing agency.

## 2.2 AUXILIARY MEMBRANE ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.
1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
  2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
    - a. Plastic Foam Adhesives: 50 g/L.
    - b. Gypsum Board and Panel Adhesives: 50 g/L.
    - c. Multipurpose Construction Adhesives: 70 g/L.
    - d. Fiberglass Adhesives: 80 g/L.
    - e. Single-Ply Roof Membrane Adhesives: 250 g/L.
    - f. Other Adhesives: 250 g/L.
    - g. Single-Ply Roof Membrane Sealants: 450 g/L.
    - h. Nonmembrane Roof Sealants: 300 g/L.
    - i. Sealant Primers for Nonporous Substrates: 250 g/L.
    - j. Sealant Primers for Porous Substrates: 775 g/L.
  3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- B. Sheet Flashing: Manufacturer's standard unreinforced thermoplastic polyolefin sheet flashing, 55 mils (1.4 mm) thick, minimum, of same color as sheet membrane.
- C. Bonding Adhesive: Manufacturers standard; VOC shall be less than 250 grams per liter less water.
- D. Slip Sheet: Manufacturer's standard, of thickness required for application.
- E. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.
- F. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick (25 mm wide by 1.3 mm thick), pre-punched.
- G. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

## 2.3 SUBSTRATE BOARDS

- A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/2 inch (13 mm) thick.

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1. Products: Subject to compliance with requirements, provide one of the following:

- a. Georgia-Pacific Corporation; Dens Deck Prime.
- b. Or prior approved equal.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof deck.

### 2.4 VAPOR RETARDER

A. Polyethylene Film: ASTM D 4397, 6 mils (0.15 mm) thick, minimum, with maximum permeance rating of 0.13 perm (7.5 ng/Pa x s x sq. m).

1. Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.
2. Adhesive: Manufacturer's standard lap adhesive, FM Approvals approved for vapor-retarder application.

B. Laminated Sheet: Kraft paper, two layers, laminated with asphalt and edge reinforced with woven fiberglass yarn with maximum permeance rating of 0.50 perm (29 ng/Pa x s x sq. m)[ and with manufacturer's standard adhesive].

C. Glass-Fiber Felts: ASTM D 2178, Type IV, asphalt impregnated.

### 2.5 ROOF INSULATION

A. General: Preformed roof insulation boards manufactured or approved by TPO membrane roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated and that produce FM Approvals-approved roof insulation.

B. Poly Isocyanurate Board Insulation: ASTM E84, NFPA 285 and 286 closed cell poly isocyanurate foam core laminated to a reinforced mat facer on both major surfaces.

C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches (1:48) unless otherwise indicated.

D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

### 2.6 INSULATION ACCESSORIES

A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with membrane roofing.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.

## 2.7 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads or rolls, approximately 3/16 inch (5 mm) thick, and acceptable to membrane roofing system manufacturer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  - 1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
  - 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  - 3. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 053100 "Steel Decking."
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- D. Install acoustical roof deck rib insulation strips, specified in Section 053100 "Steel Decking," according to acoustical roof deck manufacturer's written instructions, immediately before installation of overlying construction and to remain dry.

### 3.3 SUBSTRATE BOARD

- A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.
  - 1. Fasten substrate board to top flanges of steel deck according to recommendations in FM Approvals' "RoofNav" and FM Global Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification.



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2. Fasten substrate board to top flanges of steel deck to resist uplift pressure at corners, perimeter, and field of roof according to membrane roofing system manufacturers' written instructions.

### 3.4 VAPOR-RETARDER INSTALLATION

- A. Polyethylene Film: Loosely lay polyethylene-film vapor retarder in a single layer over area to receive vapor retarder, side and end lapping each sheet a minimum of 2 inches (50 mm) and 6 inches (150 mm), respectively.
  1. Continuously seal side and end laps with tape or adhesive.
- B. Completely seal vapor retarder at terminations, obstructions, and penetrations to prevent air movement into membrane roofing system.

### 3.5 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Install tapered insulation under area of roofing to conform to slopes indicated.
- D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (68 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
  1. Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.
- E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- F. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
  1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.
- G. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
  1. Fasten insulation according to requirements in FM Approvals' "RoofNav" for specified Windstorm Resistance Classification.
  2. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.

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- H. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction. Loosely butt cover boards together and fasten to roof deck.
  - 1. Fasten cover boards according to requirements in FM Approvals' "RoofNav" for specified Windstorm Resistance Classification.
  - 2. Fasten cover boards to resist uplift pressure at corners, perimeter, and field of roof.
- I. Install slip sheet over cover board and immediately beneath membrane roofing.

### 3.6 ADHERED MEMBRANE ROOFING INSTALLATION

- A. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.
- B. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.
- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.
- E. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- F. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- G. Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
  - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
  - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.
- I. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition and to not void warranty for existing membrane roofing system.

### 3.7 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.

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- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

### 3.8 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

### 3.9 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- C. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.
- D. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

### 3.10 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.11 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: Albuquerque Public Schools
  2. Address: 915 Locust SE Albuquerque NM 87106
  3. Building Name/Type: CNM Smith Brasher.
  4. Address: 1011 Lambert Place NW
  5. Area of Work: Roof.
  6. Acceptance Date: <Insert date>.
  7. Warranty Period: <20 year>.
  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 he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and 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, copings, 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

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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 075423

SECTION 077100 - ROOF SPECIALTIES

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. Section Includes:

1. Copings.
2. Roof-edge specialties.
3. Roof-edge drainage systems.
4. Reglets and counterflashings.

B. Related Requirements:

1. Section 055000 "Metal Fabrications" for downspout guards and downspout boots.
2. Section 061000 "Rough Carpentry" for wood nailers, curbs, and blocking.
3. Section 077129 "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint cover assemblies.
4. Section 077200 "Roof Accessories" for set-on-type curbs, equipment supports, roof hatches, vents, and other manufactured roof accessory units.
5. Section 079200 "Joint Sealants" for field-applied sealants between roof specialties and adjacent materials.

C. Preinstallation Conference: Conduct conference at Project site.

1. Meet with Owner, Architect, Owner's insurer if applicable, roofing-system testing and inspecting agency representative, roofing Installer, roofing-system manufacturer's representative, Installer, structural-support Installer, and installers whose work interfaces with or affects roof specialties, including installers of roofing materials and accessories.
2. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
3. Review special roof details, roof drainage, and condition of other construction that will affect roof specialties.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

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- B. Sustainable Design Submittals:
  - 1. Complete Material Data Worksheets provided by Owner's LEED Consultant.
  - 2. Provide the overall cost of materials and separate cost breakout for materials that contribute to Materials and Resources credits on the LEED worksheets.
  - 3. MRc4-Recycled Content: for products having recycled content, product specific documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.
- C. Shop Drawings: For roof specialties.
  - 1. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work.
  - 2. Include details for expansion and contraction; locations of expansion joints, including direction of expansion and contraction.
  - 3. Indicate profile and pattern of seams and layout of fasteners, cleats, clips, and other attachments.
  - 4. Detail termination points and assemblies, including fixed points.
  - 5. Include details of special conditions.
- D. Samples: For each type of roof specialty and for each color and texture specified.
- E. Samples for Initial Selection: For each type of roof specialty indicated with factory-applied color finishes.
- F. Samples for Verification:
  - 1. Include Samples of each type of roof specialty to verify finish and color selection, in manufacturer's standard sizes.
  - 2. Include copings, roof-edge drainage systems, reglets and counterflashings made from 12-inch (300-mm) lengths of full-size components in specified material, and including fasteners, cover joints, accessories, and attachments.

### 1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer.
- B. Product Certificates: For each type of roof specialty.
- C. Product Test Reports: For copings for tests performed by a qualified testing agency.
- D. Sample Warranty: For manufacturer's special warranty.

