Invitation to Bid (ITB)

Leon County School Board
Purchasing Department
3397 West Tharpe Street
Tallahassee, Florida 32303
batesd@leonschools.net

Amos P. Godby High School
Building 400 Re-Roof Project
ITB 2452-2026

ITB Released: March 24, 2025
Deadline for Questions*: April 4, 2025
Bids Due* 2:00 p.m. on April 24, 2025
Debbie Bates
Procurement Officer

*Timeline subject to change. Changes will be communicated through an addendum to this ITB (see Section 1.8)

ITB Timeline

Steps in the ITB Process	Date and Time	Location (if applicable)
Release of ITB	March 24, 2025	District Website https://www.leonschools.net/Page/4411 DemandStar https://www.demandstar.com/app/agencies/florida/leon-county-schools-purchasing-department/procurement-opportunities/ed9224e2-7a4c-4013-91a2-56aa6ed77478/
Mandatory Pre-Bid Conference	April 1, 2025 2:00 p.m.	Amos P. Godby High School 1717 West Tharpe Street, Tallahassee, Florida 32303 (Main Office)
Written Questions Due	April 4, 2025	Submit to: Debbie Bates, Procurement Officer Subject: ITB 2452-2026, Amos P. Godby High School Building 400 Re-Roof Project Email: batesd@leonschools.net
Anticipated Posting of Answers to Submitted Questions	April 9, 2025	District Website https://www.leonschools.net/Page/4411 DemandStar https://www.demandstar.com/app/agencies/florida/leon-county-schools-purchasing-department/procurement-opportunities/ed9224e2-7a4c-4013-91a2-56aa6ed77478/
Sealed Bids Due and Opened	April 24, 2025 at 2:00 p.m. EST	Submit to: Leon County Schools Purchasing Department Attn: Debbie Bates, Procurement Officer ITB 2452-2026, Amos P. Godby High School Building 400 Re-Roof Project 3397 W. Tharpe Street Tallahassee, FL 32303* *Also, the location for the Bid Opening.
Anticipated Date the District will Advertise its Notice of Award Recommendation	May 13, 2025	District Website https://www.leonschools.net/Page/4411 DemandStar https://www.demandstar.com/app/agencies/florida/leon-county-schools-purchasing-department/procurement-opportunities/ed9224e2-7a4c-4013-91a2-56aa6ed77478/

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SECTION 1: Key Information

1.1 Quick Facts

The School Board of Leon County, Florida (hereinafter referred to as the "District") is seeking qualified Vendors to establish firm pricing for the Re-Roof of Building 400 at Amos P. Godby High School.

a. The use of capitalization (such as Bidder) denotes words and phrases with special meaning as defined in Section 5, Definitions.

b. Unless otherwise indicated, all dates and times reflect Eastern Time (Tallahassee, Florida).

c. The District reserves the right to perform, or cause to be performed, the services herein described in any manner it sees fit, including, but not limited to, award of other contracts, utilization of existing State or governmental contracts, public purchasing cooperatives, or to perform the work with its own employees.

1.2 Bidder Qualifications

Bidders shall maintain a permanent place of business, have adequate equipment to perform the requested services, be financially solvent, and maintain enough qualified personnel to perform the services of this Contract.

a. Bidder must have a minimum of three (3) years of experience providing services of the same or similar nature and completed projects of like scope and size contemplated by this ITB;

b. Bidder must be duly licensed to conduct business in the State of Florida; and

c. Bidder must have a valid Certificate of Prequalification from the Leon County School Board Construction and Facilities department.

1.3 How to Contact Us (Procurement Rules and Information)

a. All questions related to this ITB must be made in writing, via email, to the Procurement Officer listed below. Questions will only be accepted if submitted in writing on or before the date and time specified in the Timeline.

b. On or about the date referenced in the Timeline, the District will advertise its answers to written questions on the District's website at https://www.leonschools.net/Page/4411 and DemandStar at https://www.demandstar.com/app/agencies/florida/leon-county-schools-purchasing-department/procurement-opportunities/ed9224e2-7a4c-4013-91a2-56aa6ed77478.

c. Between the release of the solicitation and the end of the 72-hour period following the advertisement of the Notice of Board Decision (the 72-hour period excludes Saturdays, Sundays, and District holidays), Bidders to this ITB or persons acting on their behalf may not contact any employee, officer or member of the Leon County School Board or Superintendent concerning any aspect of this solicitation, except in writing to the Procurement Officer as provided in this solicitation or directed by the District. Violation of this provision may be grounds for rejecting a Bid.

d. Any person requiring special accommodations in responding to this solicitation because of a disability should contact the LCS Purchasing Department at (850) 488-1206 at least five (5) days before any pre-solicitation conference, solicitation opening, or public meeting. Persons who are

deaf, hard-of-hearing, deaf-blind, or speech-disabled may contact the LCS Purchasing Office by using the Florida Relay Service at 1-800-955-8771 (TTY/ASCII).

e. **The District's Procurement Officer**

Name: Debbie Bates, Procurement Officer

Purchasing Department

Leon County Schools

3397 W. Tharpe Street

Tallahassee, FL 32303

Telephone: (850) 617-5977

Email: **batesd@leonschools.net**

f. The Bidder shall not initiate or execute any decision or action arising from any verbal discussion with any District employee related to this ITB (see Section 2.2). Only written communications from the District's Procurement Officer and formal addendums are considered duly authorized expressions on behalf of the District. Additionally, only written communications from a Bidder are recognized as duly authorized expressions on behalf of the Bidder.

1.4 Developing Your Bid

a. This ITB is being issued as part of an open, competitive process and sets out the appropriate steps and conditions.

b. Bidders should take the time to read and understand the ITB. In particular, they should:

1. Review Title XLVIII, K-20 Education Code, within the Florida Statutes.
2. Develop a strong understanding of the District's requirements detailed in Section 2.
3. Ensure their company is on file and in good standing with the Florida Department of State, or provide certification of exemption from this requirement, as required for all entities defined under Chapters 607, 617, or 620, Florida Statutes (F.S.), seeking to do business with the District.

c. Bidders should prepare a clear and concise Bid, avoiding complicated jargon, and thoroughly describe their ability to meet the expectations of the District.

d. Bidders must follow the format and instructions included in this ITB for their Bid submittal.

e. Bids that contain provisions contrary to this ITB's material requirements are not permitted. Including alternate provisions or conditions to material requirements will be considered a counteroffer, resulting in the Bid being deemed non-responsive.

f. Bidders must use Attachment I, Price Sheet, to submit pricing. Bidders shall not change or substantially alter the form but fill it out completely, as instructed in Section 3.2 of this ITB.

g. Bidders should thoroughly review their Bid before submission to ensure the Bid is complete and accurate and it has provided all information requested in the format prescribed in Section 3, Procurement Rules and Information.

h. The District is not liable for any costs incurred by a Bidder while responding to this ITB, including the costs associated with attending site visits, oral presentations, or negotiations, as applicable.

i. Bidders are expected to submit questions or concerns regarding the requirements or terms and conditions of this solicitation during the question and answer phase, per Section 1.3, a.

j. The District may reject any and all Bids that do not meet the following **pass/fail criteria (also called Mandatory Responsiveness Criteria)**. Any Bid rejected for failure to meet these requirements will not be evaluated further:

1. Bidder must have a minimum of three (3) years of experience providing services of the same or similar nature and completed projects of like scope and size contemplated by this ITB;
2. Bidder must be duly licensed to conduct business in the State of Florida;
3. Bidder shall submit a valid Certificate of Prequalification from the Leon County School Board Construction and Facilities department.; and
4. Bidder must confirm that all services to be provided under the Contract will be compliant with all laws, rules, and other authority applicable to providing the services, including, but not limited to, Florida's Open Government Laws (Article I, Section 24, Florida Constitution, and Chapter 119, F.S.).

k. The Bidder shall complete and submit the following:

1. Attachment I, Price Sheet
2. Attachment II, Required Provisions Certifications
3. Attachment III, Notice of Conflict of Interest
4. Attachment IV, Bidder Contact Information
5. Attachment VIII, Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion AD-1048
6. Attachment IX, Certification Regarding Lobbying for Contracts, Grants, and Cooperative Agreements
7. Attachment X, Vendor Affidavit Regarding the Use of Coercion for Labor and Services

1.5 Submitting Your Bid

a. Bidders shall submit their Bids in a sealed envelope or package with the ITB number and the date and time of the Bid opening clearly marked on the sealed envelope or packaging. Bidders may submit their Bids by mail, courier, delivery services (such as FedEx or UPS), or hand-delivery to the location below. The District will not accept any Bids submitted via email or fax.

b. Bidders must mail or otherwise deliver their Bids to the following address:

Leon County Schools Purchasing Department
ITB 2452-2026, Amos P. Godby High School Building 400 Re-Roof Project
Attn: Debbie Bates, Procurement Officer
3397 W. Tharpe Street
Tallahassee, FL 32303

c. It is the Bidder's responsibility to ensure their Bid is delivered to the District by the date and time stipulated in the Timeline. The District's clock will stamp Bids received and shall provide the official time for the Bid opening. Late Bids will not be accepted.

d. Submit one (1) signed, original, and two (2) copies.

e. If the Bidder includes information in their Bid that they believe is and have marked as confidential or trade secret, they should submit a redacted copy of their Bid; as outlined in Section 3.5, the Bidder should submit one (1) redacted hard copy and one (1) redacted electronic copy, in searchable PDF format (in addition to the non-redacted version).

f. Bidders are encouraged to print Bid documents double-sided and minimize using non-recyclable materials.

1.6 Bid Opening

a. Bids are due and will be publicly opened at the time, date, and location specified in the Timeline.

b. District staff are not responsible for the inadvertent opening of a Bid that is improperly sealed, addressed, or not correctly identified with the ITB number.

c. After the Bid Opening, interested parties may submit a written request to the Procurement Officer for the names of all Bidders.

1.7 Disposition of Bids

a. The District reserves the right to withdraw this ITB at any time and, by doing so, assumes no liability to any Bidder.

b. The District reserves the right to reject any Bids received in response to this ITB.

c. The District reserves the right to waive Minor Irregularities when doing so would be in the District's best interest. The District may correct Minor Irregularities at its exclusive option but is not obligated to do so.

d. All documentation produced as part of this Bid shall become the exclusive property of the District, may not be returned to or removed by the Bidder or its agents, and will become a matter of public record, subject to the provisions of Chapter 119, F.S. Selection or rejection of the Bid will not affect this right. Should the District reject all Bids and re-solicit, information submitted in response to this ITB will become a matter of public record as indicated in Section 119.071, F.S. The District shall have the right to use any ideas, adaptations of any ideas, or recommendations presented in any Bid. The award or rejection of a Bid shall not affect this right.

1.8 Changes to the ITB

The District will post all addenda and materials relative to this procurement on the District's Purchasing website at https://www.leonschools.net/Page/4411 and on DemandStar at https://www.demandstar.com/app/agencies/florida/leon-county-schools-purchasing-department/procurement-opportunities/ed9224e2-7a4c-4013-91a2-56aa6ed77478/.

Interested parties are responsible for monitoring this site for new or changing information relative to this procurement. Bidders are responsible for ensuring that all addendums have been read and incorporated, as applicable, in their Bid.

1.9 Protest Procedures

Per Section 120.57(3), F.S., a Notice of Intent to Protest or a Formal Written Protest must be filed with the District's Purchasing Department within the timeframes established in Florida Statutes. Filings may be made physically at 3397 W. Tharpe Street, Tallahassee, Florida 32305, or via email to purchasing@leonschools.net. Protests must be made in compliance with Rules 28-110.003 and 28-110.004, Florida Administrative Code (F.A.C.). Filings received on weekends, District holidays, or after 5:00 p.m. will be filed the next business day.

Failure to file a protest within the time prescribed in Section 120.57(3), F.S., or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, F.S.

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SECTION 2: Scope of Work

2.1 Background

The District and the School Board are created under Article IX, Section 4, of the Constitution of the State of Florida. The School Board is an independent taxing and reporting authority responsible for operating, controlling, and supervising all free public schools within the school district, subject to the Florida K-20 Education Code, Chapters 1000 – 1013, F.S. The Board consists of five (5) elected officials responsible for, among other things, the adoption of policies that govern the operation of District public schools. The elected Superintendent of Schools is responsible for the administration and management of the schools within the applicable parameters of state laws, State Board of Education Rules, and School Board policies. The District provides a standard, traditional curriculum to a student body of approximately 30,000 students from pre-kindergarten through the 12th grade. The District also provides adult education at several facilities during regular and non-school hours. In addition to the standard curriculum, the District offers a variety of specialized technical training programs for higher grade levels.

2.2 Procurement Overview/Requirements

Through this solicitation, the District is seeking competitive Bids, from licensed and Prequalified contractors for Building 400 Re-Roof Project at Amos P. Godby High School located at 1717 West Tharpe Street, Tallahassee, Florida 32303.

The District will work with the Successful Bidder to execute a purchase order for services soon after the award of this ITB. The Successful Bidder must have the ability to begin the project on or before June 1, 2025 and be substantially completed no later than August 31, 2025.

2.3 Bidder Responsibilities

Each Bidder must carefully examine the ITB requirements, Bid prices and extensions, insurance requirements, licensing requirements, Bid opening date and time, and thoroughly familiarize itself with all of the terms and conditions contained within the ITB. Failure to do so on the part of the Bidder will in no way relieve it of any of the obligations and responsibilities that are a part of the ITB.

2.4 Scope of Work

The District requires services to provide Building 400 Re-Roof Project at Amos P. Godby High School. The Successful Bidders' work shall meet all requirements specified in Exhibit B and Exhibit C Building 400 Re-Roof Project Permit Drawings and Project Manual of this ITB.

The Successful Bidder is responsible for completing the work in accordance with the Permit Drawings and Specifications and as required for a complete and functional installation.

a. Exhibit B, Permit Drawings and Specifications.
b. Exhibit C, Project Manual
c. The Successful Bidders' shall coordinate with Leon County Schools Permitting office to establish and adhere to the permit inspection schedule.
d. All necessary labor, materials, equipment and other items, facilities, and/or services to perform and complete all work required in the contract documents are to be provided by the Successful Bidder.

e. The Successful Bidder must provide a clean and safe work environment for the employees and students.
f. All work will need to be scheduled/accomplished to minimize interruption to school operations and in consideration and safety of building occupants.
g. Clean up any debris from the site daily and upon final completion.

2.5 Pricing

The District is requesting a total base bid price using Attachment I, Price Sheet. The Contractor shall include in their cost all labor, materials, equipment, tools, transportation, and any other facilities and services required for the proper execution and completion of the work as specified herein. The price is not subject to any material or labor escalation for the duration of the Project.