### 1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing specialties to include in maintenance manuals.

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### 1.6 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** A qualified manufacturer offering products meeting requirements that are FM Approvals listed for specified class and SPRI ES-1 tested to specified design pressure.
- B. **Source Limitations:** Obtain roof specialties approved by manufacturer providing roofing-system warranty specified in Section 07 54 23- “Thermoplastic Polyolefing (TPO) Roofing.

### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Do not store roof specialties in contact with other materials that might cause staining, denting, or other surface damage. Store roof specialties away from uncured concrete and masonry.
- B. Protect strippable protective covering on roof specialties from exposure to sunlight and high humidity, except to extent necessary for the period of roof-specialty installation.

### 1.8 FIELD CONDITIONS

- A. **Field Measurements:** Verify profiles and tolerances of roof-specialty substrates by field measurements before fabrication, and indicate measurements on Shop Drawings.
- B. **Coordination:** Coordinate roof specialties with flashing, trim, and construction of parapets, roof deck, roof and wall panels, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

### 1.9 WARRANTY

- A. **Roofing-System Warranty:** Roof specialties are included in warranty provisions in Section 07 54 23- “Thermoplastic Polyolefing (TPO) Roofing”.
- B. **Special Warranty on Painted Finishes:** Manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. **Fluoropolymer Finish:** Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. **Finish Warranty Period:** **20** years from date of Substantial Completion.



PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof specialties shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.
- B. FM Approvals' Listing: Manufacture and install copings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-75. Identify materials with FM Approvals' markings.
- C. SPRI Wind Design Standard: Manufacture and install copings tested according to SPRI ES-1 and capable of resisting the following design pressures:
  - 1. Design Pressure: As indicated on Drawings.
- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 COPINGS

- A. Metal Copings: Manufactured coping system consisting of metal coping cap in section lengths not exceeding 12 feet (3.6 m), concealed anchorage; with corner units, end cap units, and concealed splice plates with finish matching coping caps.
  - 1. Extruded-Aluminum Coping Caps: Extruded aluminum, thickness as required to meet performance requirements.
    - a. Finish: Three-coat fluoropolymer.
    - b. Color: As selected by Architect from manufacturer's full range.
  - 2. Corners: Factory mitered and mechanically clinched and sealed watertight.
  - 3. Coping-Cap Attachment Method: Snap-on or face leg hooked to continuous cleat with back leg fastener exposed, fabricated from coping-cap material.
    - a. Snap-on Coping Anchor Plates: Concealed, galvanized-steel sheet, 12 inches (300 mm) wide, with integral cleats.
    - b. Face-Leg Cleats: Concealed, continuous galvanized-steel sheet.

### 2.3 ROOF-EDGE DRAINAGE SYSTEMS

- A. Downspouts: As indicated in the drawings, complete with machine-crimped elbows, manufactured from the following exposed metal. Furnish with metal hangers, from same material as downspouts, and anchors.
  - 1. Formed Aluminum: 0.063 inch (1.60 mm) thick.
  - 2. Extruded Aluminum: 0.125 inch (3.18 mm) thick.
- B. Parapet Scuppers: Manufactured with closure flange trim to exterior, 4-inch- (100-mm-) wide wall flanges to interior, and base extending 4 inches (100 mm) beyond cant or tapered strip into field of roof.
  - 1. Formed Aluminum: 0.032 inch (0.81 mm) thick.
- C. Conductor Heads: Manufactured conductor heads, each with flanged back and stiffened top edge, and of dimensions and shape indicated, complete with outlet tube that nests into upper end of downspout[, exterior flange trim, and built-in overflow.
  - 1. Formed Aluminum: 0.032 inch (0.81 mm) thick.
- D. Splash Pans: Fabricate from the following exposed metal:
  - 1. Formed Aluminum: 0.040 inch (1.02 mm) thick.
- E. Aluminum Finish: Three-coat fluoropolymer.
  - 1. Color: As selected by Architect from manufacturer's full range.

### 2.4 REGLETS AND COUNTERFLASHINGS

- A. Reglets: Manufactured units formed to provide secure interlocking of separate reglet and counterflashing pieces, from the following exposed metal:
  - 1. Zinc-Coated Steel: Nominal 0.028-inch (0.71-mm) thickness.
  - 2. Formed Aluminum: 0.050 inch (1.27 mm) thick.
  - 3. Corners: Factory mitered and mechanically clinched and sealed watertight.
  - 4. Surface-Mounted Type: Provide reglets with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.
  - 5. Stucco Type, Embedded: Provide reglets with upturned fastening flange and extension leg of length to match thickness of applied finish materials.
  - 6. Masonry Type, Embedded: Provide reglets with offset top flange for embedment in masonry mortar joint.
- B. Counterflashings: Manufactured units of heights to overlap top edges of base flashings by 4 inches (100 mm) and in lengths not exceeding 12 feet (3.6 m) designed to snap into reglets or through-wall-flashing receiver and compress against base flashings with joints lapped, from the following exposed metal:
  - 1. Zinc-Coated Steel: Nominal 0.028-inch (0.71-mm) thickness.
  - 2. Formed Aluminum: 0.032 inch (0.81 mm) thick.

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### C. Accessories:

1. Flexible-Flashing Retainer: Provide resilient plastic or rubber accessory to secure flexible flashing in reglet where clearance does not permit use of standard metal counterflashing or where reglet is provided separate from metal counterflashing.
2. Counterflashing Wind-Restraint Clips: Provide clips to be installed before counterflashing to prevent wind uplift of counterflashing lower edge.

### D. Zinc-Coated Steel Finish: Three-coat fluoropolymer.

1. Color: As selected by Architect from manufacturer's full range.

### E. Aluminum Finish: Three-coat fluoropolymer.

1. Color: As selected by Architect from manufacturer's full range.

## 2.5 MATERIALS

### A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A653/A653M, G90 (Z275) coating designation.

### B. Aluminum Sheet: ASTM B209 (ASTM B209M), alloy as standard with manufacturer for finish required, with temper to suit forming operations and performance required.

### C. Aluminum Extrusions: ASTM B221 (ASTM B221M), alloy and temper recommended by manufacturer for type of use and finish indicated, finished as follows:

## 2.6 UNDERLAYMENT MATERIALS

### A. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils (0.76 to 1.0 mm) thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: ASTM D1970/D1970M; stable after testing at 240 deg F (116 deg C).
2. Low-Temperature Flexibility: ASTM D1970/D1970M; passes after testing at minus 20 deg F (29 deg C).

### B. Felt: ASTM D226/D226M, Type II (No. 30), asphalt-saturated organic felt, nonperforated.

### C. Slip Sheet: Rosin-sized building paper, 3-lb/100 sq. ft. (0.16-kg/sq. m) minimum.

## 2.7 MISCELLANEOUS MATERIALS

### A. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:

1. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
2. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.

## APS DATA CHARTER SCHOOL REROOF

3. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A153/A153M or ASTM F2329.
- B. Elastomeric Sealant: ASTM C920, elastomeric polyurethane or silicone polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.
- C. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type joints with limited movement.
- D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.

### 2.8 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. Coil-Coated Galvanized-Steel Sheet Finishes:
  1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with ASTM A755/A755M and coating and resin manufacturers' written instructions.
    - a. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - b. Concealed Surface Finish: Apply pretreatment and manufacturer's standard acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).
- E. Coil-Coated Aluminum Sheet Finishes:
  1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - a. Three-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - b. Concealed Surface Finish: Apply pretreatment and manufacturer's standard acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).
- F. Aluminum Extrusion Finishes:

## APS DATA CHARTER SCHOOL REROOF

1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
  - a. Three-Coat Fluoropolymer: AAMA 2604. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
  - b. Concealed Surface Finish: Apply pretreatment and manufacturer's standard acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Examine walls, roof edges, and parapets for suitable conditions for roof specialties.
- C. Verify that substrate is sound, dry, smooth, clean, sloped for drainage where applicable, and securely anchored.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (152 mm) staggered 24 inches (610 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.
  1. Apply continuously under copings, roof-edge specialties, and reglets and counterflashings.
  2. Coordinate application of self-adhering sheet underlayment under roof specialties with requirements for continuity with adjacent air barrier materials.
- B. Felt Underlayment: Install with adhesive for temporary anchorage to minimize use of mechanical fasteners under roof specialties. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches (50 mm).
- C. Slip Sheet: Install with tape or adhesive for temporary anchorage to minimize use of mechanical fasteners under roof specialties. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches (50 mm).

3.3 INSTALLATION, GENERAL

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, underlayments, sealants, and other miscellaneous items as required to complete roof-specialty systems.
  - 1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
  - 2. Provide uniform, neat seams with minimum exposure of solder and sealant.
  - 3. Install roof specialties to fit substrates and to result in weathertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
  - 4. Torch cutting of roof specialties is not permitted.
  - 5. Do not use graphite pencils to mark metal surfaces.
  
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
  - 1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
  - 2. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.
  
- C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.
  - 1. Space movement joints at a maximum of 12 feet (3.6 m) with no joints within 18 inches (450 mm) of corners or intersections unless otherwise indicated on Drawings.
  - 2. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
  
- D. Fastener Sizes: Use fasteners of sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
  
- E. Seal concealed joints with butyl sealant as required by roofing-specialty manufacturer.
  
- F. Seal joints as required for weathertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F (4 deg C).
  
- G. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm); however, reduce pre-tinning where pre-tinned surface would show in completed Work. Tin edges of uncoated copper sheets using solder for copper. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

3.4 COPING INSTALLATION

- A. Install cleats, anchor plates, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor copings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.
  - 1. Interlock face and back leg drip edges of snap-on coping cap into cleated anchor plates anchored to substrate at manufacturer's required spacing that meets performance requirements.
  - 2. Interlock face-leg drip edge into continuous cleat anchored to substrate at manufacturer's required spacing that meets performance requirements. Anchor back leg of coping with screw fasteners and elastomeric washers at manufacturer's required spacing that meets performance requirements.

3.5 ROOF-EDGE SPECIALITIES INSTALLATION

- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

3.6 ROOF-EDGE DRAINAGE-SYSTEM INSTALLATION

- A. General: Install components to produce a complete roof-edge drainage system according to manufacturer's written instructions. Coordinate installation of roof perimeter flashing with installation of roof-edge drainage system.
- B. Downspouts: Join sections with manufacturer's standard telescoping joints. Provide hangers with fasteners designed to hold downspouts securely to walls and 1 inch (25 mm) away from walls; locate fasteners at top and bottom and at approximately 60 inches (1500 mm) o.c.
  - 1. Provide elbows at base of downspouts at grade to direct water away from building.
  - 2. Connect downspouts to underground drainage system indicated.
- C. Splash Pans: Install where downspouts discharge on low-slope roofs. Set in material as recommended by the roofing manufacturer.
- D. Parapet Scuppers: Install scuppers through parapet where indicated. Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.
  - 1. Anchor scupper closure trim flange to exterior wall and seal or solder to scupper.
  - 2. Loosely lock front edge of scupper with conductor head.
  - 3. Seal or solder exterior wall scupper flanges into back of conductor head.
- E. Conductor Heads: Anchor securely to wall with elevation of conductor top edge 1 inch (25 mm) below scupper discharge.

## APS DATA CHARTER SCHOOL REROOF

### 3.7 REGLET AND COUNTERFLASHING INSTALLATION

- A. General: Coordinate installation of reglets and counterflashings with installation of base flashings.
- B. Embedded Reglets: See Section 042000 "Unit Masonry" for installation of reglets.
- C. Surface-Mounted Reglets: Install reglets to receive flashings where flashing without embedded reglets is indicated on Drawings. Install at height so that inserted counterflashings overlap 4 inches (100 mm) over top edge of base flashings.
- D. Counterflashings: Insert counterflashings into reglets or other indicated receivers; ensure that counterflashings overlap 4 inches (100 mm) over top edge of base flashings. Lap counterflashing joints a minimum of 4 inches (100 mm) and bed with butyl sealant. Fit counterflashings tightly to base flashings.

### 3.8 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as roof specialties are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain roof specialties in a clean condition during construction.
- D. Replace roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 077100



SECTION 077129 - MANUFACTURED ROOF EXPANSION JOINTS

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. Section Includes:

- 1. Watertight Dual-Seal Flush.

- B. Related Requirements:

- 1. Section 061000 "Rough Carpentry" for wooden curbs or cants for mounting roof expansion joints.
- 2. Section 077200 "Roof Accessories" for manufactured and prefabricated metal roof curbs.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Sustainable Design Submittals:

- 1. Complete Material Data Worksheets provided by Owner's LEED Consultant.
- 2. Provide the overall cost of materials and separate cost breakout for materials that contribute to Materials and Resources credits on the LEED worksheets.
- 3. MRc4-Recycled Content: for products having recycled content, product specific documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.

- C. Shop Drawings: For roof expansion joints.

- 1. Include plans, elevations, sections, and attachment details.
- 2. Include details of splices, intersections, transitions, fittings, method of field assembly, and location and size of each field splice.
- 3. Provide isometric drawings of intersections, terminations, changes in joint direction or planes, and transition to other expansion joint systems depicting how components interconnect with each other and adjacent construction to allow movement and achieve waterproof continuity.

## APS DATA CHARTER SCHOOL REROOF

- D. Samples: For each exposed product and for each color specified, 6 inches (150 mm) in size.

### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: For each fire-barrier provided as part of a roof-expansion-joint assembly, for tests performed by a qualified testing agency.
- C. Sample Warranties: For special warranties.

### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Installer of roofing membrane.

### 1.7 WARRANTY

- A. Special Warranty: Manufacturer and Installer agree to repair or replace roof expansion joints and components that leak, deteriorate beyond normal weathering, or otherwise fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof expansion joints that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than five Hunter units when tested according to ASTM D2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Warranty Period: 10 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint seals, failure of connections, and other detrimental effects.
  - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C)>, material surfaces.

## APS DATA CHARTER SCHOOL REROOF

- B. Fire-Resistance Rating: Comply with ASTM E1966 or UL 2079; testing by a qualified testing agency to resist the spread of fire and to accommodate building thermal and seismic movements without impairing its ability to resist the passage of fire and hot gases. Identify products with appropriate markings of applicable testing agency.
  - 1. Rating: Not less than fire-resistance rating of the roof assembly.
  - 2. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

### 2.2 WATERTIGHT DUAL-SEAL

- A. Provide profiles as identified in the drawings.
- B. Materials:
  - 1. Extruded thermoplastic rubber system compatible with TPO
  - 2. TPO Membrane: ASTM D6878/D6878M, type standard with manufacturer for application.

### 2.3 MISCELLANEOUS MATERIALS

- A. Adhesives: As recommended by roof-expansion-joint manufacturer.
- B. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to withstand design loads.
  - 1. Exposed Fasteners: Gasketed. Use screws with hex washer heads matching color of material being fastened.
- C. Mineral-Fiber Blanket: ASTM C665.
- D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine joint openings, substrates, and expansion-control joint systems that interface with roof expansion joints, for suitable conditions where roof expansion joints will be installed.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Comply with manufacturer's written instructions for handling and installing roof expansion joints.

## APS DATA CHARTER SCHOOL REROOF

1. Anchor roof expansion joints securely in place, with provisions for required movement. Use fasteners, protective coatings, sealants, and miscellaneous items as required to complete roof expansion joints.
  2. Install roof expansion joints true to line and elevation; and without warping, jogs in alignment, buckling, or tool marks.
  3. Provide for linear thermal expansion of roof expansion joint materials.
  4. Provide uniform profile of roof expansion joint throughout its length; do not stretch or squeeze membranes.
  5. Provide uniform, neat seams.
  6. Install roof expansion joints to fit substrates and to result in watertight performance.
- B. Directional Changes: Install factory-fabricated units at directional changes to provide continuous, uninterrupted, and watertight joints.
- C. Transitions to Other Expansion-Control Joint Assemblies: Coordinate installation of roof expansion joints with other exterior expansion-control joint assemblies specified in Section 079513.16 "Exterior Expansion Joint Cover Assemblies" to result in watertight performance. Install factory-fabricated units at transitions between roof expansion joints and exterior expansion-control joint systems.
- D. Splices: Splice roof expansion joints to provide continuous, uninterrupted, and waterproof joints.
1. Install waterproof splices and prefabricated end dams to prevent leakage of secondary-seal membrane.
- E. Fire Barrier: Install fire barrier as required by manufacturer to provide continuous, uninterrupted fire resistance throughout length of roof expansion joint, including transitions and end joints.
- F. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.