2.6 Mandatory Pre-Bid Conference

A mandatory pre-bid Conference will be held on Tuesday, April 1, 2025 at 2:00 p.m., at the site located at 1717 West Tharpe Street, Tallahassee, Florida 32303 (Main Office).

Attendance at the mandatory pre-bid conference is part of the requirement of this solicitation. Each Bidder shall have a maximum of two (2) representatives. They are to meet at the site and document attendance on the conference "sign-in" sheet. Attendees and Leon County Schools Department Staff will inspect the site. Failure to attend will be cause for disqualification.

Questions will be answered at that time; however, verbal answers are not binding on the Leon County School Board. Only those questions subsequently submitted in writing during the question and answer period, and answered through an addendum to this ITB will be considered binding upon the Board.

2.7 Prequalification

Interested firms must hold a Certificate of Prequalification from the Leon County School Board, Construction & Facilities Department. Certificates will be valid for one (1) year from the date of School Board approval and must be renewed annually. Instructions are available at: https://www.leonschools.net/Page/4815. Submittals for work from firms not prequalified at the time of submittal will be deemed nonresponsive and will not be considered.

The bonding capacity identified in the firms prequalification shall be greater than or equal to the firms total bid price.

2.8 Permits

The Successful Bidder shall apply for and obtain any and all such permits and regulatory approvals as may be required by the Board or any other governmental or administrative agency, in order to legally complete the work required hereunder, and by signing and returning their Bid, Contractor acknowledges that the cost thereof has been included in the base price.

2.9 Safety

The Successful Bidder and its employees must comply with the Board's safety policies. The Successful Bidder is responsible for adhering to all OSHA Job Safety Requirements including the use of all PPE (personal protective equipment) for staff.

2.10 Performance and Payment Bonds

The Performance and Payment Bonds shall be secured from any agency of a surety or insurance company who shall have an established place of business in the State of Florida and be duly licensed to conduct business there. It is to be furnished as prescribed in Section 255.05 and 1013.47, Florida Statutes. In the event the Contract is awarded, the Successful Bidder shall, within eight (8) Owner business days after the award by the Owner of the Contract, furnish the required Performance and Payment Bonds.

2.11 Property Damage

The Successful Bidder will be responsible to repair or replace, to the Leon County School Board's satisfaction, any damage caused in pursuit of the work specified herein. Such repairs will be at the sole expense of the awarded Successful Bidder.

2.12 Quality

All materials used must be new and equal to or exceed specifications. The manufacturer's standard guarantee shall apply.

2.13 Contact Person

The Successful Bidder shall be notified of the name and phone number of the District Project Coordinator. Only the Project Coordinator may authorize changes to the scope of work.

2.14 Warranties

The Contractor warrants that all provided commodities and contractual services are free from liens and encumbrances, and are free from defects in design, materials, and workmanship. The Contractor warrants the commodities and contractual services are suitable for and will perform per the ordinary use for which they are intended. The Contractor must agree to assist the District in resolving any dispute over warranty terms with the manufacturer. Any manufacturer's warranty that extends beyond the expiration of the warranty will be passed on to the District.

2.15 Purchase Orders

A purchase order issued by the District Purchasing Department or from school internal accounts is the only legal authorization for Awarded Contractors to provide services. **District procurement cards are not an approved form of payment.** A written or verbal commitment from district employees without a purchase order issued does not constitute an obligation by the District to a Contractor. Contractors that perform services or provide commodities without a purchase order do so at their own risk and risk of non-payment.

2.16 Invoice and Payment

The Contractor will be paid upon submission of a properly documented invoice to the District following pickup/delivery and acceptance of the contracted goods or services. The invoice(s) shall contain sufficient detail for audit purposes, including the PO number, and an itemized list of all goods and/or services along with signed receiving tickets. The Board intends to pay all properly submitted invoices on "Net 30 Days" terms, following the receipt of goods or completion of services and receipt of a properly documented and approved invoice.

2.17 Performance Monitoring

The District may utilize any or all of the following methodologies in monitoring the Contractor(s) performance under the Contract and in determining compliance with Contract terms and conditions:

a. On-site reviews of work performed;

b. Documentation/review of timely response to work requests;

c. Documentation/review of timely completion of work as assigned; and

d. Documentation/review of invoices.

The Contract Manager will provide a written monitoring report to the Awarded Contractor within 30 days of a monitoring visit. Non-compliance issues identified by the Contract Manager will be described in detail to provide the Awarded Contractor the opportunity for correction, where feasible.

Within ten (10) calendar days of receipt of the District's written monitoring report, the Awarded Contractor shall provide a formal Corrective Action Plan (CAP) to the Contract Manager (e-mail acceptable) in response to all noted deficiencies, including responsible individuals and required time frames for achieving compliance. Unless specifically agreed upon in writing by the Contract Manager, time frames for compliance shall not exceed 30 calendar days from the date of receipt of the monitoring report by the Awarded Contractor. The Contract Manager shall reject CAPs that do not contain all the information required in writing. The Awarded Contractor shall have 15 calendar days from receiving such written rejection to submit a revised CAP; this will not increase the required time for achieving compliance. All noted deficiencies shall be corrected within the time frames identified in the CAP or as amended with prior approval of the District. If deficiencies are not corrected within the approved timeframe, the District may terminate the Contract. The Contract Manager may conduct follow-up monitoring at any time to determine compliance based on the submitted CAP.

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SECTION 3: Procurement Rules and Information

3.1 Contents and Format of Bid Submittals

All Bids must include the following required forms:

a. Each Bidder shall complete and submit Attachment I, Price Sheet, and provide a signed hard copy.

b. Attachment II, Required Provisions Certifications

c. Attachment III, Notice of Conflict of Interest

d. Attachment IV, Bidder Contact Information

e. Attachment V, Local Preference Affidavit (if applicable)

f. Attachment VI, Subcontracting Form (if applicable)

g. Attachment VII, Drug-Free Workplace Certification (if applicable)

h. Attachment VIII, Certification Regarding Debarment

i. Attachment IX, Certification Regarding Lobbying

j. Attachment X, Vendor Affidavit Regarding the Use of Coercion for Labor and Services

3.2 Basis of Award

The District intends to issue an award to the one Responsible Bidder, who provides the lowest total price. The District will apply a preference to Vendors as indicated in Sections 3.6, 3.7, and 3.8.

In the event the Responsible Bidder with the lowest total price is found non-responsive, the District may proceed to the next Responsive Bid from a Responsible Bidder with the next lowest total price and continue the award process. Any and all award(s) made as a result of this ITB shall conform to all applicable Board policies, State Board rules, and Florida Statutes.

The District reserves the right to require bidder(s) to submit evidence of qualifications or any other information the Board may deem necessary, including audited and unaudited financial statements.

Any award(s) made as a result of this ITB shall conform to all applicable Board policies, State Board rules, and Florida Statutes.

3.3 Advertising Notice of Board Decision

The District reserves the right to award one (1) or more Contracts, in whole or part, for the services sought in this ITB. The District reserves the right to accept or reject any offers or separable portions and waive any Minor Irregularity, technicality, or omission if the District determines doing so will serve the Board's best interest. While the Board will encourage use by all District departments, the Contract(s) is not an exclusive agreement, and the Board may secure the same or similar goods and services from other vendors in accordance with applicable procurement laws, rules, and policies.

As in any competitive solicitation, the Board shall advertise a public notice of Board Decision when the Board has decided on the outcome of the solicitation, including, but not limited to, a decision to award a Contract(s), reject all Bids, or to cancel/withdraw the ITB.

The Notice of Board Decision will be advertised on or about the date shown in the Timeline. It will remain posted for a period of 72 hours (Saturdays, Sundays, and District holidays shall be excluded in the computation of the 72-hour period).

3.4 No Prior Involvement and Conflicts of Interest

Any Bidder who participated through decision, approval, disapproval, recommendation, preparation of any part of the purchase, influenced the content of the solicitation, rendered advice, investigated, audited, or served in any other advisory capacity is ineligible to participate in this solicitation.

Additionally, no Bidder shall compensate in any manner, directly or indirectly, any officer, agent, or employee of the District for any act or service which he/she may do or perform for, or on behalf of, any officer, agent, or employee of the Bidder. No officer, agent, or employee of the District or Board shall have any interest, directly or indirectly, in any Contract or purchase made or authorized to be made by anyone for, or on behalf of, the Board. The Bidder shall have no interest and shall not acquire any interest that shall conflict in any manner or degree with the performance of the services required under this ITB.

3.5 Confidentiality, Proprietary, or Trade Secret Material

The District takes its public records responsibilities very seriously, as provided under Chapter 119, F.S., and Article I, Section 24 of the Florida Constitution. If the Bidder considers any portion of the documents, data, or records submitted in response to this solicitation to be confidential, trade secret, or otherwise not subject to disclosure under Chapter 119, F.S., the Florida Constitution, or other authority, the Bidder must also simultaneously provide the District with a separate redacted copy of its Bid and briefly describe in writing the grounds for claiming exemption from the public records law, including the specific statutory citation for such exemption. This redacted copy shall contain the District's solicitation name, number, and the name of the Bidder on the cover and shall be clearly titled "Redacted Copy." The redacted copy shall be provided to the District at the same time the Bidder submits its Bid to the solicitation and must only exclude or redact those exact portions that are claimed confidential, proprietary, or trade secret. The Bidder shall be responsible for defending its determination that the redacted portions of its response are confidential, trade secret, or otherwise not subject to disclosure.

Further, the Bidder shall protect, defend, and indemnify the District for any and all claims arising from or relating to the Bidder's determination that the redacted portions of its response are confidential, proprietary, trade secret, or otherwise not subject to disclosure. If the Bidder fails to submit a Redacted Copy with its Bid, the District is authorized to produce all the documents, data, or records submitted by the Bidder in answer to a public record request for these records. In no event shall the District, Board, or any of its employees or agents be liable for disclosing or otherwise failing to protect the confidentiality of information submitted in response to this solicitation.

3.6 Florida Preference

When a school district is required to make purchases of personal property through competitive solicitation and the lowest responsible and responsive bid, proposal, or reply is by a vendor whose principal place of business is in a state or political subdivision that grants a preference by that state or political subdivision, and then the school district shall award an equal preference to the lowest responsible and responsive vendor having a principal place of business within Florida. In a competitive solicitation in which the lowest bid is submitted by a vendor whose principal place of business is located outside the state, and that state does not grant a preference in competitive solicitation to vendors having a principal place of business in that state, the preference to the lowest responsible and responsive vendor having a principal place of business in the State of Florida shall be five (5) percent. F.S. 287.084(1)(a).

A vendor whose principal place of business is outside this state must accompany any written bid, proposal, or reply documents with a written opinion of an attorney at law licensed to practice law in that

foreign state as to the preferences, if any or none, granted by the law of that state to its own business entities whose principal places of business are in that foreign state in the letting of any or all public contracts. F.S. 287.084(2).

3.7 Small Business Enterprise

This ITB is subject to the small business enterprise provisions specified in Board Policy 6327.

3.8 Local Purchasing Preference

This ITB is subject to the local purchasing preference provisions specified in Board Policy 6450.

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SECTION 4: Contract Terms and Conditions

4.1 Contract Modifications

During the term of the Contract, the District may unilaterally require changes (altering, adding to, or deducting from the specifications) provided such changes are within the general scope of this solicitation. The Contractor may request an equitable adjustment in the price(s) or delivery date(s) if the change affects the cost or time of performance. Such equitable adjustments require a formal contract amendment. The District shall provide written notice to the Bidder 30 days before any Department-required changes to the technical specifications and/or scope of service that affect the Bidder's ability to provide the service as specified herein. Other than purely administrative changes, any changes will require a written change order or formal Contract amendment.

The District will authorize additional services on an individual basis. The District would jointly determine a "not to exceed" price for each additional project using the contractually established hourly rates with the Contractor.

4.2 Use by Other Public Agencies

Pursuant to their governing laws and subject to the Contractor's agreement, other entities may be permitted to make purchases at the terms and conditions contained herein. Any such purchases are independent of the agreement between the District and Contractor, and the District shall not be a party to any transaction between the Contractor and any other purchaser.
The District hereby notifies interested parties that the Florida Department of Management Services purchasing agreements and state term contracts have been reviewed for the goods and services contemplated by this solicitation, and the District has determined that conducting our solicitation is in our best interest.

4.3 Travel Expenses

The District shall not be responsible for paying any travel expenses incurred by Bidders due to this ITB or Contract.

4.4 E-Verify

Per Executive Order 11-116, "The provider agrees to utilize the U.S. Department of Homeland Security's E-Verify system, https://e-verify.gov/employers, to verify the employment eligibility of all new employees hired during the contract term by the Provider. The Provider shall also include a requirement in subcontracts that the subcontractor shall utilize the E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term." Contractors meeting the terms and conditions of the E-Verify System are deemed to comply with this provision.

Beginning January 1, 2021, every public employer, Contractor, and subcontractor shall register with and use the E-Verify system to verify the work authorization status of all newly hired employees. A public employer, Contractor, or subcontractor shall not enter into a contract unless each party to the contract registers with and uses the E-Verify system per Section 448.095, F.S.

4.5 Subcontracts

The Contractor may, only with the prior written consent of the District, enter into written subcontracts for the delivery or performance of services as indicated in this ITB. Anticipated subcontract agreements known at the time of Bid submission must be identified in the submitted Bid using Attachment VI, Subcontracting Form. If a subcontract has been identified at the time of submission, a copy of the proposed subcontract must be submitted to the District. No subcontract, which the Contractor enters into concerning the performance of any of its functions under the Contract, shall in any way relieve the Contractor of any responsibility for the performance of its duties. All subcontractors, regardless of function, providing services

on District property shall comply with the District's security requirements, as defined by the Board, including background checks, compliance with Board Policy 2.021, the Jessica Lunsford Act, and all other Contract requirements. All payments to the subcontractor shall be made by the Contractor.

If a subcontractor is utilized by the Contractor, the Contractor shall pay the subcontractor within seven (7) working days after receipt of full or partial payments from the District, per Section 287.0585, F.S. It is understood and agreed that the District shall not be liable to any subcontractor for any expenses or liabilities incurred under the subcontract and that the Contractor shall be solely liable to the subcontractor for all expenses and liabilities under the Contract. Failure by the Contractor to pay the subcontractor within seven (7) working days will result in a penalty to be paid by the Prime Contractor to the subcontractor in the amount of one-half (½) of one percent (1%) of the amount due per day from the expiration of the period allowed herein for payment. Such penalty shall be in addition to actual payments owed and shall not exceed fifteen percent (15%) of the outstanding balance due.