END OF SECTION 077129

SECTION 077200 - ROOF ACCESSORIES

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. Section Includes:

1. Roof curbs.
2. Equipment supports.
3. Roof hatches.
4. Preformed flashing sleeves.

B. Related Requirements:

1. Section 055000 "Metal Fabrications" for metal vertical ladders, ships' ladders, and stairs for access to roof hatches.
2. Section 077100 "Roof Specialties" for manufactured fasciae, copings, gravel stops, gutters and downspouts, and counterflashing.
3. Section 077129 "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint covers.
4. Section 086200 "Unit Skylights" for single- and double-glazed domed plastic skylights with curb frame.
5. Section 230548 "Vibration and Seismic Controls for HVAC" for special curbs designed to accommodate seismic and vibration controls.
6. Section 233423 "HVAC Power Ventilators" for power roof-mounted ventilators.

1.3 COORDINATION

- A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing and interfacing and adjoining construction to provide a leakproof, weathertight, secure, and noncorrosive installation.
- B. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of roof accessory.

## APS DATA CHARTER SCHOOL REROOF

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For roof accessories.
1. Include plans, elevations, keyed details, and attachments to other work. Indicate dimensions, loadings, and special conditions. Distinguish between plant- and field-assembled work.
- C. Samples: For each exposed product and for each color and texture specified, prepared on Samples of size to adequately show color.
- D. Delegated-Design Submittal: For roof curbs and equipment supports indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
1. Detail mounting, securing, and flashing of roof-mounted items to roof structure. Indicate coordinating requirements with roof membrane system.
  2. Wind-Restraint Details: Detail fabrication and attachment of wind restraints. Show anchorage details and indicate quantity, diameter, and depth of penetration of anchors.
- E. Sustainable Design Submittals
1. Complete Material Data Worksheets provided by Owner's LEED Consultant.
  2. Provide the overall cost of materials and separate cost breakout for materials that contribute to Materials and Resources credits on the LEED worksheets.
  3. MRc4-Recycled Content: for products having recycled content, product specific documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.

### 1.5 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Roof plans, drawn to scale, and coordinating penetrations and roof-mounted items. Show the following:
1. Size and location of roof accessories specified in this Section.
  2. Method of attaching roof accessories to roof or building structure.
  3. Other roof-mounted items including mechanical and electrical equipment, ductwork, piping, and conduit.
  4. Required clearances.
- B. Sample Warranties: For manufacturer's special warranties.

### 1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For roof accessories to include in operation and maintenance manuals.

## APS DATA CHARTER SCHOOL REROOF

### 1.7 WARRANTY

- A. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finishes or replace roof accessories that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Delta units when tested according to ASTM D2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof accessories shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.
- B. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design roof curbs and equipment supports to comply with wind performance requirements, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- C. Wind-Restraint Performance: As indicated on Drawings.

### 2.2 ROOF CURBS

- A. Roof Curbs: Internally reinforced roof-curb units capable of supporting superimposed live and dead loads, including equipment loads and other construction indicated on Drawings, bearing continuously on roof structure, and capable of meeting performance requirements; with welded or mechanically fastened and sealed corner joints, stepped integral metal cant raised the thickness of roof insulation, and integrally formed deck-mounting flange at perimeter bottom.
- B. Size: Coordinate dimensions with roughing-in information or Shop Drawings of equipment to be supported.
- C. Supported Load Capacity: Coordinate load capacity with information on Shop Drawings of equipment to be supported.
- D. Material: Aluminum sheet, 0.125 inch (3.17 mm) thick.
  - 1. **Finish: Clear anodic.**
  - 2.
- E. Construction:

## APS DATA CHARTER SCHOOL REROOF

1. Curb Profile: Profile as required by existing mechanical units and compatible with roofing system.
2. On ribbed or fluted metal roofs, form deck-mounting flange at perimeter bottom to conform to roof profile.
3. Fabricate curbs to height of 12 inches (305 mm) above roofing surface unless otherwise indicated.
4. Top Surface: Level top of curb, with roof slope accommodated by sloping deck-mounting flange or by use of leveler frame.
5. Sloping Roofs: Where roof slope exceeds 1:48, fabricate curb with perimeter curb height tapered to accommodate roof slope so that top surface of perimeter curb is level. Equip unit with water diverter or cricket on side that obstructs water flow.
6. Insulation: Factory insulated with 1-1/2-inch- (38-mm-) or as indicated on the Drawings thick glass-fiber board insulation.
7. Liner: Same material as curb, of manufacturer's standard thickness and finish.
8. Nailer: Factory-installed wood nailer along top flange of curb, continuous around curb perimeter.
9. Wind Restraint Straps and Base Flange Attachment: Provide wind restraint straps, welded strap connectors, and base flange attachment to roof structure at perimeter of curb, of size and spacing required to meet wind uplift requirements.
10. Platform Cap: Where portion of roof curb is not covered by equipment, provide weathertight platform cap formed from 3/4-inch- (19-mm-) thick plywood covered with metal sheet of same type, thickness, and finish as required for curb.
11. Metal Counterflashing: Manufacturer's standard, removable, fabricated of same metal and finish as curb.
12. Damper Tray: Provide damper tray or shelf with opening 3 inches (76 mm).

### 2.3 EQUIPMENT SUPPORTS

- A. Equipment Supports: Internally reinforced perimeter metal equipment supports capable of supporting superimposed live and dead loads between structural supports, including equipment loads and other construction indicated on Drawings, spanning between structural supports; capable of meeting performance requirements; with welded or mechanically fastened and sealed corner joints, stepped integral metal cant raised the thickness of roof insulation, and integrally formed structure-mounting flange at bottom.
- B. Size: Coordinate dimensions with roughing-in information or Shop Drawings of equipment to be supported.
- C. Supported Load Capacity: Coordinate load capacity with information on Shop Drawings of equipment to be supported.
- D. Material: Aluminum sheet, 0.125 inch (3.17 mm) thick.
  1. Finish: Clear anodic.
- E. Construction:
  1. Curb Profile: Manufacturer's standard or as indicated on the Drawings compatible with roofing system.



## APS DATA CHARTER SCHOOL REROOF

2. Insulation: Factory insulated with 1-1/2-inch- (38-mm-) thick glass-fiber board insulation.
3. Liner: Same material as equipment support, of manufacturer's standard thickness and finish.
4. Nailer: Factory-installed continuous wood nailers 3-1/2 inches (90 mm) wide on top flange of equipment supports, continuous around support perimeter.
5. Wind Restraint Straps and Base Flange Attachment: Provide wind restraint straps, welded strap connectors, and base flange attachment to roof structure at perimeter of curb of size and spacing required to meet wind uplift requirements.
6. Platform Cap: Where portion of equipment support is not covered by equipment, provide weathertight platform cap formed from 3/4-inch- (19-mm-) thick plywood covered with metal sheet of same type, thickness, and finish as required for curb.
7. Metal Counterflashing: Manufacturer's standard, removable, fabricated of same metal and finish as equipment support.
8. On ribbed or fluted metal roofs, form deck-mounting flange at perimeter bottom to conform to roof profile.
9. Fabricate equipment supports to minimum height of 12 inches (305 mm) above roofing surface unless otherwise indicated.
10. Sloping Roofs: Where roof slope exceeds 1:48, fabricate each support with height to accommodate roof slope so that tops of supports are level with each other. Equip supports with water diverters or crickets on sides that obstruct water flow.

### 2.4 ROOF HATCHES

- A. Roof Hatches: Metal roof-hatch units with lids and insulated double-walled curbs, welded or mechanically fastened and sealed corner joints, continuous lid-to-curb counterflashing and weathertight perimeter gasketing, stepped integral metal cant raised the thickness of roof insulation, and integrally formed deck-mounting flange at perimeter bottom.
- B. Type and Size: Single-leaf lid, size to match existing roof hatch opening or as indicated on the Drawings.
- C. Loads: Minimum 40-lbf/sq. ft. (1.9-kPa) external live load and 20-lbf/sq. ft. (0.95-kPa) internal uplift load.
- D. Hatch Material: Aluminum sheet.
  1. Thickness: Manufacturer's standard thickness for hatch size indicated.
  2. Finish: Clear anodic.
- E. Construction:
  1. Insulation: 2-inch- (50-mm-) thick, polyisocyanurate board.
    - a. R-Value: 4.3 according to ASTM C1363.
  2. Nailer: Factory-installed wood nailer continuous around hatch perimeter.
  3. Hatch Lid: Opaque, insulated, and double walled, with manufacturer's standard metal liner of same material and finish as outer metal lid.
  4. Curb Liner: Manufacturer's standard, of same material and finish as metal curb.

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5. Fabricate curbs to minimum height of 12 inches (305 mm) above roofing surface unless otherwise indicated.
- F. Hardware: Spring operators, hold-open arm, galvanized steel spring latch with turn handles, galvanized steel butt- or pintle-type hinge system, and padlock hasps inside and outside.
1. Provide two-point latch on lids larger than 84 inches (2130 mm).
  2. Provide remote-control operation.
- G. Safety Railing System: Roof-hatch manufacturer's standard system including rails, clamps, fasteners, safety barrier at railing opening, and accessories required for a complete installation; attached to roof hatch and complying with 29 CFR 1910.23 requirements and authorities having jurisdiction.
1. Height: 42 inches (1060 mm) above finished roof deck.
  2. Posts and Rails: Galvanized-steel pipe, 1-1/4 inches (31 mm) in diameter or galvanized-steel tube, 1-5/8 inches (41 mm) in diameter.
  3. Flat Bar: Galvanized steel, 2 inches (50 mm) high by 3/8 inch (9 mm) thick.
  4. Maximum Opening Size: System constructed to prevent passage of a sphere 21 inches (533 mm) in diameter.
  5. Chain Passway Barrier: Galvanized proof coil chain with quick link on fixed end.
  6. Self-Latching Gate: Fabricated of same materials and rail spacing as safety railing system. Provide manufacturer's standard hinges and self-latching mechanism.
  7. Post and Rail Tops and Ends: Weather resistant, closed or plugged with prefabricated end fittings.
  8. Provide weep holes or another means to drain entrapped water in hollow sections of handrail and railing members.
  9. Fabricate joints exposed to weather to be watertight.
  10. Fasteners: Manufacturer's standard, finished to match railing system.
  11. Finish: Manufacturer's standard.
    - a. Color: As selected by Architect from manufacturer's full range.

### 2.5 PIPE SUPPORTS

- A. Rooftop pipe supports basis of design: MAPA MT-2RA6 with 3" to 6" adjustable height or prior approved equal

### 2.5 PREFORMED FLASHING SLEEVES

- A. Exhaust Vent Flashing: Double-walled metal flashing sleeve or boot, insulation filled, with integral deck flange, 12 inches (300 mm) high, with removable metal hood and perforated metal collar.
1. Metal: Aluminum sheet, 0.063 inch (1.60 mm) thick.
  2. Diameter: As indicated on Drawings.
  3. Finish: Manufacturer's standard.
- B. Vent Stack Flashing: Metal flashing sleeve, uninsulated, with integral deck flange.
1. Metal: Aluminum sheet, 0.063 inch (1.60 mm) thick.
  2. Height: 13 inches (330 mm).

3. Diameter: As indicated on Drawings.
4. Finish: Manufacturer's standard.

## 2.6 METAL MATERIALS

- A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A653/A653M, G90 (Z275) coating designation and mill phosphatized for field painting where indicated.
  1. Mill-Phosphatized Finish: Manufacturer's standard for field painting.
  2. Factory Prime Coating: Where field painting is indicated, apply pretreatment and white or light-colored, factory-applied, baked-on epoxy primer coat, with a minimum dry film thickness of 0.2 mil (0.005 mm).
  3. Exposed Coil-Coated Finish: Prepainted by the coil-coating process to comply with ASTM A755/A755M. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - a. Two-Coat Fluoropolymer Finish: AAMA 621. System consisting of primer and fluoropolymer color topcoat containing not less than 70 percent PVDF resin by weight.
  4. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester-backer finish consisting of prime coat and wash coat, with a minimum total dry film thickness of 0.5 mil (0.013 mm).
- B. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A792/A792M, AZ50 (AZM150) coated.
  1. Factory Prime Coating: Where field painting is indicated, apply pretreatment and white or light-colored, factory-applied, baked-on epoxy primer coat, with a minimum dry film thickness of 0.2 mil (0.005 mm).
  2. Exposed Coil-Coated Finish: Prepainted by the coil-coating process to comply with ASTM A755/A755M. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - a. Two-Coat Fluoropolymer Finish: AAMA 621. System consisting of primer and fluoropolymer color topcoat containing not less than 70 percent PVDF resin by weight.
  3. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester-backer finish consisting of prime coat and wash coat, with a minimum total dry film thickness of 0.5 mil (0.013 mm).
- C. Aluminum Sheet: ASTM B209 (ASTM B209M), manufacturer's standard alloy for finish required, with temper to suit forming operations and performance required.
  1. Mill Finish: As manufactured.
  2. Factory Prime Coating: Where field painting is indicated, apply pretreatment and white or light-colored, factory-applied, baked-on epoxy primer coat, with a minimum dry film thickness of 0.2 mil (0.005 mm).
  3. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester-backer finish consisting of prime coat and wash coat, with a minimum total dry film thickness of 0.5 mil (0.013 mm).

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- D. Aluminum Extrusions and Tubes: ASTM B221 (ASTM B221M), manufacturer's standard alloy and temper for type of use, finished to match assembly where used; otherwise mill finished.
- E. Steel Shapes: ASTM A36/A36M, hot-dip galvanized according to ASTM A123/A123M unless otherwise indicated.
- F. Steel Tube: ASTM A500/A500M, round tube.
- G. Galvanized-Steel Tube: ASTM A500/A500M, round tube, hot-dip galvanized according to ASTM A123/A123M.
- H. Steel Pipe: ASTM A53/A53M, galvanized.

### 2.7 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.
- B. Cellulosic-Fiber Board Insulation: ASTM C208, Type II, Grade 1, thickness as indicated.
- C. Glass-Fiber Board Insulation: ASTM C726, nominal density of 3 lb/cu. ft. (48 kg/cu. m), thermal resistivity of 4.3 deg F x h x sq. ft./Btu x in. at 75 deg F (29.8 K x m/W at 24 deg C), thickness as indicated.
- D. Polyisocyanurate Board Insulation: ASTM C1289, thickness and thermal resistivity as indicated.
- E. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for aboveground use, acceptable to authorities having jurisdiction, containing no arsenic or chromium, and complying with AWPA C2; not less than 1-1/2 inches (38 mm) thick.
- F. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.
- G. Underlayment:
  - 1. Felt: ASTM D226/D226M, Type II (No. 30), asphalt-saturated organic felt, nonperforated.
  - 2. Polyethylene Sheet: 6-mil- (0.15-mm-) thick polyethylene sheet complying with ASTM D4397.
  - 3. Slip Sheet: Building paper, 3 lb/100 sq. ft. (0.16 kg/sq. m) minimum, rosin sized.
  - 4. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils (0.76 to 1.0 mm) thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
  - 5. Fasteners: Roof accessory manufacturer's recommended fasteners suitable for application and metals being fastened. Match finish of exposed fasteners with finish of material being fastened. Provide nonremovable fastener heads to exterior exposed fasteners. Furnish the following unless otherwise indicated:
  - 6. Fasteners for Zinc-Coated or Aluminum-Zinc Alloy-Coated Steel: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A153/A153M or ASTM F2329.