4.6 Background Screening Requirements/Jessica Lunsford Act

Florida Statutes contain specific fingerprinting and screening requirements pertaining to all persons or entities entering into contracts with schools, school boards, school districts, and charter schools, which may have personnel who will be on school grounds when students are present. All contractor staff must successfully pass a Level 2 background screening. Individuals who fail to meet the statutory requirements shall not be allowed on school grounds. Failure to comply with the statutory requirements will be considered a material default of this Contract.

The Contractor shall bear all costs associated with background screening.

District Contact

Donald Kimbler

Safety & Security

Phone: (850) 487-7293

Email: kimblerd@leonschools.net

Monday-Friday (excluding District holidays), 8:00 a.m. – 5:00 p.m.

4.7 Insurance Requirements

Each respondent will carry and maintain as a minimum the following coverage from insurance carriers that maintain a rating of "A-" or better and a financial size category of "VI" or higher according to the A. M. Best Company: (a) general liability (b) professional (c) automobile (d) workers' compensation and (e) cyber liability in the below amounts required by the Risk Management Department and Purchasing Department of the School District of Osceola County, Florida. The bidder will provide, before commencement of work, and attach to this agreement, certificates evidencing such coverage and annually upon renewal thereafter. Bidder agrees that the School Board will make no payments pursuant to the terms of this Contract Agreement until all required proof of evidence of insurance have been provided to the School Board. The bidder agrees that the insurer shall waive its rights of subrogation, if any, against the School Board. The School Board shall be named as an additional insured on the General and Automobile Liability Insurance as evidenced by the endorsement. The School Board shall be exempt from, and in no way liable for, any sums of money that may represent a deductible in any insurance policy. The payment of such deductible shall be the sole responsibility of the Bidder and/or subcontractor providing such insurance. The School Board must be notified at least thirty (30) days prior to any material changes in provisions or cancellation of the policy.

a) Commercial General Liability. Commercial general liability coverage which includes broad form commercial general liability, including premises and operation, products and complete operations, personal injury, with limits of not less than $1,000,000.00 per occurrence and $2,000,000.00 per general aggregate. This policy will include the District as an additional insured.

b) Professional Liability Insurance. The professional liability insurance shall provide protection from negligent act, errors, and omissions of the Contractor from and in connection with the performance of work under the Contract Agreement. The policy shall provide coverage for the negligent acts or omissions of the Contractor in a minimum amount of $1,000,000.00 per claim. The policy shall contain a maximum deductible of $25,000.00 per claim.

c) Automobile Liability Insurance. The automobile liability insurance coverage shall include coverage for business automobile liability with limits not less than $1,000,000.00 combined single limit or $1,000,000.00 per person/ $1,000,000.00 per accident bodily injury, and $1,000,000.00 per accident property damage. Coverage must include all owned, non-owned and hired vehicles. The policy will include the District as an additional insured.

d) Workers' Compensation Insurance. The workers' compensation insurance will be maintained as required by applicable Florida law, to include Employer's Liability of $1,000,000.00 per accident bodily injury, $1,000,000.00 bodily injury (disease) per employee and $1,000,000.00 bodily injury (disease) policy limit. The Worker's Compensation policy shall state that it cannot be cancelled or materially changed without first giving thirty (30) days prior notice thereof in writing to the School Board.

Requirements for the Contractor that qualifies for an exemption under the Florida Worker's Compensation law in Chapter 440 Florida Statutes are detailed below:
Incorporated or unincorporated firms with fewer than four employees shall be required to sign a Hold Harmless Agreement relieving the School Board of liability in the event they and/or their employees are injured while providing goods and/or services to the School Board.

Incorporated or unincorporated firms with four or more employees shall be required to provide a copy of their "Notice of Election to be Exempt," along with valid proof of coverage for non-exempt employees.

The Bidder shall carry Liability Insurance in the minimum amounts listed above, and Worker's Compensation and Employer's Liability Insurance in statutory amounts. In addition, the bidder shall either cover any and all subconsultants, separate consultants, and subcontractors on its policies or make it a condition of all subcontracts related to the rendering of professional services under this Contract that any and all subconsultants, separate consultants, and subcontractors shall maintain the insurance coverages outlined above and must incorporate all of the provisions of this Section, Insurance Requirements into all subcontracts.

e) Cyber Liability Insurance: Coverage must be afforded in an amount not less than $5,000,000 per claim for negligent retention of data as well as notification and related costs for actual Information Security Incidents.

Information Security Incident Response. In the event that Contractor becomes aware of an Information Security Incident, Contractor shall:

i. Promptly notify School District, in writing, of the occurrence of such Information Security Incident, no more than 24 hours after becoming aware of said Information Security Incident;

ii. Investigate such Information Security Incident and conduct an analysis of the cause(s) of such Information Security Incident;

iii. Provide periodic updates of any ongoing investigation to School District;

iv. Develop and implement an appropriate plan to remediate the cause of such Information Security Incident, to the extent that such cause is within Contractor's or any of its affiliates or subcontractor's control;

v. Provide:

1. Notification to potentially affected persons;
2. Credit monitoring services;
3. Identification protection services;
4. Establish and operate a call center;
5. Notification to any and all regulatory authorities; and
6. Other functions, services, or penalties as may be required by law.

vi. Should it be determined that such Information Security Incident was the responsibility of School District, School District shall reimburse Contractor for its reasonable out-of-pocket costs to investigate and remediate such Information Security Incident.

Both Contractor and School District shall be responsible for complying with all applicable federal and state regulations, statutes, rules and/or requirements in effect at the time of any Information Security Incident, as may be amended or revised, that are applicable to any and all School District Data in Contractor or any of its affiliates or subcontractor's control.

Contractor will defend, indemnify, and hold harmless School District and School District's officers, employees, and agents, from and against any third-party loss, liability, damage, costs, fine(s), penalty, claim, judgment, including, but not limited to, reasonable attorney's fees (collectively "Damages"), arising as a result of an Information Security Incident.

4.8 Copyrights, Right to Data, Patents, and Royalties

Where contracted activities produce original writing, sound recordings, pictorial reproductions, drawings, or other graphic representation and works of any similar nature, the District has the right to use, duplicate, and disclose such materials in whole or in part, in any manner, for any purpose whatsoever and to have others acting on behalf of the District to do so.

The District shall have unlimited rights to use, disclose, or duplicate, for any purpose whatsoever, all information and data developed, derived, documented, or furnished by the Bidder. All computer programs and other documentation produced as part of the Contract shall become the exclusive property of the District and may not be copied or removed by any employee of the Contractor without express written permission of the District.

The Contractor, without exception, shall indemnify and save harmless the District, the Board, and its employees from liability of any nature or kind, including costs and expenses for or on account of any copyrighted, patented, or unpatented invention, process, or article manufactured or supplied by the

Vendor. The Vendor has no liability when such claim is solely and exclusively due to the combination, operation, or use of any article supplied hereunder with equipment or data not supplied by the Contractor or is based solely and exclusively upon the District's alteration of the article. The District will provide prompt written notification of a claim of copyright or patent infringement and will afford the Contractor the full opportunity to defend the action and control the defense of such claim.

Further, if such a claim is made or is pending, the Contractor may, at its option and expense, procure for the District the right to continue the use of, replace, or modify the article to render it non-infringing. If none of the alternatives are reasonably available, the District agrees to return the article to the Contractor upon its request and receive reimbursement, fees, and costs, if any, as may be determined by a court of competent jurisdiction. If the Contractor uses any design, device, or materials covered by letter, patent or copyright, it is mutually agreed and understood without exception that the Contract prices shall include all royalties or costs arising from the use of such design, device, or materials in any way involved in the work to be performed hereunder.

4.9 Independent Contractor Status

The Awarded Contractor shall be considered an independent Contractor in the performance of its duties and responsibilities. The District shall neither have nor exercise any control or direction over the methods by which the Contractor shall perform its work and functions other than as provided herein. Nothing is intended to, nor shall be deemed to constitute, a partnership or a joint venture with the Contractor(s).

4.10 Contact with Students

No Contractor staff, subcontractors, suppliers, or anyone involved in any manner with providing goods or services under the Contract(s) shall have direct or indirect contact with students at school sites. A violation of this provision shall result in immediate termination of the offender and issuance of a trespass notice from the Board. The Contractor shall be responsible for ensuring compliance by all employees, independent contractors, subcontractors, or other persons involved in any manner with providing goods or services under the Contract(s).

4.11 Assignment

The Contractor shall not assign its responsibilities or interests to another party without the District's prior written approval. The Board shall, at all times, be entitled to assign or transfer its rights, duties, and obligations to another governmental entity of the State of Florida upon giving written notice to the Contractor.

4.12 Force Majeure

Neither party shall be liable for loss or damage suffered as a result of any delay or failure in performance under the Contract or interruption of performance resulting directly or indirectly from acts of God, fire, explosions, earthquakes, floods, water, wind, lightning, civil or military authority, acts of public enemy, war, riots, civil disturbances, insurrections, strikes, or labor disputes.

4.13 Severability

The invalidity or unenforceability of any particular provision shall not affect the other provisions hereof and shall be construed in all respects as if such invalid or unenforceable provision was omitted, so long as the material purposes can still be determined and effectuated.

4.14 Reservation of Rights

The District reserves the exclusive right to make certain determinations regarding the service requirements. The absence of the District setting forth a specific reservation of rights does not mean that any provision regarding the services to be performed is subject to mutual agreement. The District reserves the right to make any and all determinations exclusively which it deems are necessary to protect the best interests of the District and the health, safety, and welfare of the District's employees and of the general public which is served by the Board, either directly or indirectly, through these services.

4.15 Americans with Disabilities Act

The Bidder shall comply with the Americans with Disabilities Act (ADA). In the event of the Bidder's noncompliance with the non-discrimination clauses, the ADA, or with any other such rules, regulations, or orders, the Contract may be canceled, terminated, or suspended in whole or in part, and the Bidder may be declared ineligible for further contracts.

4.16 Employment of District Personnel

The Contractor shall not knowingly engage, employ, or utilize, on a full-time, part-time, or any other basis during the term of the Contract, any current or former employee of the District where such employment conflicts with Section 112.3185, F.S.

4.17 Legal Requirements

The applicable provisions of all federal, state, county, and local laws and all ordinances, rules, and regulations shall govern the development, submittal, and evaluation of all Bids received in response to this ITB and shall govern any and all claims and disputes which may arise between a person(s) submitting a Bid hereto and the Leon County School Board, by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any Contractor shall not constitute a cognizable defense against the legal effect thereof.

4.18 Conflict of Law and Controlling Provisions

The Contract, plus any conflict of law issue, shall be governed by the laws of the State of Florida. The venue for any legal proceedings will be Leon County, Florida.

4.19 Default

If the awarded Bidder should breach the Contract(s) awarded, the Board reserves the right to seek all remedies in law or in equity.

4.20 Termination

4.20.1 Termination at Will

4.20.2 The Contract may be terminated by the District upon no less than 60 calendar days' notice and by the Contractor upon no less than 120 calendar days' notice, without cause, unless a lesser time is mutually agreed upon by both parties. Notice shall be delivered by certified mail (return receipt requested), by another method of delivery whereby an original signature is obtained, or in-person with proof of delivery. **Termination for Cause**

Performance issues will be handled per Section 2.4 of the ITB. If the Contractor's performance issues are not remedied or are so egregious as to cause damage to life, safety, or property, the District may terminate the Contract upon 24 hours' written notice to the Contractor. Notice shall be delivered by certified mail (return receipt requested), in-person with proof of delivery, or by another delivery method whereby an original signature is obtained.

4.20.3 Termination for Unauthorized Employment

Violating the provisions of Section 274A of the Immigration and Nationality Act shall be grounds for unilateral cancellation of the Contract.

4.20.4 Termination for Lack of Funds

If the funds to finance this Contract become unavailable, the District may terminate the Contract upon no less than 24 hours' notice, in writing, to the Contractor. Notice shall be delivered by

certified mail (return receipt requested), in-person with proof of delivery, or by another delivery method whereby an original signature is obtained. The District shall be the final authority as to the availability of funds.

4.20.5 Contract Termination Requirements

If at any time, the Contract is canceled, terminated, or otherwise expires, and a Contract is subsequently executed with a Contractor other than the Contractor or service delivery is provided by the District, the Contractor has the affirmative obligation to assist in the smooth transition of Contract services to the subsequent provider. This includes but is not limited to, the timely provision of all Contract-related documents, information, and reports not otherwise protected from disclosure by law to the replacing party.

4.21 Public Records

To the extent that information is utilized in the performance of the Contract(s) or generated as a result of it, and to the extent that information meets the definition of "public record," as defined in Section 119.011(12), F.S., said information is recognized by the parties to be a public record and, absent a provision of law or administrative rule or regulation requiring otherwise, shall be made available for inspection and copying by any person upon request as provided in Chapter 119, F.S. The Contractor agrees to (a) keep and maintain public records required to perform the service; (b) upon request from the District's custodian of public records, provide the District with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, F.S., or as otherwise provided by law; (c) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Contract term and following completion of the Contract if the Contractor does not transfer the records to the District; and (d) upon completion of the Contract, transfer, at no cost, to the District all public records in possession of the Contractor or keep and maintain public records required by the District to perform the service. If the Contractor transfers all public records to the District upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the Contract, the Contractor shall meet all applicable requirements for retaining public records.

All records stored electronically must be provided to the District, upon request from the District's custodian of public records or Contract Manager, in a format that is compatible with the information technology systems of the District. Unless a greater retention period is required by state or federal law, all documents pertaining to the program contemplated by this ITB shall be retained by the Bidder for five (5) years after the termination of the resulting contract or longer as may be required by any renewal or extension of the Contract. The District may unilaterally cancel the Contract for refusal by the Bidder to allow public access to all documents, papers, letters, or other material made or received by the Bidder in conjunction with the Contract unless the records are exempt from Section 24(a) of Art. I of the State Constitution and either Sections 119.07(1), or 119.071, F.S.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS, JULIE JERNIGAN, AT jerniganj@leonschools.net, (850) 487-7363, 520 S. Appleyard Dr., Tallahassee, FL 32304.

4.22 Indemnification

The Contractor shall be liable and agrees to be liable for, and shall indemnify, defend, and hold the District, Board, its employees, agents, officers, heirs, and assignees harmless from any and all claims, suits, judgments, or damages including court costs and attorney's fees arising out of intentional acts, negligence, or omissions by the Contractor, or its employees or agents, in the course of the operations of the Contract, including any claims or actions brought under Title 42 USC §1983, the Civil Rights Act.

4.23 No Waiver of Sovereign Immunity

Nothing herein contained shall be deemed or construed as a waiver of sovereign immunity as provided by § 768.28, Florida Statutes, by any agency or political subdivision to which sovereign immunity may be applicable.

4.24 Disputes

Any dispute concerning the performance of the terms of the Contract shall be resolved informally by the Contract Manager. Any dispute that cannot be resolved informally shall be reduced to writing and delivered to the District's Divisional Director of Business Services or designee. The District's Divisional Director of Business Services, or designee, shall decide the dispute, reduce the decision to writing, and deliver a copy to the parties, the Contract Managers, and the District's Contract Administrator.

4.25 Federal Terms and Conditions

For any solicitation that involves, receives, or utilizes Federal funding, the following terms and conditions shall be considered a part of the solicitation and resulting Contract, and the Vendor accepts and acknowledges that it is and will continue to be in compliance with said terms and conditions for the term of the awarded Contract:

a. Equal Employment Opportunity (2 CFR Part 200.326(C)): All vendors, Contractors, and subcontractors must comply with Executive Order 11246, entitled "Equal Employment Opportunity," as amended by Executive Order 11375, implementing regulations at 41 CFR Part 60. This applies to all construction contracts that meet the "federally assisted construction contract" definition in 41 CFR Part 60-1.3.

b. Copeland "Anti-Kickback" Act (2 CFR Part 200.326(D)): All vendors, Contractors, and subcontractors must comply with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145) as supplemented in Department of Labor regulations (29 CFR part 3). Applies to all contracts and sub grants for construction or repair.

c. Davis-Bacon Act (2 CFR Part 200.326(D)): All vendors, Contractors, and subcontractors must comply with the Davis-Bacon Act (40 U.S.C. 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations (29 CFR part 5). This applies to all prime construction contracts in excess of $2,000 awarded by the District and sub-grantees when required by Federal grant program legislation.

d. Contract Work Hours & Safety Standards Act (2 CFR Part 200.326(E)): All vendors, Contractors, and sub-contractors must comply with 40 U.S.C. 3702 and 3704 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708) as supplemented by Department of Labor regulations (29 CFR part 5). This applies to all applicable contracts awarded by the District and sub-grantees in excess of $100,000 that involve the employment of mechanics or laborers.

e. Access to Records (2 CFR Part 200.336): All vendors, Contractors, and subcontractors shall give access to the District, the appropriate Federal agency, the Inspectors General, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers,

and records of the vendor which is directly pertinent to this specific solicitation for the purpose of making audit, examination, excerpts, and transcripts.

f. Rights to Inventions Made Under a Contract or Agreement (2 CFR Part 200.326 (F)): The recipient or subrecipient must comply with the requirements of 37 CFR Part 401 and any implementing regulations issued by the awarding agency. This applies to Federal awards meeting the "funding agreement" definition under 37 CFR §401.2(a), and the recipient or subrecipient wishes to enter into a contract with a small business firm or non-profit organization.

g. Clean Air Act (2 CFR 200.326(G)): All vendors, Contractors, and subcontractors must comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Applies to contracts, subcontracts, and subgrants for amounts in excess of $150,000.

h. Energy Efficiency (2 CFR 200.326(H)): All vendors, Contractors, and subcontractors must comply with mandatory standards and policies relating to energy efficiency, which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201).

i. Federal Debarment Certification (2 CFR Part 200.326(I): Certification regarding debarment, suspension, ineligibility, and voluntary exclusion as required by Executive Orders 12549 and 12689, Debarment and Suspension; and in accordance with 2 CFR Part 180, Section 300.

1. The prospective lower tier participant certifies, by submission and signature of this Bid, that neither it nor its principals, its agents, or its representatives are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this Bid.

j. Anti-Lobbying Certification (2 CFR Part 220.326(J): Certification regarding the use of Federal funds as required by Byrd Anti-Lobbying Amendment 31 U.S.C. 1352. This provision applies to vary at or above $100,000.

1. The Contractor certifies, by submission and signature of their Bid, that during the term and after the awarded term of all contracts resulting from this procurement, it is in compliance with all applicable provisions of the Byrd Anti-Lobbying Amendment 31 U.S.C. 1352, including that it will not and has not used Federally appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352.
2. Where funds other than Federally appropriated funds are used for such purpose in connection with obtaining any Federal award, the Contractor must disclose the same.

k. Procurement of Recovered Materials (2 CFR §200.322): A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in the guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of

recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

l. Domestic Preferences for Procurements (§ 200.322):

1. As appropriate and to the extent consistent with law, the non-Federal entity should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards, including all contracts and purchase orders for work or products under this award.

2. For purposes of this section:

i. "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

ii. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

m. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment (§ 200.216)

1. Recipients and sub-recipients are prohibited from obligating or expending loan or grant funds to:

i. Procure or obtain;

ii. Extend or renew a contract to procure or obtain; or;

iii. Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

a. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

b. Telecommunications or video surveillance services are provided by such entities or using such equipment.

c. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation,

reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

2. In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions, and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

n. Records Retention: (2 CFR §200.333): Financial records, supporting documents, statistical records, and all other non-Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a sub-recipient.

4.26 Anti-Discrimination

No person shall, on the basis of sex (including transgender, gender nonconforming, and gender identity), marital status, sexual orientation, race, religion, ethnicity, national origin, age, color, pregnancy, disability, military status, or genetic information be excluded from participation in, be denied the proceeds or benefits of, or be otherwise subjected to, discrimination in the performance of this Contract.

4.27 Discriminatory Vendor List

Per the provisions of 287.134(2)(a), F.S., "An entity or affiliate who has been placed on the discriminatory vendor list may not submit a Bid on a contract to provide any goods or services to a public entity, may not submit a Bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit Bids on leases of real property to a public entity, may not be awarded or perform work as a Contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity." The Vendor certifies, by submission and signature of their Bid, that neither the Bidder nor its principal Vendor, agent, or representative is presently on the discriminatory vendor list or otherwise precluded by Section 287.134, F.S. from participating in this Contract.

4.28 Public Entity Crime & Convicted Vendor List

Per the provisions of 287.133 (2)(a), F.S., "a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a Bid, Bid or reply on a contract to provide any goods or services to a public entity, may not submit a Bid, Bid or reply on a contract with a public entity for the construction or repair of a public building or public work, may not submit Bids, Bids or replies on leases of real property to a public entity, may not be awarded or perform work as a Contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Florida Statute 287.017 for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list. The Vendor certifies, by submission and signature of their Bid, that neither the Bidder nor its principal, agent, or representative is presently debarred, suspended, proposed for debarment, declared ineligible, voluntarily excluded from participation in this transaction, or otherwise precluded by Section 287.133, F.S. from participating in this Contract.

4.29 Scrutinized Companies Certification

The Bidder certifies they are not listed on the Scrutinized Companies that Boycott Israel List, created under Section 215.4725, F.S., and they are not currently engaged in a boycott of Israel. If the Contract exceeds $1,000,000 in total (not including renewal years), the Bidder certifies that it is not listed on either the

Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List created under Sections 215.473 and 215.4725, F.S., and further certifies they are not engaged in business operations in Cuba or Syria as stated in Section 287.135(2)(b)2, F.S. Per Sections 287.135(5) and 287.135(3), F.S., the Bidder agrees the Board may immediately terminate the Contract for cause if the Bidder is found to have submitted a false certification or if the Bidder is placed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, the Scrutinized Companies that Boycott Israel List, or is engaged in a boycott of Israel, or has engaged in business operations in Cuba or Syria during the term of the Contract. Any company that submits a Bid for a contract or upon execution or renewal of a contract with an agency or local governmental entity for goods or services of any amount must certify that the company is not participating in a boycott of Israel.

4.30 Contracting with Entities of Foreign Countries

By signing this Contract, the Contractor certifies they are not owned or controlled by, nor do they have their principal place of business in, the People's Republic of China, the Russian Federation, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Republic of Cuba, the Venezuelan regime of Nicolas Maduro, the Syrian Arab Republic or any other foreign country of concern Per Section 287.138, F.S.

4.31 Vendor Interests

Per Section 287.05701, F.S., the Board will not consider a Vendor's social, political, or ideological interests when determining if a vendor is considered responsible. Nor will the Board provide a preference based on a vendor's social, political, or ideological beliefs. The Board will not request nor shall a Respondent be expected to provide documentation of its social, political, or ideological interests or those of its employees.

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SECTION 5: Definitions

In this ITB, the following words and expressions have the definitions below unless the context otherwise clearly leads to a different interpretation.

Adjacent County	Any private independent vendor whose county abuts Leon County and has been licensed at least six (6) months preceding the Bid or Bid opening, as required by local, State, and Federal law, to provide the goods and services to be purchased.
Business Day	Any weekday in Florida, excluding Saturdays, Sundays, and observed holidays.
Contract	The written agreement entered by the Board and Awarded Contractor(s) resulting from the award of this solicitation for the delivery of the goods or services described herein.
Contract Manager	The District representative, or their designee, whose responsible for oversight of the resulting Contract, including performance monitoring and certification of invoices for payment.
District/Board (LCS)	Leon County School District, with the Leon County School Board serving as the contracting entity
District Project Manager	The District representative, or their designee, who is responsible for assigning and monitoring the individual projects on site, documenting deficiencies, and certifying project completion
Mandatory Responsiveness Requirements	Terms, conditions, and requirements must be met by the Bidder to be considered responsive to this solicitation.
Material Deviation(s)	A deviation which, in the District's sole discretion, is not in substantial accordance with the requirements herein, provides a significant competitive advantage to one Bidder over other Bidders, has a potentially substantial effect on the quantity or quality of items proposed, services proposed, or cost to the District.
Minor Irregularity	A variation from the requirements herein that does not give the Bidder a substantial competitive advantage or benefit not enjoyed by other Bidders and does not adversely impact the interests of the District.
Bidder	A legally qualified corporation, partnership, or other business entity that submits a Bid to the District in response to this ITB. This term differs from suppliers, which refers to the marketplace at large.
Responsible Bidder or Vendor	A Bidder who can fully perform all aspects of the Contract Requirements and has the integrity and reliability to ensure good faith performance.
Responsive Bid	A Bid submitted by a Responsible Bidder which conforms to all material aspects of this ITB.
Subcontract	An agreement between the Contractor and any other person or organization in which that person or organization agrees to perform any duties on the Bidder's behalf under the Contract. The Awarded Contractor is not relieved of its duties under the Contract when it enters a Subcontract.
Awarded Contractor(s) or Contractor	The Bidder(s) who is awarded the Contract(s) to deliver the goods or provide the services sought in this ITB.
Landed Cost	The sum of expenses associated with shipping a product.
Qualified Grower	A local farmer is any qualified grower located within the State of Florida.
Product Cost	The term “product cost” means the cost of products delivered to the Awarded Contractor’s warehouse.
Opportunity Buys	Opportunity Buys are made available to the District from reputable, certified, local farmers due to seasonal volume, weather considerations, etc.

Attachment I
Price Sheet
ITB No. 2452-2026
Amos P. Godby High School Building 400 Re-Roof Project

Description	Total Bid Price
Total cost of Amos P. Godby High School Building 400 Re-Roof Project as specified.	$_____

Company Name	FEIN
Authorized Representative Name (Printed)	Authorized Representative Title
Authorized Representative Signature	Date

Attachment II
Required Provisions Certifications

1. Business/Corporate Experience

a. The Bidder has a permanent place of business and adequate resources to perform the services contemplated by this ITB;

b. Bidder has a minimum of three (3) years of experience providing services of the same or similar nature and completed projects of like scope and size contemplated by this ITB;

c. Bidder is duly licensed to conduct business in the State of Florida; and

d. Bidder has a valid Certificate of Prequalification from the Leon County School Board Construction and Facilities department.

2. Prime Vendor

This is to certify that the Awarded Contractor will act as the Prime Contractor to the District for all services provided under the Contract(s).

3. Meets Legal Requirements

This is to certify that the Bidder's Bid and all services provided under the Contract will be compliant with all laws, rules, and other authority applicable to providing the services, including, but not limited to, Florida's Open Government laws (Article I, Section 24, Florida Constitution, Chapter 119, F.S.).

4. Business Licensing and Financial Issues

This is to certify that the Bidder has disclosed in their Bid all suspensions, revocations, reviews of licensing, bankruptcies, judgments, or liens in the last five (5) years.

5. Federal Debarment

This is to certify that neither the Bidder nor its principles is currently disbarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded from participation in this solicitation by any Federal department or agency.

6. Conflict of Interest

Per Section 1001.42(12)(i), F.S., this certifies that no member of the Leon County School Board or the Superintendent has any financial interest in the Bidder whatsoever.

7. Statement of No Inducement

This is to certify that no attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a Bid with regards to this ITB. Furthermore, this is to certify that the Bid contained herein is submitted in good faith and not subject to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other non-competitive Bid.

8. Statement of Non-Disclosure

This is to certify that none of the contents of this Bid have been disclosed before award, directly or indirectly, to any other Bidder or competitor.

9. Statement of Non-Collusion

This is to certify that the proposed costs in this Bid have been arrived at independently, without consultation, communications, or agreement as to any matter relating to such costs with any other Bidder or with any competitor, and not to restrict competition.

10. Scrutinized Companies Certification

The Bidder certifies they are not listed on the Scrutinized Companies that Boycott Israel List, created under Section 215.4725, F.S., and they are not currently engaged in a boycott of Israel. If the resulting

Contract exceeds $1,000,000.00 in total, not including renewal years, the Bidder certifies that they are not listed on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List created under Sections 215.473, F.S., and 215.4725, F.S., and further certifies they are not engaged in business operations in Cuba or Syria. In compliance with Sections 287.135(5), F.S., and 287.135(3), F.S., the Bidder agrees the District may immediately terminate the resulting Contract for cause if the Bidder is found to have submitted a false certification or if the Bidder is placed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, the Scrutinized

Companies that Boycott Israel List, or are engaged in a boycott of Israel, or have engaged in business operations in Cuba or Syria during the term of the Contract. Any company that submits a bid or Bid for a contract or intends to enter into or renew a contract with an agency or local governmental entity for commodities or services of any amount must certify that the company is not participating in a boycott of Israel.

By signing this certification below, the Authorized Representative affirms their authority to bind the Bidder and acknowledges and affirms the statements above.

_____ _____

Authorized Representative (Print) ***Authorized Representative (Signature)***

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of _____ physical presence or _____ online

notarization this _____ day of _____ 20 _____, by _____

(name of authorized representative)

as _____ as _____

(position title for authorized representative) *(position title)*

for _____ _____

(Vendor Name)

(NOTARY SEAL)

_____
Notary Signature

_____
Name of Notary (Typed, Printed or Stamped)

Personally Known _____ Or Produced Identification _____ Type of Identification _____

Attachment III

Notice of Conflict of Interest

(Bidders shall complete either Section 1 or Section 2)

Company Name: _____

Solicitation Number: ITB 2452-2026

To participate in this solicitation process and comply with the provisions of Chapter 112.313, Florida Statutes, the undersigned corporate officer hereby discloses the following information to the Leon County School Board.