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7. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
  8. Fasteners for Stainless Steel Sheet: Series 300 stainless steel.
- H. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, PVC, or silicone or a flat design of foam rubber, sponge neoprene, or cork.
- I. Elastomeric Sealant: ASTM C920, elastomeric silicone polymer sealant as recommended by roof accessory manufacturer for installation indicated; low modulus; of type, grade, class, and use classifications required to seal joints and remain watertight.
- J. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for expansion joints with limited movement.
- K. Asphalt Roofing Cement: ASTM D4586/D4586M, asbestos free, of consistency required for application.

### 2.8 ROOF CROSSOVER LADDER

- A. Prefabricated crossover ladder, roof mount, steel, 500 lb load with rails. Dimensions to support roof elevation and parapet dimensions

### 2.9 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- C. Verify dimensions of roof openings for roof accessories.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Install roof accessories according to manufacturer's written instructions.

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1. Install roof accessories level; plumb; true to line and elevation; and without warping, jogs in alignment, buckling, or tool marks.
  2. Anchor roof accessories securely in place so they are capable of resisting indicated loads.
  3. Use fasteners, separators, sealants, and other miscellaneous items as required to complete installation of roof accessories and fit them to substrates.
  4. Install roof accessories to resist exposure to weather without failing, rattling, leaking, or loosening of fasteners and seals.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
1. Coat concealed side of uncoated aluminum roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
  2. Underlayment: Where installing roof accessories directly on cementitious or wood substrates, install a course of underlayment and cover with manufacturer's recommended slip sheet.
  3. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof accessories for waterproof performance.
- C. Roof Curb Installation: Install each roof curb so top surface is level.
- D. Equipment Support Installation: Install equipment supports so top surfaces are level with each other.
- E. Roof-Hatch Installation:
1. Verify that roof hatch operates properly. Clean, lubricate, and adjust operating mechanism and hardware.
  2. Attach safety railing system to roof-hatch curb.
  3. Attach ladder-assist post according to manufacturer's written instructions.
- F. Preformed Flashing-Sleeve and Flashing Pipe Portal Installation: Secure flashing sleeve to roof membrane according to flashing-sleeve manufacturer's written instructions; flash sleeve flange to surrounding roof membrane according to roof membrane manufacturer's instructions.

### 3.3 REPAIR AND CLEANING

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing according to ASTM A780/A780M.
- B. Touch up factory-primed surfaces with compatible primer ready for field painting according to Section 099113 "Exterior Painting."
- C. Clean exposed surfaces according to manufacturer's written instructions.
- D. Clean off excess sealants.
- E. Replace roof accessories that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

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END OF SECTION 077200

SECTION 079200 - JOINT SEALANTS

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. Section Includes:
  - 1. Silicone joint sealants.
  - 2. Nonstaining silicone joint sealants.
  - 3. Urethane joint sealants.
  - 4. Immersible joint sealants.
  - 5. Silyl-terminated polyether joint sealants.
  - 6. Mildew-resistant joint sealants.
  - 7. Polysulfide joint sealants.
  - 8. Butyl joint sealants.
  - 9. Latex joint sealants.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product.
- B. Sustainable Design Submittals:
  - 1. Complete Material Data Worksheets provided by Owner's LEED Consultant.
  - 2. Product Data for Credit EQ 4.1: For adhesives and sealants, documentation including printed statement of VOC content.
- C. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- D. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- E. Joint-Sealant Schedule: Include the following information:



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1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant color.

### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Product Test Reports: For each kind of joint sealant, for tests performed by manufacturer and witnessed by a qualified testing agency.
- C. Preconstruction Laboratory Test Schedule: Include the following information for each joint sealant and substrate material to be tested:
  1. Joint-sealant location and designation.
  2. Manufacturer and product name.
  3. Type of substrate material.
  4. Proposed test.
  5. Number of samples required.
- D. Preconstruction Laboratory Test Reports: From sealant manufacturer, indicating the following:
  1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
  2. Interpretation of test results and written recommendations for primers and substrate preparation are needed for adhesion.
- E. Preconstruction Field-Adhesion-Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on testing specified in "Preconstruction Testing" Article.
- F. Field-Adhesion-Test Reports: For each sealant application tested.
- G. Sample Warranties: For special warranties.

### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
- B. Product Testing: Test joint sealants using a qualified testing agency.
  1. Testing Agency Qualifications: Qualified according to ASTM C1021 to conduct the testing indicated.
- C. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.

1.7 PRECONSTRUCTION TESTING

- A. Preconstruction Laboratory Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
1. Adhesion Testing: Use ASTM C794 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
  2. Compatibility Testing: Use ASTM C1087 to determine sealant compatibility when in contact with glazing and gasket materials.
  3. Submit manufacturer's recommended number of pieces of each type of material, including joint substrates, joint-sealant backings, and miscellaneous materials.
  4. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
  5. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures, including use of specially formulated primers.
  6. Testing will not be required if joint-sealant manufacturers submit data that are based on previous testing, not older than 24 months, of sealant products for adhesion to, staining of, and compatibility with joint substrates and other materials matching those submitted.
- B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates as follows:
1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.
  2. Conduct field tests for each kind of sealant and joint substrate.
  3. Notify Architect seven days in advance of dates and times when test joints will be erected.
  4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
    - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.
      - 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
  5. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
  6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

1.8 FIELD CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:

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1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F (5 deg C).
2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

### 1.9 WARRANTY

- A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  1. Warranty Period: Five years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
  1. Movement of the structure caused by stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
  2. Disintegration of joint substrates from causes exceeding design specifications.
  3. Mechanical damage caused by individuals, tools, or other outside agents.
  4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

## PART 2 - PRODUCTS

### 2.1 JOINT SEALANTS, 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. VOC Content of Interior Sealants: Provide sealants and sealant primers for use inside the weatherproofing system that comply with the following limits for VOC content when calculated according to 40 CFR 59, Part 59, Subpart D (EPA Method 24):
  1. Architectural Sealants: 250 g/L.
  2. Nonmembrane Roof Sealants: 300 g/L.
  3. Single-Ply Roof Membrane Sealants: 450 g/L.
  4. Sealant Primers for Nonporous Substrates: 250 g/L.

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5. Sealant Primers for Porous Substrates: 775 g/L
  6. Modified Bituminous Sealant Primers: 500 g/L
- C. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

### 2.2 SILICONE JOINT SEALANTS

- A. Silicone, S, NS, 100/50, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Use NT.
- B. Silicone, S, NS, 50, NT: Single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 50, Use NT.
- C. Silicone, S, NS, 35, NT: Single-component, nonsag, plus 35 percent and minus 35 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 35, Use NT.
- D. Silicone, S, NS, 25, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
- E. Silicone, Acid Curing, S, NS, 25, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant: ASTM C920, Type S, Grade NS, Class 25, Use NT.
- F. Silicone, S, NS, 100/50, T, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Uses T and NT.
- G. Silicone, S, NS, 50, T, NT: Single-component, nonsag, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 50, Uses T and NT.
- H. Silicone, S, NS, 25, T, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Uses T and NT.
- I. Silicone, S, P, 100/50, T, NT: Single-component, pourable, plus 100 percent and minus 50 percent movement capability traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade P, Class 100/50, Uses T and NT.
- J. Silicone, S, P, 25, T, NT: Single-component, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade P, Class 25, Uses T and NT.
- K. Silicone, M, P, 100/50, T, NT: Multicomponent, pourable, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type M, Grade P, Class 100/50, Uses T and NT.