Section 1

I hereby certify that no official or employee of the School Board has a material financial interest in this company.

Authorized Representative (Signature	Authorized Representative (Printed)

Section 2

I hereby certify that the following named Leon County School Board official(s) and employee(s) have a material financial interest(s) (over 5%) in this company, and they have filed Conflict of Interest Statements with the Leon County Supervisor of Elections, before the Proposal Opening.

Name	Title/Position	Date of Filing

Authorized Representative (Signature)	**Authorized Representative (Print)**

Date

Attachment IV

Bidder Contact Information

The Bidder shall identify the contact information for solicitation and contractual purposes via the requested fields in the table below.

	For solicitation purposes, the Bidder's representative shall be:	For contractual purposes, should the Bidder be awarded, the Bidder's representative shall be:
Name:		
Title:		
Street Address:		
City, State, Zip code		
Telephone: (Office)		
Telephone: (Cell)		
Email:		

Company Name | **Authorized Representative (Signature)** | **Date**

FEIN# | **Authorized Representative (Print)**

Attachment V

Local Purchasing Preference Affidavit

A Bidder must have a physical business address staffed by at least one (1) person in the geographical boundaries of Leon, Gadsden, Jefferson, Liberty, or Wakulla counties, Florida., employ at least one (1) person at that location, and have been licensed, as required, for at least six (6) months before the Bid Opening to qualify for the Local Purchasing Preference. On a day-to-day basis, the Bidder should substantially provide the goods/services provided under this Contract from the local business address. Post office boxes are not acceptable for obtaining this preference.
By completing this Affidavit, the Bidder affirms that it is a local Business, as defined by Board Policy 6450.

Bidder Name: _____

Physical Address: _____

County: _____ **Phone of Local Location:** _____

Phone of Local Location: _____ **Length of Time at this Location:** _____

Is your business certified as a small business enterprise through Leon County Schools?

_____

_____ _____

Authorized Representative (Print) ***Authorized Representative (Signature)***

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of _____ physical presence or _____ online notarization this _____ day of _____ 20 _____, by _____ (name of authorized representative) as _____ (position title for authorized representative) as _____ (position title) for _____ (Vendor Name).

_____
Notary Signature

(NOTARY SEAL)

_____
Name of Notary (Typed, Printed, or Stamped)

Personally Known _____ Or Produced Identification _____ Type of Identification _____

Attachment VI

Subcontracting Form

The Bidder shall complete the information below on all subcontractors that will be providing services to the Bidder to meet the requirements of the Contract, should the Bidder be awarded. Submission of this form does not indicate the District's approval of such subcontractor(s) but provides the District with information on proposed subcontractors for review.

Complete a <u>separate sheet</u> for each subcontractor.

Prime Bidder Name: _____

Type/Description of Goods or Service Subcontractor will provide: _____

_____

_____

Subcontractor Company Name: _____ FEIN: _____

Contact Person: _____ Contact Phone Number: _____

Address: _____

Email Address: _____

Currently Registered as a Small Business with Leon County Schools? Yes ____ No ____

Local Bidder per Board Policy 6450? _____

In a job description format, identify the responsibilities and duties of the subcontractor based on the specifications or scope of services outlined in this solicitation.

_____

_____

_____

_____

Attachment VII

Drug-Free Workplace Certification

The undersigned Bidder, in accordance with Section 287.087, F.S., hereby certifies that

_____

Name of Business

1. Publishes a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Informs employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Gives each employee engaged in providing the commodities or contractual services sought in this solicitation a copy of the statement specified in Paragraph 1.
4. In the statement specified in Paragraph 1, notify the employees that, as a condition of working on the commodities or contractual services sought in this solicitation, the employee will abide by the terms of the statement and will notify the employer of any conviction of, a plea of guilty, or nolo contender to, any violation of Chapter 893, F.S., or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Imposes sanctions on or requires satisfactory participation in a drug abuse assistance or rehabilitation program by any employee who is so convicted as available in their community.
6. Make a good faith effort to continue to maintain a drug-free workplace through the implementation of Paragraphs 1 thru 5.

As the person authorized to sign this statement, I certify that this company complies fully with the above requirements.

Authorized Officer (Printed Name) _____

Authorized Officer (Signature) _____

Date _____

Attachment VIII

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion AD-1048

Lower Tier Covered Transactions

The following statement is made in accordance with the Privacy Act of 1974 (5 U.S.C. § 552a, as amended). This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, and 2 C.F.R. §§ 180.300, 180.335, Participants' responsibilities. The regulations were amended and published on August 31, 2005, in 70 Fed. Reg. 51865-51880. Copies of the regulations may be obtained by contacting the Department of Agriculture agency offering the proposed covered transaction.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0505-0027. The time required to complete this information collection is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The provisions of appropriate criminal, civil, fraud, privacy, and other statutes may be applicable to the information provided.

(Read instructions on page two before completing certification.)

A. The prospective lower tier participant certifies, by submission of this Bid, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency;

B. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this Bid.

ORGANIZATION NAME	PR/AWARD NUMBER OR PROJECT NAME
NAME(S) AND TITLE(S) OF AUTHORIZED REPRESENTATIVE(S)	
SIGNATURE(S)	DATE

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its agencies, offices, employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at How to File a Program Discrimination Complaint (https://www.ascr.usda.gov/filing-program-discrimination-complaint-usda-customer) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442.

Instructions for Certification

(1) By signing and submitting this form, the prospective lower-tier participant is providing the certification set out on page 1 in accordance with these instructions.

(2) The certification in this clause is a material representation of the fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower-tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.

(3) The prospective lower-tier participant shall provide immediate written notice to the person(s) to which this Bid is submitted if at any time the prospective lower-tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(4) The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "Bid," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549, at 2 C.F.R. Parts 180 and 417. You may contact the department or agency to which this Bid is being submitted for assistance in obtaining a copy of those regulations.

(5) The prospective lower-tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower-tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

(6) The prospective lower-tier participant further agrees by submitting this form that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion - Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

(7) A participant in a covered transaction may rely upon a certification of a prospective participant in a lower-tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the System for Award Management (SAM) database.

(8) Nothing contained in the foregoing shall be construed to require the establishment of a system of records to render in good faith the certification required by this clause. The knowledge and information of a participant are not required to exceed that normally possessed by a prudent person in the ordinary course of business dealings.

(9) Except for transactions authorized under paragraph (5) of these instructions, if a participant in a covered transaction knowingly enters into a lower-tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Attachment IX

Certification Regarding Lobbying
For Contracts, Grants, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of Congress or an employee of a member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal-appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, Disclosure Form to Report Lobbying, in accordance with its instructions.

3. The undersigned shall require that the language of this certification is included in the award documents for all sub-awards at all tiers (including sub-contracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of the fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

By: _____ Date: _____
(Signature of Official (Executive Director) Authorized to Sign Application)

By: _____ Date: _____
(Signature of Official (Chief Financial Officer) Authorized to Sign Application)

For: _____
Name of Grantee

_____
Title of Grant Program

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

1. Type of Federal Action

_____ **a.** Contract
_____ **b.** Grant
_____ **c.** Cooperative Agreements
_____ **d.** Loan
_____ **e.** Loan Agreement
_____ **f.** Loan Insurance

2. Status of Federal Action

_____ **a.** Bid/offer/application
_____ **b.** Initial award
_____ **c.** Post-award

3. Report Type

_____ **a.** Initial filing
_____ **b.** Material changes

For a material change only:
Year: _____ Quarter: _____
Date of last report: _____

4. Name and Address of Reporting Entity

_____ Prime _____ Subawardee _____ Tier (if known)

Name: _____
Street: _____
City/State/ Zip _____
Congressional District (if known) _____

5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of the Prime

Name: _____
Street: _____
City/State/ Zip _____
Congressional District (if known) _____

6. Federal Department/Agency:

_____

7. Federal Program Name/Description:

_____
CFDA Number, *if applicable* _____

8. Federal Action Number (if known) _____

9. Award Amount (if known) _____

10. (a.) Name and Address of Lobbying Registrant

_____
_____

10. (b.) Individuals Performing Services

_____
_____

11. *Information requested through this form is authorized by Title 31 U.S.C. Section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.*

Signature: _____

Print Name: _____ Title: _____

Telephone No: _____ Date: _____

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action or a material change to a previous filing, pursuant to Title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State, and zip code of the reporting entity. Include the Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or sub-award recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants, and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State, and zip code of the prime Federal recipient. Include the Congressional District, if known.

6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below the agency name, if known. For example, the Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Bid (RFP) number; Invitations to Bid (ITB) number; grant announcement number; the contract, grant, or loan award number; the application/Bid control number assigned by the Federal agency). Included prefixes, e.g., "ITB-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in items 4 or 5.

10. (a) Enter the full name, address, city, State, and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Attachment X

Vendor Affidavit Regarding the Use of Coercion for Labor and Services

Vendor Name: _____

Address: _____

Phone Number: _____

Authorized Representative's Name: _____

Authorized Representative's Title: _____

Email Address: _____

Section 787.06(13), Florida Statutes requires all nongovernmental entities (such as Vendor) executing, renewing, or extending a contract with a governmental entity (such as the School Board of Leon County, Florida) to provide an affidavit signed by an officer or representative of Vendor under penalty of perjury that Vendor does not use coercion for labor or services as defined in that statute.

As the person authorized to sign on behalf of the Vendor, I certify that the company identified above does not:

- Use or threaten to use physical force against any person;
- Restrain, isolate, or confine or threaten to restrain, isolate, or confine any person without lawful authority and against her or his will;
- Use lending or other credit methods to establish a debt by any person when labor or services are pledged as a security for the debt, if the value of the labor or services as reasonably assessed is not applied toward the liquidation of the debt, the length and nature of the labor or services are not respectively limited and defined;
- Destroy, conceal, remove, confiscate, withhold, or possess any actual or purported passport, visa, or other immigration document, or any other actual or purported government identification document, of any person;
- Cause or threaten to cause financial harm to any person;
- Entice or lure any person by fraud or deceit; or
- Provide a controlled substance as outlined in Schedule I or Schedule II of s. 893.03 to any person for the purpose of exploitation of that person.

Under penalties of perjury, I declare that I have read the foregoing document and that the facts stated in it are true.

_____

Signature of Authorized Representative

Exhibit A

ITB Submittal Checklist

The list below is provided to assist bidders in ensuring the necessary documents are included in the bid submittal. This Exhibit does not need to be returned with your Bid.

Included	Item
	Attachment I, Price Sheet
	Attachment II, Required Provisions Certifications
	Attachment III, Notice of Conflict of Interest
	Attachment IV, Bidder Contact Information
	Attachment VIII, Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion AD-1048
	Attachment IX, Certification Regarding Lobbying for Contracts, Grants, and Cooperative Agreements
	Attachment X, Vendor Affidavit Regarding the Use of Coercion for Labor and Services

Exhibit B
Permit Drawings

GODBY HIGH SCHOOL BUILDING 4 ROOF REPLACEMENT

PERMIT DOCUMENTS

LEON COUNTY SCHOOLS

SIGNATURE BLOCK

RYAN PECK, DIRECTOR OF MAINTENANCE & FACILITIES _____ _____

DESMOND COLE, SCHOOL PRINCIPAL _____ _____

TRAVIS SMITH, PROJECT COORDINATOR _____ _____

SHEET INDEX

FITZGERALD COLLABORATIVE

ATLANTA
1401 PEACHTREE ST NE, SUITE 200
ATLANTA, GA 30309

TALLAHASSEE
850 S. GADSDEN STREET, SUITE 140
TALLAHASSEE, FL 32301

FITZGERALD COLLABORATIVE GROUP, LLC.
AA26001957

Digitally signed by Donald R. Jr. Gray
Date: 2025.02.03 10:10:36 -05'00'

STATE OF FLORIDA · DONALD R. GRAY JR. · REGISTERED ARCHITECT · AR0019607

REVISION

NO.	DESCRIPTION	DATE

PERMIT DOCUMENTS

CLIENT
LEON COUNTY SCHOOLS

PROJECT TITLE
LCS GODBY HIGH SCHOOL-BLDG 4 REROOF

1717 W Tharpe St, Tallahassee, FL 32304

PROJECT NUMBER
240208

ISSUE DATE
2/3/2025

DRAWING TITLE
COVER PAGE & DRAWING INDEX

SHEET NUMBER
G000

ABBREVIATIONS

A/C	AIR CONDITION
AB	ANCHOR BOLT
ACT	ACOUSTICAL CEILING TILE
ACTV	VINYL FACED ACT
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AEDC	DEFIBRILLATOR & CABINET
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
ARCH	ARCHITECT
AWT	ACOUSTICAL WALL TREATMENT
BALC	BALCONY
BD	BOARD
BITUM	BITUMINOUS
BLDG	BUILDING
BM	BENCHMARK
BN	BARN DOOR
B.O.	BOTTOM OF
BR	BEDROOM
BRKT	BRACKET
C/C	CENTER TO CENTER
CAB	CABINET
CBB	CEMENTITIOUS BACKER BOARD
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFMF	COLD FORMED METAL FRAMING
CH	COAT HOOK
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLL	COLUMN CENTER LINE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONT	CONTINUOUS
CPT	CARPET
CR	CARD READER
CSB	CONCRETE SPLASH BLOCK
CT	CERAMIC TILE
CTB	CERAMIC TILE BASE
CTR	CENTER
CW	CURTAINWALL
DBL	DOUBLE
DEMO	DEMOLITION
DET	DETAIL
DHW	DOUBLE HUNG WINDOWS
DIA	DIAMETER
DIM	DIMENSION
DMPF	DAMP PROOFING
DS	DOWNSPOUT
DWG	DRAWING
E	EAST
EA	EACH
EB	EXPANSION BOLT
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
EL PNL	ELECTRICAL PANEL
EOS	EDGE OF SLAB
EP	EPOXY PAINT
EF	EPOXY FLOOR
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXTR	EXTERIOR
F	FLUSH
FA	FIRE ALARM
FB	FIBERGLASS
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER & CABINET
FFE	FINISH FLOOR ELEVATION
FF&E	FIXTURES, FURNITURE & EQUIPMENT
FHC	FIRE HOSE CABINET
FIN	FINISH
FIN FLR	FINISH FLOOR
FLR FIN	FLOOR FINISH
FLUOR	FLUORESCENT
FO	FINISHED OPENING
FOG	FACE OF GLASS
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FT	FEET
FV	FIELD VERIFY
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GD	GARBAGE DISPOSAL
GDR	GUARD RAIL
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GHM	GALVANIZED HOLLOW METAL
GL	GLASS
GL BLK	GLASS BLOCK
GR FL	GROUND FLOOR
GYM	GYMNASIUM
GYP BD	GYPSUM BOARD
GYP	GYPSUM
GWB	GYPSUM WALLBOARD
H&CW	HOT & COLD WATER
HB	HOSE BIBB
HC	HANDICAP
HM	HOLLOW METAL
HT	HEIGHT
HMD	HOLLOW METAL DOOR
HMDF	HOLLOW METAL DOOR & FRAME
HMF	HOLLOW METAL FRAME
HORIZ	HORIZONTAL
HW	HOT WATER
ID	INSIDE DIAMETER
INCL	INCLUDED
INFO	INFORMATION
INSUL	INSULATION
JC	JANITOR CLOSET
JST	JOIST
LAM	LAMINATE
LAM GL	LAMINATED GLASS
LAV	LAVATORY
LD BR	GLOAD BEARING
LT GA	LIGHT GAUGE
LVR	LOUVER
LVT	LUXURY VINYL TILE
LWC	LIGHT WEIGHT CONCRETE
MAX	MAXIMUM
MBR	MASTER BEDROOM
MECH	MECHANICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MFR RECM	FR RECOMMENDATION
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLDG	MOLDING / MOULDING
MO	MASONRY OPENING
MRT	MARBLE THRESHOLD
MS	MOP SINK
MTL	METAL
MW	MICROWAVE
MWP	MEMBRANE WATERPROOFING
N	NORTH
NA	NOT APPLICABLE / NOT AVAILABLE
NL	NATURAL LIGHT
NTE	NOT TO EXCEED
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
OFCI	OWNER FURNISHED, GC INSTALLED
OFOI	OWNER FURNISHED & INSTALLED
O.H.	OPPOSITE HAND
OH DR	OVERHEAD DOOR
OITC	OUTSIDE / INSIDE TRANSMISSION CLASS
ORD	OVERFLOW ROOF DRAIN
PCC	PRECAST CONCRETE
PEMB	PRE-ENGINEERED METAL BUILDING
PERIM	PERIMETER
PLAM	PLASTIC LAMINATE
PNL	PANEL
PR	PAIR
PT	PAINT
P.T.	PRESSURE TREATED
PWR	POWER
QTR	QUARTER
QTY	QUANTITY
R	RADIUS
RB	RUBBER BASE
RF	RESIN FLOORING
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RDL	ROOF DRAIN LEADER
REBAR	REINFORCING STEEL BARS
REC	RECESSED
REF	REFERENCE OR REFRIGERATOR
REINF	REINFORCE
REQD	REQUIRED
REV	REVISION
RH	ROOF HATCH
RO	ROUGH OPENING
RWL	RAINWATER LEADER
S	SOUTH
SAN	SANITARY
SCHED	SCHEDULE
SCWD	SOLID CORE WOOD DOOR
SGD	SLIDING GLASS DOOR
SF	SQUARE FOOT / FEET
SC	SEALED CONCRETE
SH	SHINGLES
SHT	SHEET
SHV	SHELVING
SHWR	SHOWER
SIM	SIMILAR
SM	SHEET METAL
SQ	SQUARE
SS	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
SY	SQUARE YARD
TEMP	TEMPORARY
THK	THICKNESS
THRU	THROUGH
TF	TRANSPARENT FINISH
TN	TRUE NORTH
T.O.	TOP OF
TOB	TOP OF BEAM
TOS	TOP OF STEEL
TLT	TOILET
TYP	TYPICAL
UCD	UNDERCUT DOOR
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VR	VAPOR RETARDER
VTR	VENT THROUGH ROOF
W/	WITH
WC	WATER CLOSET
WD	WOOD
WDF	WOOD DOOR & FRAME
WH	WATER HEATER
WPM	WATERPROOF MEMBRANE
WWF	WELDED WIRE FABRIC
WGL	WIRED GLASS

GENERAL NOTES:

1. CONTRACTOR SHALL NOT SCALE DRAWINGS.
2. THESE WORKING DRAWINGS INDICATE MATERIALS AND METHODS OF CONSTRUCTION TO SET STANDARDS OF QUALITY AND/OR PERFORMANCE. OTHER MATERIALS AND/OR METHODS MAY BE CONSIDERED BY THE ARCHITECT FOR ACCEPTANCE PROVIDED THEY DO NOT ALTER THE ORIGINAL DESIGN INTENT. SUBMIT ALL PROPOSED ALTERNATES TO ARCHITECT IN WRITING FOR APPROVAL PRIOR TO IMPLEMENTATION. INCLUDE REASON/PURPOSE FOR SUBSTITUTION, COST DIFFERENCE TO ORIGINALLY SPECIFIED ITEM AND LEADTIME. REFER TO SPECIFICATIONS FOR SUBMITTAL PROCEDURES.
3. THE ARCHITECT IS NOT RESPONSIBLE FOR DISCREPANCIES OR OMISSIONS THAT ARISE DUE TO CHANGES BY THE CONTRACTOR OR OWNER AFTER THE DATE OF ISSUANCE OF THE DRAWINGS.
4. CONTRACTOR SHALL REFER TO BASE BUILDING SPECIFICATIONS FOR STANDARDS OF WORKMANSHIP AND MATERIALS WHEN NEW INTERIOR CONSTRUCTION IS INDICATED TO MATCH EXISTING.
5. ALL CONTRACTORS AND/OR SUB-CONTRACTORS SHALL CARRY INSURANCE TO COVER WORKMAN'S COMPENSATION AND EMPLOYER'S LIABILITY AS REQUIRED.
6. ALL CONSTRUCTION EITHER OUTLINED OR IMPLIED IN THESE DOCUMENTS SHALL COMPLY WITH ALL APPLICABLE CODE REQUIREMENTS.
7. ALL SUBCONTRACTORS INCLUDING MECHANICAL, PLUMBING AND ELECTRICAL SHALL BE RESPONSIBLE FOR SECURING PERMITS FOR THEIR WORK AND TRADES, UTILITY HOOK-UPS, AND FOR PROVIDING ANY ADDITIONAL DRAWINGS THE BUILDING DEPARTMENT MAY REQUIRE.
8. THIS DESIGN TEAM (ARCHITECTS/INTERIOR DESIGNERS, AND ENGINEERS) WILL NOT BE RESPONSIBLE FOR AND WILL NOT HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THIS PROJECT AND WILL NOT BE RESPONSIBLE FOR CONTRACTORS FAILURE TO CARRY OUT THE WORK ON THIS PROJECT IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS OR INDUSTRY STANDARDS. THE DESIGN TEAM WILL NOT BE RESPONSIBLE FOR OR HAVE CONTROL OR CHARGE OVER THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OF THEIR AGENTS OR EMPLOYEES OR ANY OTHER PERSON PERFORMING ANY OF THE WORK OF THIS PROJECT.
9. ALL WORK OF OUTLINED TRADES SHALL BE PERFORMED BY SKILLED CRAFTSMEN IN THE TRADE, AND THE WORK SHALL BE OF A QUALITY THAT IS ACCEPTABLE BY INDUSTRY STANDARDS AND SATISFACTORY TO THE DESIGNER, ARCHITECT, BUILDING MANAGEMENT AND OWNER.
10. DEBRIS RESULTING FROM CONSTRUCTION SHALL BE REMOVED ENTIRELY FROM THE SITE ON A REGULAR BASIS TO A WASTE AND/OR RECYCLING AREA PROVIDED BY THE CONTRACTOR.
11. UPON AWARDING CONTRACTS TO SUBCONTRACTORS, THE GENERAL CONTRACTOR SHALL SUBMIT TO THE ARCHITECT AND OWNER A SCHEDULE FOR ALL LONG LEAD TIME ITEMS ON THE PROJECT (I.E. MATERIALS, EQUIPMENT, HARDWARE, FABRICS) AND SHALL BE RESPONSIBLE FOR NOTIFYING THE DESIGNER AND OWNER AS TO ANY ITEM WHICH MAY CAUSE THE PROJECT COMPLETION TO BE DELAYED, PRIOR TO ORDERING THAT ITEM.
12. PATCH AND FIRE STOP ALL PENETRATIONS IN FLOOR AND WALL ASSEMBLIES TO COMPLY WITH APPLICABLE BUILDING CODE.
13. CONSIDERATION SHALL BE GIVEN WHEN LAYING OUT AND DETAILING THE WORK TO BE DONE TO VARIATIONS IN FLOOR PLANES RESULTING FROM CONSTRUCTION QUALITY AND LIVE DEAD LOADS IMPOSED ON THE STRUCTURE. ALIGNMENT OF DOOR AND WINDOW HEADS, AND ANY OTHER HORIZONTAL ELEMENT SHALL BE MAINTAINED AT A CONSTANT AND SHALL NOT FOLLOW VARIATIONS IN FLOOR PLANE.
14. CONTRACTOR SHALL DISPOSE OF ALL CHEMICALS AND HAZARDOUS MATERIALS IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND ORDINANCES.
15. CONTRACTOR AND SUBCONTRACTORS SHALL TAKE CARE NOT TO DAMAGE EXISTING TO REMAIN AREAS (I.E. WALLS, DOORS, SOFFITS, CEILINGS). ALL CONSTRUCTION DAMAGE MUST BE REPAIRED BY CONTRACTOR RETURNING ITEM TO ITS ORIGINAL CONDITION.
16. PRIOR TO SUBMITTING BID, CONTRACTOR SHALL VISIT JOB SITE AND NOTIFY ARCHITECT OF ANY PHYSICAL CONDITIONS NOT INCLUDED IN CONSTRUCTION DOCUMENTS WHICH REQUIRE CORRECTIVE ACTION.
17. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS AT SITE AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE ORDERING MATERIALS, BEGINNING FABRICATION, OR STARTING CONSTRUCTION.
18. CONTRACTOR SHALL CLEAN THE JOB SITE MINIMUM WEEKLY. REMOVE DUST, DEBRIS, OILS, STAINS, FINGERPRINTS AND LABELS FROM EXPOSED FINISHED SURFACES, INCLUDING GLASS SURFACES AND PERIMETER WINDOW SILLS, GLAZING AND WINDOW TREATMENTS.
19. CONTRACTOR SHALL PROVIDE CLOSE-OUT PACKAGE TO ARCHITECT AT SUBSTANTIAL COMPLETION AND TO CLIENT AND/OR OWNER AT THE END OF PROJECT. CLOSE-OUT DOCUMENTS TO INCLUDE: CONSENT OF SURETY, POWER OF ATTORNEY, WARRANTIES, RECEIPTS, CERTIFICATE OF OCCUPANCY, AS-BUILT DRAWINGS, TEST AND BALANCE REPORTS, WARRANTY INFORMATION AND OPERATIONS AND MAINTENANCE MANUAL.
20. CONTRACTOR TO ENSURE THAT ALL COMPOSITE WOOD AND AGRIFIBER PRODUCTS, INCLUDING CORE MATERIALS, MUST CONTAIN NO ADDED UREA-FORMALDEHYDE RESINS.
21. CONTRACTOR TO ENSURE THAT ALL ADHESIVES, SEALANTS AND SEALANT PRIMERS USED MUST NOT EXCEED THE VOC CONTENT LIMITS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) RULE #1168 REQUIREMENTS IN EFFECT ON JANUARY 1, 2003 AND RULE AMENDMENT DATED OCTOBER 3, 2003.
22. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE SITE PRIOR TO SUBMITTING A BID. DUE TO THE NATURE OF THIS PROJECT AND THE STATE OF THE EXISTING BUILDING, IT IS IMPOSSIBLE TO COMPLETELY RELATE THE SCOPE OF THE RENOVATION REQUIRED TO THE CONTRACTOR THROUGH THE CONTRACT DOCUMENTS. FAILURE TO VISIT THE SITE WILL NOT RELIEVE THE CONTRACTOR OF RENOVATION RESPONSIBILITIES UNDER THIS CONTRACT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND COORDINATE THE EXACT CONTENT OF DEMOLITION NECESSARY TO PROVIDE A RENOVATED AND UPGRADED SPACE AND TO FACILITATE NEW WORK.

PROJECT TEAM

FITZGERALD COLLABORATIVE GROUP, LLC

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Contact: Patrick M. Mckee, P.E.
pmckee@kevermckee.com

MCGINNISS & FLEMING ENGINEERING, INC.

MEP and Fire Protection
820 East Park Avenue, Suite I-200
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850.681.6424
Contact: Brian Wallace, PE, LEED AP
bwallace@mfe-inc.com

APPLICABLE CODES

ALL CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE CODES LISTED BELOW:

- FLORIDA BUILDING CODE: (FBC-B) 2023 - EIGHTH EDITION
- FLORIDA BUILDING CODE: (FBC-EB) 2023 - EIGHTH EDITION
- FLORIDA BUILDING CODE: ACCESSIBILITY (FBC-A) 2023 - EIGHTH EDITION
- FLORIDA BUILDING CODE: ENERGY CONSERVATION (FBC-EC) 2023 - EIGHTH EDITION
- FLORIDA BUILDING CODE: MECHANICAL (FBC-M) 2023 - EIGHTH EDITION
- FLORIDA BUILDING CODE: PLUMBING (FBC-P) 2023 - EIGHTH EDITION
- FLORIDA BUILDING CODE: FUEL GAS (FBC-FG) 2023 - EIGHTH EDITION
- NATIONAL ELECTRICAL CODE: (NEC) 2020 EDITION
- FLORIDA FIRE PREVENTION CODE (FFPC) 2023 - EIGHTH EDITION
- STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES: (SREF) 2014
- UNIFORM FIRE SAFETY STANDARDS FOR EDUCATIONAL FACILITIES
- NATIONAL FIRE PROTECTION ASSOCIATION: (NPFA 101 LIFE SAFETY & NFPA 1 FIRE) 2021
- FLORIDA ADMINISTRATIVE CODE (FAC)

SCOPE OF WORK

THE PROPOSED PROJECT IS COMMISSIONED BY LEON COUNTY SCHOOLS TO REPLACE THE EXISTING ROOF FOR THE GODBY HIGH SCHOOL AT 1717 W THARPE STREET, TALLAHASSEE, FL 32304. NEW CONSTRUCTION INCLUDES ALL WORKS ASSOCIATED WITH THE FOLLOWING BUILDINGS AND SPACES:

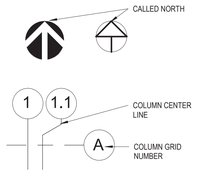
- BUILDING 04 RE-ROOFING

KEY PLAN

ANNOTATION SYMBOLS

DRAWING TITLEBAR:

GRAPHIC SYMBOLS:



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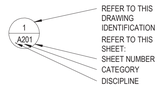
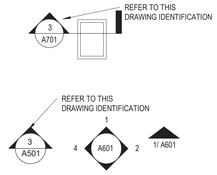
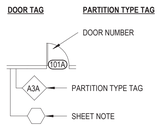


BUILDING / WALL SECTION REFERENCE:

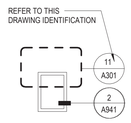


SPACE NAME / NUMBER SYMBOL:

PARTITION/ DOOR TYPE SYMBOLS:



DETAIL REFERENCE:



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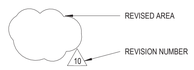

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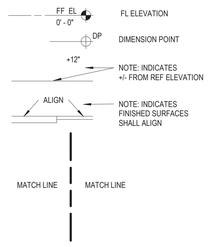
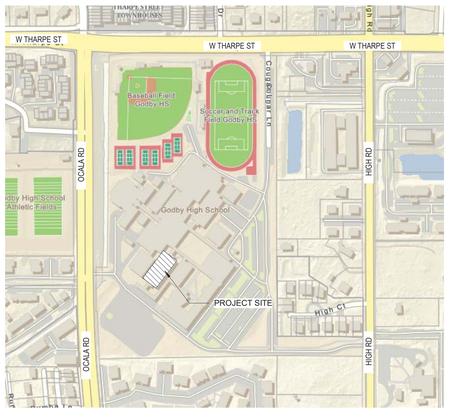


LOCATION MAP



N
NORTH

MAP IMAGE PROVIDED FROM TLCGIS
N.T.S.