2.3 NONSTAINING SILICONE JOINT SEALANTS

- A. Nonstaining Joint Sealants: No staining of substrates when tested according to ASTM C1248.
- B. Silicone, Nonstaining, S, NS, 100/50, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Use NT.
- C. Silicone, Nonstaining, S, NS, 50, NT: Nonstaining, single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 50, Use NT.
- D. Silicone, Nonstaining, S, NS, 100/50, T, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Uses T and NT.
- E. Silicone, Nonstaining, M, NS, 50, NT: Nonstaining, multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type M, Grade NS, Class 50, Use NT.

2.4 URETHANE JOINT SEALANTS

- A. Urethane, S, NS, 25, NT: Single-component, nonsag, nontraffic-use, plus 25 percent and minus 25 percent movement capability, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
- B. Urethane, S, NS, 100/50, T, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Uses T and NT.
- C. Urethane, S, NS, 25, T, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 25, Uses T and NT.
- D. Urethane, S, P, 35, T, NT: Single-component, pourable, plus 35 percent and minus 35 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type S, Grade P, Class 35, Uses T and NT.
- E. Urethane, S, P, 25, T, NT: Single-component, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type S, Grade P, Class 25, Uses T and NT.
- F. Urethane, M, NS, 50, NT: Multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability nontraffic-use, urethane joint sealant; ASTM C920, Type M, Grade NS, Class 50, Use NT.
- G. Urethane, M, NS, 25, NT: Multicomponent, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, urethane joint sealant; ASTM C920, Type M, Grade NS, Class 25, Use NT.

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- H. Urethane, M, NS, 50, T, NT: Multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type M, Grade NS, Class 50, Uses T and NT.
- I. Urethane, M, NS, 25, T, NT: Multicomponent, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type M, Grade NS, Class 25, Uses T and NT.
- J. Urethane, M, P, 50, T, NT: Multicomponent, pourable, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type M, Grade P, Class 50, Uses T and NT.
- K. Urethane, M, P, 25, T, NT: Multicomponent, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type M, Grade P, Class 25, Uses T and NT.

### 2.5 MILDEW-RESISTANT JOINT SEALANTS

- A. Mildew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent mold and mildew growth.
- B. Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
- C. STPE, Mildew Resistant, S, NS, 50, NT: Mildew-resistant, single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, silyl-terminated polyether joint sealant; ASTM C920, Type S, Grade NS, Class 50, Use NT.

### 2.6 BUTYL JOINT SEALANTS

- A. Butyl-Rubber-Based Joint Sealants: ASTM C1311.

### 2.7 LATEX JOINT SEALANTS

- A. Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C834, Type OP, Grade NF.

### 2.8 JOINT-SEALANT BACKING

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin), or as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

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- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

### 2.9 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 performance of the Work.
- 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.
    - c. Unglazed surfaces of ceramic tile.
    - d. Exterior insulation and finish systems.

3. Remove laitance and form-release agents from concrete.
  4. 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.
    - c. Porcelain enamel.
    - d. Glazed surfaces of ceramic tile.
- 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 C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  1. Do not leave gaps between ends of sealant backings.
  2. Do not stretch, twist, puncture, or tear sealant backings.
  3. Remove absorbent sealant backings that have become wet before sealant application, and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. 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.
- F. Tooling of Nonsag 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 C1193 unless otherwise indicated.
4. Provide flush joint profile according to Figure 8B in ASTM C1193.
5. Provide recessed joint configuration of recess depth according to Figure 8C in ASTM C1193.
  - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

### 3.4 FIELD QUALITY CONTROL

A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:

1. Extent of Testing: Test completed and cured sealant joints as follows:
  - a. Perform 10 tests for the first 1000 feet (300 m) of joint length for each kind of sealant and joint substrate.
2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.
  - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
3. Inspect tested joints and report on the following:
  - a. Whether sealants filled joint cavities and are free of voids.
  - b. Whether sealant dimensions and configurations comply with specified requirements.
  - c. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion complies with sealant manufacturer's field-adhesion hand-pull test criteria.
4. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant material, sealant configuration, and sealant dimensions.
5. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.

B. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory.

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Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

### 3.5 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.

### 3.6 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, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

### 3.7 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces.
  - 1. Joint Locations:
    - a. Control and expansion joints in brick pavers.
    - b. Isolation and contraction joints in cast-in-place concrete slabs.
    - c. Joints between plant-precast architectural concrete paving units.
    - d. Joints in stone paving units, including steps.
    - e. Tile control and expansion joints.
    - f. Joints between different materials listed above.
    - g. Other joints as indicated on Drawings.
  - 2. Joint Sealant: Urethane, M, P, 50, T, NT.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
  - 1. Joint Locations:
    - a. Construction joints in cast-in-place concrete.
    - b. Joints between plant-precast architectural concrete units.
    - c. Control and expansion joints in unit masonry.
    - d. Joints in dimension stone cladding.
    - e. Joints in glass unit masonry assemblies.
    - f. Joints in exterior insulation and finish systems.
    - g. Joints between metal panels.
    - h. Joints between different materials listed above.

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- i. Perimeter joints between materials listed above and frames of doors, windows, and louvers.
    - j. Control and expansion joints in ceilings and other overhead surfaces.
    - k. Other joints as indicated on Drawings.
  2. Joint Sealant: Silicone, nonstaining, S, NS, 50, NT.
  3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- C. Joint-Sealant Application: Interior joints in horizontal traffic surfaces.
  1. Joint Locations:
    - a. Isolation joints in cast-in-place concrete slabs.
    - b. Control and expansion joints in stone flooring.
    - c. Control and expansion joints in brick flooring.
    - d. Control and expansion joints in tile flooring.
    - e. Other joints as indicated on Drawings.
  2. Joint Sealant: Urethane, S, P, 25, T, NT.
  3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- D. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
  1. Joint Locations:
    - a. Control and expansion joints on exposed interior surfaces of exterior walls.
    - b. Tile control and expansion joints.
    - c. Joints on underside of plant-precast structural concrete beams and planks.
    - d. Other joints as indicated on Drawings.
  2. Joint Sealant: Urethane, S, NS, 25, NT.
  3. Joint-Sealant Color: *As selected by Architect from manufacturer's full range of colors.*
- E. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces not subject to significant movement.
  1. Joint Locations:
    - a. Control joints on exposed interior surfaces of exterior walls.
    - b. Perimeter joints between interior wall surfaces and frames of interior doors, windows, and elevator entrances.
    - c. Other joints as indicated on Drawings.
  2. Joint Sealant: Acrylic latex.
  3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- F. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.
  1. Joint Locations:
    - a. Joints between plumbing fixtures and adjoining walls, floors, and counters.

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- b. Tile control and expansion joints where indicated.
    - c. Other joints as indicated on Drawings.
  - 2. Joint Sealant: Silicone, mildew resistant, acid curing, S, NS, 25, NT.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- G. Joint-Sealant Application: Concealed mastics.
- 1. Joint Locations:
    - a. Aluminum thresholds.
    - b. Sill plates.
    - c. Other joints as indicated on Drawings.
  - 2. Joint Sealant: Butyl-rubber based.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION 079200

SECTION 099113 - EXTERIOR PAINTING

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 surface preparation and the application of paint systems on the following exterior substrates:

1. Concrete.
2. Steel.
3. Galvanized metal.
4. Aluminum (not anodized or otherwise coated).
5. Exterior portland cement (stucco).
6. Exterior gypsum board.

- B. Related Sections include the following:

1. Division 05 Sections for shop priming of metal substrates with primers specified in this Section.
2. Division 06 Sections for shop priming carpentry with primers specified in this Section.
3. Division 08 Sections for factory priming windows and doors with primers specified in this Section.
4. Division 09 painting Sections for special-use coatings.
5. Division 09 Section "Interior Painting" for surface preparation and the application of paint systems on interior substrates.
6. Division 09 Section "Staining and Transparent Finishing" for surface preparation and the application of wood stains and transparent finishes on exterior wood substrates.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of topcoat product indicated.
- C. Samples for Verification: For each type of paint system and each color and gloss of topcoat indicated.
  1. Submit Samples on rigid backing, 8 inches square.
  2. Step coats on Samples to show each coat required for system.
  3. Label each coat of each Sample.
  4. Label each Sample for location and application area.