FITZGERALD COLLABORATIVE

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1401 PEACHTREE ST NE, SUITE 200
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TALLAHASSEE
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TALLAHASSEE, FL 32301

FITZGERALD COLLABORATIVE GROUP, LLC.
AA26001957

Digitally signed by Donald R. Jr. Gray
Date: 2025.02.03 12:10:57 -05'00'

STATE OF FLORIDA
DONALD R. GRAY JR.
REGISTERED ARCHITECT
AR0009607

REVISION

NO.	DESCRIPTION	DATE

PERMIT DOCUMENTS

CLIENT

LEON COUNTY SCHOOLS

PROJECT TITLE

LCS GODBY HIGH SCHOOL-BLDG 4 REROOF

1717 W Tharpe St, Tallahassee, FL 32304

PROJECT NUMBER

240208

ISSUE DATE

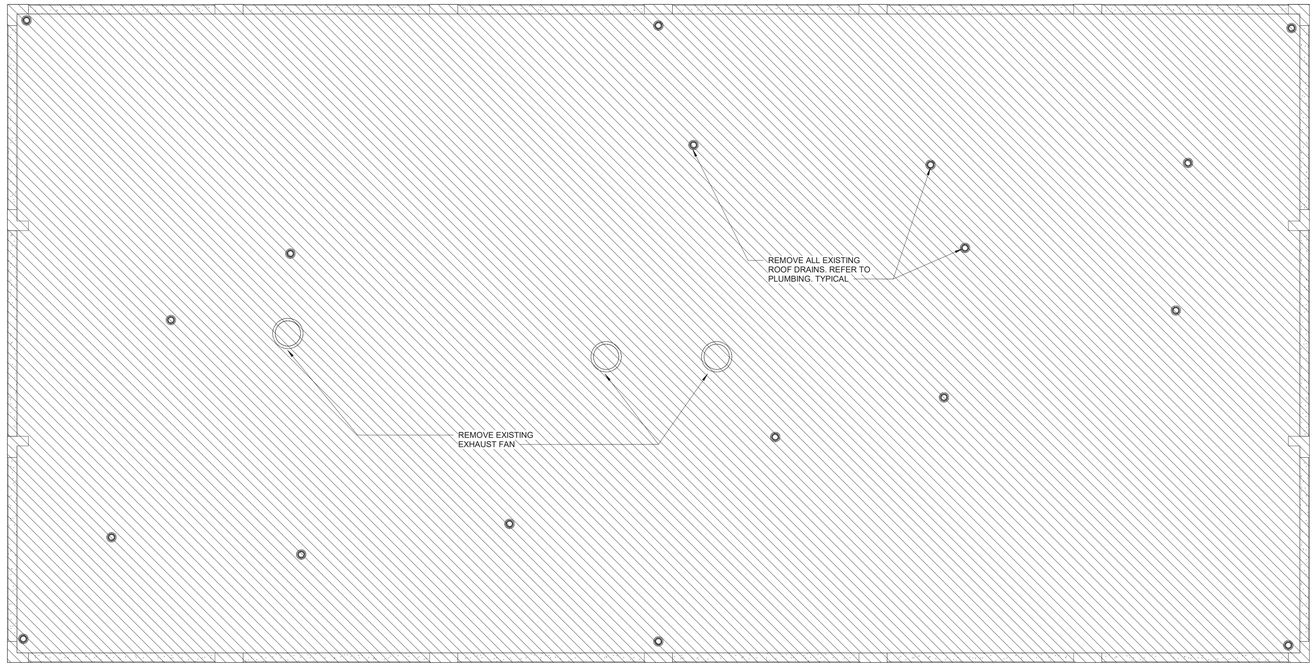
2/3/2025

DRAWING TITLE

NOTES, SYMBOLS, & ABBREVIATIONS

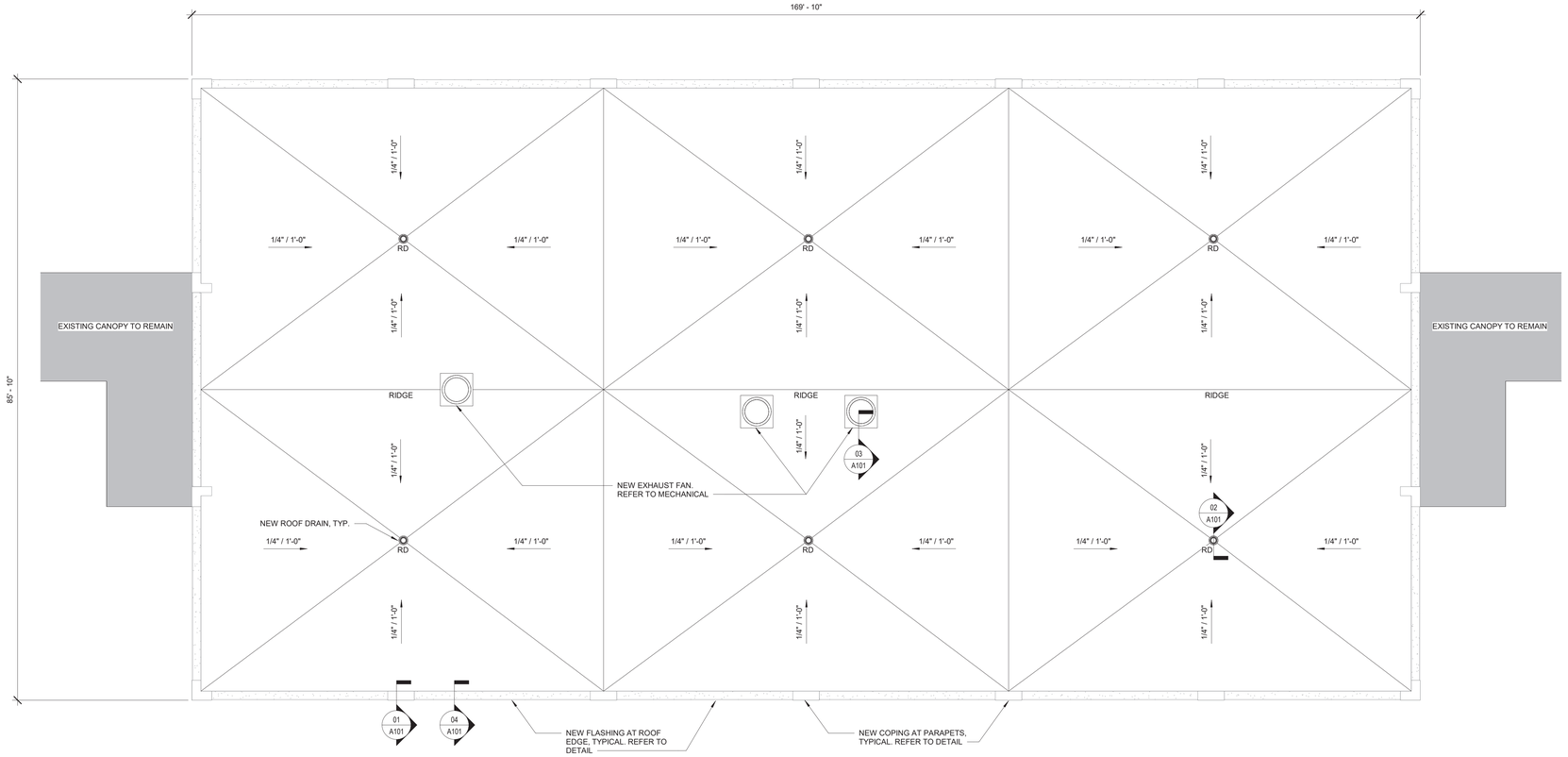
SHEET NUMBER

G001



02 DEMO ROOF PLAN

1/8" = 1'-0"



01 PROPOSED ROOF PLAN

1/8" = 1'-0"

ROOF PLAN DEMOLITION NOTES

1. REMOVE EXISTING ROOF ASSEMBLY TO EXISTING DECK. EXISTING GYPSUM CONCRETE ROOF DECK TO REMAIN. REFER TO DETAILS. PATCH AND REPAIR DECK AS REQUIRED.
2. REMOVE ALL EXISTING ROOFING INSULATION.
3. REMOVE ALL EXISTING COPING, FLASHING AND METAL TRIM AT PARAPETS AND ROOF EDGE.
4. REMOVE ALL EXISTING ROOF DRAINS AND DOWNSPOUTS.
5. EXISTING HVAC ROOF PENETRATIONS TO REMAIN. REMOVE AND REPLACE EXISTING FLASHING AND CURBS PER DETAIL
6. STAINING WAS OBSERVED ON THE BOTTOM OF THE EXISTING ROOF DECK. THIS IS RECORDED IN A FIELD OBSERVATION REPORT IN THE SPECIFICATIONS - APPEDNIX 'A'. INVESTIGATE THE DECK ONCE THE DEMOLITION OF THE EXISTING ROOF MEMBRANE IS COMPLETE AND REPORT THE FINDINGS TO THE DESIGN TEAM AND THE OWNER. REFER TO THE ROOF DECK REPAIR STRUCTURAL DETAIL.

ROOF PLAN NOTES

1. PROVIDE NEW ALUMINUM COPING AND FLASHING AT PARAPETS AND ROOF EDGE.
2. PROVIDE NEW CURBS AT ALL MECHANICAL EQUIPMENT ROOF PENETRATIONS. REFER TO DETAIL.
3. INSTALL AND PAINT NEW DOWNSPOUTS PER PLUMBING DRAWINGS.

DEMO PLAN LEGEND

	DEMO

FLOOR PLAN LEGEND

	NOT IN SCOPE
RD	ROOF DRAIN
	EXHAUST FAN

FITZGERALD COLLABORATIVE

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AA26001957

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Date: 2025.02.03 12:11:26 -05'00'

STATE OF FLORIDA · DONALD R. GRAY JR. · AR89607 · REGISTERED ARCHITECT

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LEON COUNTY SCHOOLS

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LCS GODBY HIGH SCHOOL-BLDG 4 REROOF

1717 W Tharpe St, Tallahassee, FL 32304

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240208

ISSUE DATE

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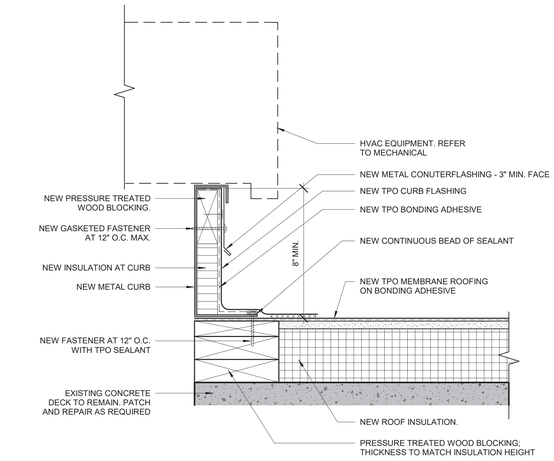
DRAWING TITLE

ROOF PLANS

SHEET NUMBER

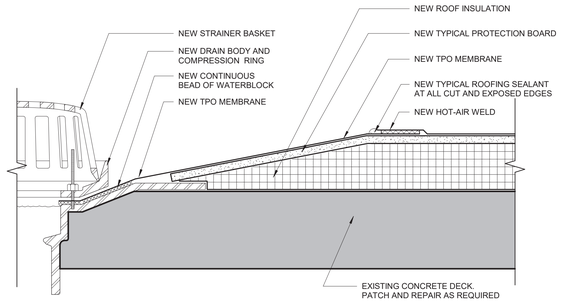
A100

NORTH



03 ROOF EXHAUST FAN/ INTAKE HOOD DETAIL

3" = 1'-0"



NOTES:

1. ALL BOLTS OR CLAMPS MUST BE IN PLACE TO PROVIDE CONSTANT COMPRESSION ON MANUFACTURER'S WATER CUT-OFF MASTIC.

2. CUT ROOF MEMBRANE SO IT EXTENDS MIN. 1/2" FROM ATTACHMENT POINTS OF DRAIN CLAMPING RING.

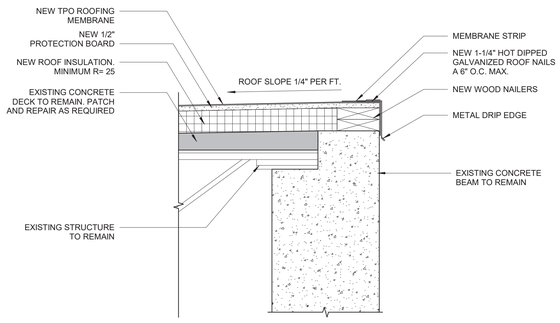
3. HOLE IN MEMBRANE MUST EXCEED DRAIN PIPE SIZE.