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- D. Product List: For each product indicated, include the following:
  - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
  - 2. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

### 1.4 QUALITY ASSURANCE

- A. MPI Standards:
  - 1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
  - 2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.
- B. Mockups: Apply benchmark samples of each paint system indicated and each color and finish selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
    - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
    - b. Other Items: Architect will designate items or areas required.
  - 2. Final approval of color selections will be based on benchmark samples.
    - a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Architect at no added cost to Owner.

### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
  - 1. Maintain containers in clean condition, free of foreign materials and residue.
  - 2. Remove rags and waste from storage areas daily.

### 1.6 PROJECT CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

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### 1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.
  - 1. Quantity: Furnish an additional 5 percent, but not less than one (1) gallon of each material and color applied.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Benjamin Moore & Co.
  - 2. Benjamin Moore & Co., Limited (Canada).
  - 3. Cloverdale Paint.
  - 4. Diamond Vogel Paints.
  - 5. Dunn-Edwards Corporation.
  - 6. Duron, Inc.
  - 7. Frazee Paint.
  - 8. General Paint.
  - 9. ICI Paints.
  - 10. Kwal-Howells Paint.
  - 11. M.A.B. Paints.
  - 12. Miller Paint.
  - 13. PPG Architectural Finishes, Inc.
  - 14. Sherwin-Williams Company (The).

### 2.2 PAINT, GENERAL

- A. Material Compatibility:
  - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. Colors: To be selected by Architect from Manufacturers standard available colors.

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### 2.3 ANTI-GRAFFITI COATING (NOT REQUIRED FOR THIS PROJECT)

- A. Clear anti-graffiti coating: Chemical based sacrificial coating, GRAFFITI CONTROL. Defacer Eraser by ProSoCo, Inc. Kansas City, Kansas, available through Rinker Materials, Albuquerque, New Mexico (505) 345-4451. Install on all exterior Stucco and Masonry surfaces from ground level to a minimum of 8'-0" above ground level. Extend coating to nearest horizontal control joint or parapet above the 8'-0" minimum typical.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
  - 1. Concrete: 12 percent.
  - 2. Masonry (Clay and CMU): 12 percent.
  - 3. Wood: 15 percent.
  - 4. Plaster: 12 percent.
  - 5. Gypsum Board: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
  - 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
  - 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.



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1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.
- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- G. Aluminum Substrates: Remove surface oxidation.
- H. Plaster Substrates: Do not begin paint application until plaster is fully cured and dry.
- I. Exterior Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth.

### 3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
  1. Use applicators and techniques suited for paint and substrate indicated.
  2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Application of Anti-Graffiti Coating
  1. Surface to be treated must be sound, dry and free of cracks, dirt, oil, paint or other contaminants which may affect the penetration of the sacrificial coatings. USE WITH ADEQUATE VENTILATION.
  2. Do not apply sacrificial coating to a wet wall. Allow at least 25 days from completion of work. Allow at least 48 hours after a rain or snow. Do not apply if rain or snow is expected. Do not allow wall to become wet for at least four hours after application.
  3. Complete all caulking and sealing at least 72 hours prior to applying sacrificial coating.
  4. Do not apply coating to frozen substrate.

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5. For split-face concrete block, apply a second coat. Allow first coat to dry to touch. Do not allow more than 2 hour between coats.
6. Do not dilute or alter. Keep container tightly sealed until ready to use. Once opened, use within 12 hours.
7. Apply sacrificial coating from bottom up in a saturating spray application. Apply sufficient material to create a 6" to 8" rundown below the contact point.

### 3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

### 3.5 PAINTING SCHEDULE

- A. Apply paint in strict accordance with manufacturer's recommendations and as specified. Listing order does not indicate preference. Use only one manufacturer throughout Project as conditions allow. Do not intermix manufacturers.
- B. Exterior metal items to be painted include, but are not limited to,
  1. Lintels.
  2. Bollards.
  3. Architectural steel.
  4. Galvanized metal flashings.
  5. Miscellaneous exposed steel. (including roof top equipment exposed to view).
  6. Steel doors and frames.
  7. Stairs.
  8. Handrails and railings.
- C. Exterior Painting:
  1. Steel (includes all exterior hollow metal, except for steel canopy structure, see below):
    - a. First Coat: Red Oxide Primer (unless shop primed), 1.6 mils.. DFT.
      - 1) Benjamin Moore Alkyd Metal Primer M06.
      - 2) Carboline Carbocrylic 3358 Water-reducible Alkyd Primer (voc 67 g/l) as supplied by Dunn-Edwards.
      - 3) ICI Devguard Multi-Purpose Metal Primer 4160.
      - 4) Kwal-Hanley 9210 Accu-Pro Rust Inhibiting Primer.
      - 5) Sherwin Williams Kem Kromik Universal Primer, B50 Series.

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- b. Two Coats: Semi-gloss enamel, 50 to 60 percent on a 60 degree gloss meter. Each coat to be 2.0 mils.. DFT.
  - 1) Benjamin Moore DTM Alkyd Semi-Gloss Enamel M24.
  - 2) Carboline Carbocrylic 3359 Semi-Gloss Enamel (voc 60 g/l) as supplied by Dunn- Edwards.
  - 3) ICI Ultra-Hide Durus Exterior Alkyd Semi-Gloss Finish.
  - 4) Kwal-Hanley 4600 Accu-Pro Alkyd Semi-Gloss Enamel.
  - 5) Sherwin Williams Industrial Enamel B54 Series.
  
- 2. Steel (exterior steel canopy structure):
  - a. First Coat: Rust Inhibitor Primer (shop primed),
    - 1) Fabricators standard alkyd rust inhibiting primer.
  
  - b. Second Coat: Rust Inhibitor Primer 2.0 mils. DFT.
    - 1) Benjamin Moore Alkyd P07 Universal Primer.
      - a) Color: Gray,
    - 2) Prior approved equal.
  
  - c. Two Coats: Aliphatic Acrylic Urethane, two component aliphatic acrylic urethane. Each coat to be 2.0 mils.. DFT.
    - 1) Benjamin Moore Aliphatic Acrylic Urethane Gloss Finish P74.
    - 2) Prior approved equal.
  
- 3. Mechanical Equipment, Piping, Conduits, Ductwork and Galvanized Metal:
  - a. Etching: Etch galvanized metals as specified above.
  - b. First Coat: Alkyd Primer, 2.0 mils. DFT.
    - 1) Benjamin Moore Acrylic Metal Primer 4160.
    - 2) Carboline Carbocrylic 3358 Water-reducible Alkyd Primer (voc 60 g/l) as supplied by Dunn-Edwards.
    - 3) ICI Ultra-Hide Durus Exterior Alkyd Semi-Gloss Finish.
    - 4) Kwal-Hanley 4600 Accu-Pro Alkyd Semi-Gloss Enamel.
    - 5) Sherwin Williams Industrial Enamel – B54 Series.
  
- 4. Concrete Masonry – Paint:
  - a. First Coat: Acrylic Resin Block Filler, 10.0 mils. DFT.
    - 1) Benjamin Moore Moorcraft Super Craft Interior/Exterior Latex Block Filler 285.
    - 2) Dunn-Edwards Concrete Block Filler Smooth W315.
    - 3) Kwal Hanley 5890 Accu-Pro Latex Block Filler.
    - 4) Sherwin Williams PrepRite Block Filler, B25W25.

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- b. Two Coats: Latex Paint, 6 to 10 percent on a 60 degree gloss meter, 1.4 mils..  
DFT.
  - 1) Benjamin Moore Moorlite Latex House Paint 105.
  - 2) Dunn-Edwards Acri-Flat Acrylic Exterior Flat Paint W704.
  - 3) Kwal-Hanley 6300 Accu-Pro 100 percent Acrylic Flat Latex.
  - 4) Sherwin Williams Summit Flat Latex B3WJ596.

END OF SECTION 099113