4. EXTEND THE REINFORCING MEMBRANE 5 1/2" MINIMUM OUT OF THE SUMP AREA OR PER ROOFING MANUFACTURER'S DETAIL.

5. INSULATION TAPER SHALL NOT BE STEEPER THAN 3 INCHES (VERTICAL) IN 12 INCHES (HORIZONTAL).

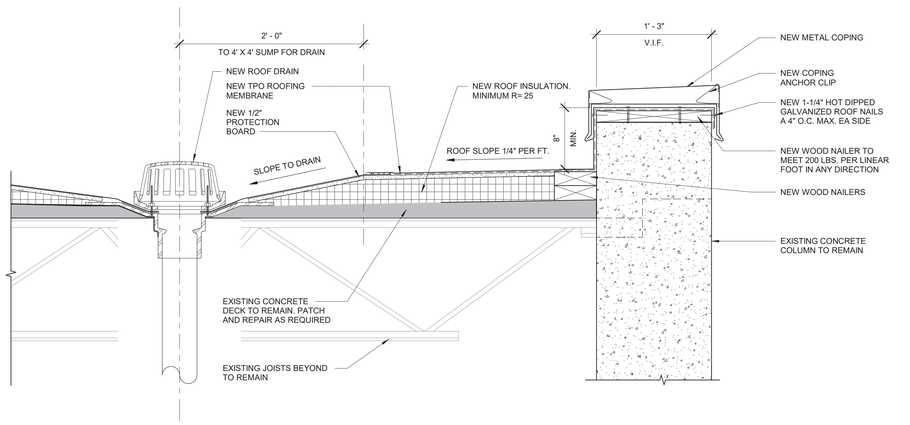
02 TYPICAL ROOF DRAIN DETAIL

3" = 1'-0"



04 TYPICAL ROOF EDGE DETAIL

1 1/2" = 1'-0"



01 TYPICAL ROOF PARAPET EDGE DETAIL

1 1/2" = 1'-0"

FITZGERALD COLLABORATIVE

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AA26001957

Digitally signed by Donald R. Jr. Gray
Date: 2025.02.03 12:11:24 -05'00'

STATE OF FLORIDA · DONALD R. GRAY JR. · REGISTERED ARCHITECT · AR89607

REVISION

NO.	DESCRIPTION	DATE
1		

PERMIT DOCUMENTS

CLIENT

LEON COUNTY SCHOOLS

PROJECT TITLE

LCS GODBY HIGH SCHOOL- BLDG 4 REROOF

1717 W Tharpe St, Tallahassee, FL 32304

PROJECT NUMBER

240208

ISSUE DATE

2/3/2025

DRAWING TITLE

DETAILS

SHEET NUMBER

A101

Exhibit C
Project Manual

PROJECT MANUAL

Leon County Schools

GODBY HIGH SCHOOL
BUILDING NO 4
ROOF REPLACEMENT

1717 West Tharpe Street
Tallahassee, FL 32303

PERMIT DOCUMENTS

LEON COUNTY SCHOOLS

Construction & Facilities
3420 West Tharpe Street – Suite 100
Tallahassee. Florida 32303

February 03, 2025.

FITZGERALD COLLABORATIVE

Fitzgerald Collaborative Group LLC
850 South Gadsden Street – Suite 140
Tallahassee, Florida 32301

FC Group Project No.: 240208

Specifications are identified by the individual disciplines in accordance with the following list. Signatures and seals indicate professional responsibility for those sections.

Legend	Discipline	Consultant	Design Professional
LCS	Owner Requirements	Leon County School Board	N/A
AR	Architecture	Fitzgerald Collaborative Group, LLC	Donald Gray, AIA
SE	Structural	Kever-McKee Engineering	Pat McKee, PE
MP	Mechanical Plumbing	MFE Engineering	Jon Barber, PE

DATE OF ISSUE

Date	Title	
10/28/2024	SCHEMATIC DESIGN DOCUMENTS	
01/06/2025	50% CONSTRUCTION DOCUMENTS	
02/03/2025	PERMIT DOCUMENTS	

DIVISION 00 – LEON COUNTY SCHOOL BOARD- S NON-TECHNICAL SPECIFICATIONS

DIVISION 01 – GENERAL REQUIREMENTS

LCS Godby High School
Building 04 Roof Replacement
1717 West Tharpe Street
Tallahassee, FL 32303

February 03, 2025

STATEMENT OF COMPLIANCE

"To the best of my knowledge, these drawings and the project manual are complete and comply with the Florida Building Code."

Sincerely,

ERIKA J. HAGAN, AIA
PRINCIPAL

FITZGERALD COLLABORATIVE GROUP, LLC
850 S. GADSDEN STREET, SUITE 140, TALLAHASSEE, FL 32301
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AA26001957

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DOCUMENT 000107 - SEALS PAGE

1.1 DESIGN PROFESSIONALS OF RECORD

A. Architect:

1. Fitzgerald Collaborative Group, LLC
2. Responsible for Divisions 01-14 sections except where indicated as prepared by other design professionals of record.

00 01 15	LIST OF DRAWING SHEETS
01 01 00	SUMMARY OF WORK
01 04 30	COORDINATION
01 21 01	PROCEDURES AND PERFORMANCE
01 25 00	SUBSTITUTION PROCEDURES
01 25 00.1	SUBSTITUTION PROCEDURES APPENDIX – CSI FORM 13.1A
01 29 00	PAYMENT PROCEDURES
01 31 00	PROJECT MANAGEMENT AND COORDINATION
01 32 00	CONSTRUCTION PROGRESS DOCUMENTATION
01 32 33	PHOTOGRAPHIC DOCUMENTATION
01 33 00	SUBMITTAL PROCEDURES
01 40 00	QUALITY REQUIREMENTS
01 42 00	REFERENCES
01 43 30	QUALITY ASSURANCE for FIRESTOPPING PENETRATIONS AND JOINTS
01 50 00	TEMPORARY FACILITIES AND CONTROLS
01 70 00	CONTRACT CLOSEOUT
01 73 00	EXECUTION
01 74 19	CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
01 78 00	WARRANTIES AND BONDS
01 78 23	OPERATION AND MAINTENANCE DATA
01 78 39	PROJECT RECORD DOCUMENTS
02 41 19	SELECTIVE DEMOLITION
06 10 53	MISCELLANEOUS ROUGH CARPENTRY

07 54 23	THERMOPLASTIC-POLYOLEFIN (TPO) ROOFING
07 62 00	SHEET METAL FLASHING AND TRIM
07 71 00	ROOF SPECIALTIES
07 72 00	ROOF ACCESSORIES
07 84 13	PENETRATION FIRESTOPPING
07 84 43	JOINT FIRESTOPPING
07 92 00	JOINT SEALANTS
09 91 13	EXTERIOR PAINTING

DOCUMENT 000115 - LIST OF DRAWING SHEETS

1.1 LIST OF DRAWINGS

A. List of Drawings: Drawings consist of the following Contract Drawings and other drawings of type indicated:

GENERAL

G000 COVER PAGE & DRAWING INDEX

G001 NOTES, SYMBOLS, & ABBREVIATIONS

ARCHITECTURE

A100 ROOF PLANS

A101 DETAILS

STRUCTURAL

S001 STRUCTURAL NOTES

MECHANICAL

M100 NOTES, LEGEND, SCHEDULE, AND ROOF PLAN

PLUMBING

P001 PLUMBING NOTES, LEGEND, SCHEDULE, AND DETAILS

P100 DEMOLITION PLANS – PLUMBING

P101 NEW WORK PLANS – PLUMBING

ELECTRICAL

E100 NOTES, LEGEND, AND ROOF PLAN

END OF DOCUMENT 000115

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SECTION 010100 - SUMMARY OF WORK

PART 1 - GENERAL

1. WORK COVERED BY CONTRACT DOCUMENTS

A. Re-Roofing: The work of this Contract consists Selective Demolition of the roof at Building No 4 at Godby High School, 1717 West Tharpe Street Tallahassee, Leon County Florida 32303. Work shall be performed in accordance with drawings and specifications prepared by Fitzgerald Collaborative Group, LLC. 850 South Gadsden Street, Suite 140, Tallahassee, FL 32301. The work will include installing a new Thermoplastic-Polyolefin (TPO) roofing membrane, coverboard, insulation, and all necessary flashing and copings to the existing Building No 4. New gutters and downspouts will also be provided.

B. The Contractor shall lay out the work with appropriately qualified personnel from the information shown on the drawings.

2. RELATED REQUIREMENTS

A. LCS Section 00 00 01
B. Contractual Conditions
C. Division 01 through 33 Sections

3. CONTRACT TIME

All work shall be substantially complete as stated in the Contract between the Owner and the Contractor.

4. WORK BY OTHERS

A. Work on the project which will be executed prior to the start of work on this contract, and which is excluded from this contract, as follows:

1. None identified at this time.

5. CONTRACTOR'S USE OF PREMISES

A. Coordinate use of premises under the direction of the Owner. Locate construction staging area as directed by the Owner.

B. Assume full responsibility for the protection and safekeeping of Products under this Contract, stored on site.

C. Move any stored Products, under Contractor's control, which interfere with operation of the Owner or any separate Contractor.

D. Protect all existing site vegetation and improvements not specifically noted to be demolished.

6. OWNER OCCUPANCY

A. Contractor shall at all times conduct his operations as to insure the safety of and least inconvenience to the students and staff of the school.

B. Owner may take beneficial occupancy of any portion of the new building so agreed and arranged between Owner, Contractor and Architect/Engineer.

7. RIGHT OF ACCESS

The Contractor agrees that representatives of the Owner and Architect/Engineer will have access to the work wherever it is in preparation or progress and that the Contractor will provide facilities for such access.

8. SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION

The Contractor shall be solely responsible for all applicable obligations prescribed as employer obligations under any and all governmental regulations.

9. PROTECTION OF EXISTING GROUNDS

A. Turfs, irrigation systems, shrubbery, etc. shall be protected from any and all damage by construction vehicles or work activities. The Contractor shall be responsible for restoring same to equal or better conditions.

B. Trees are a valuable natural resource and shall be protected to at least their drip lines with wood fencing acceptable to the Architect/Engineer. Construction vehicles and activities shall in no case, except as specifically shown on the Contract Documents, violate the drip lines of existing trees.

C. The Contractor's fenced staging and construction areas may or may not include existing trees and shrubs; these shall receive protection.

D. In an effort to document existing grounds conditions, the Contractor shall provide a VHS video tape prior to commencing any on site Construction Activities. Such video tape shall be delivered to the Architect/Engineer for review with the Owner at the project completion in order to evaluate and direct the Contractor as to restoration required.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION 01010

SECTION 010430 - COORDINATION

PART 1 - GENERAL:

1.1. WORK INCLUDED

A. Contractor shall supervise and direct the work competently and efficiently, devoting such attention thereto and applying such skills as may be necessary to perform the work in accordance with the Contract Documents.

B. Contractor shall be solely responsible for all means, methods, techniques, sequences and procedures of construction, and for providing adequate safety precautions and coordinating all portions of the work under the Contract Documents.

C. Contractor shall be responsible to see that the finished work complies accurately with the Contract Documents.

D. Contractor shall be responsible for all project coordination.

1.2. RELATED REQUIREMENTS

A. Section 010100 - Summary of Work
B. Section 011100 - State of Florida Product Approval
C. Section 012500 - Substitution Procedures
D. Section 017000 - Contract Closeout
E. Section 024119 – Selective Demolition

1.3. DESCRIPTION

A. Coordinate scheduling, submittals, and the work of the various sections of specifications to ensure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items to be installed later.

1. Maintain reports and records at the job site:

a. Daily log of progress of work and other pertinent data. Maintain log accessible to Owner, Architect/Engineer and his representative.
b. Assemble documentation for the handling of any claims or disputes which may arise.

2. Inspections and Testing:

a. Inspect the work to assure that it is performed in accordance with the requirements of the Contract Documents.

b. Reject work which does not conform to requirements of the Contract

Documents.

B. Coordinate sequence of work to ensure proposed completion dates are met.

1. Construction Schedule:
   a. Prepare a detailed schedule of Contractor's operations and for all subcontractors on the project.

   b. Monitor schedules as work progresses.

      1. Identify potential variances between scheduled and probable completion date.

      2. Recommend to Architect/Engineer any adjustments in schedule to meet the required completion date.

      3. Provide monthly summary reports of each monitoring.

   c. Observe work to monitor compliance with schedule.

      1. Verify that labor and equipment are adequate to meet and maintain the schedule for the work.

      2. Verify that product deliveries are adequate to meet and maintain the schedule for the work.

      3. Report any non-compliance to Architect/Engineer, with recommendations for remedy.

      4. Verify that adequate services are provided to comply with requirements for work and climatic conditions.

      5. Verify proper maintenance and operation of temporary facilities.

      6. Administer traffic and parking controls for construction workers. Construction traffic shall not interfere with surrounding traffic movement.

2. Coordination of Subcontractors:

   a. Coordinate work of all subcontractors and relationship between them.
   b. Establish on-site lines of authority and communication. Schedule and conduct progress meetings among Owner and Architect/Engineer representatives and subcontractors.
   c. Ensure that specified cleaning is done during progress of the work and at completion of contract.

1.4. MEETINGS

1. In addition to progress meetings and preconstruction meetings, hold coordination meetings and pre-installation conferences with personnel and subcontractors to assure coordination of work. Contractor shall record, prepare and distribute minutes to all Attendees within five (5) business days.

1.5. COORDINATION OF SUBMITTALS

A. Schedule and coordinate submittals specified in Section 013300.

1. Administer processing of shop drawings, product data, and samples.

B. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

1. Coordinate with Sub-contractors as required:

a. Provide temporary utilities (electric, water) required by the Subcontractors in the performance of their work.

b. Provide designated location where the Subcontractors may place construction debris for removal by the Contractor.

C. Coordinate requests for changes to ensure compatibility of space, of operating elements, and effect on the work of other sections.

1. Recommend necessary of desirable changes to Architect/Engineer.

2. Review subcontractor's requests for changes and substitutions. Submit recommendations to Architect/Engineer.

3. Process Change Orders in accord with General Conditions and Change Order Procedures.

1.6. COORDINATION OF SPACE

A. Coordinate use of Project space and sequence of installation of subcontractor work which is indicated diagrammatically on Drawings. Follow routings shown for pipes, ducts, and conduits as closely as practicable, with due allowance for available physical space; make runs parallel with lines of building. Utilize space efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

1.7. INTERPRETATION OF CONTRACT DOCUMENTS

A. Consult with Architect/Engineer to obtain interpretation or clarifications for any portions of the contract documents which are unclear or ambiguous. Transmit all requests for interpretation in writing.

B. Assist in the answering of any questions which may arise.

C. Transmit written interpretations to Sub-Contractors, Suppliers and others who's work may be affected by the clarification.

D. Interpretations shall be based on the Architect/Engineers review of the Contract Documents. In case of conflicting data, assumption shall be made that the item of greater quality, cost of quantity was bid.

1.8. UTILITIES

A. Direct the disconnection and safely securing utilities, operational systems, and equipment. Coordinate with the Owner and Utility provider as required

1.9. COORDINATION OF CONTRACT CLOSEOUT

A. Substantial Completion:

1. Coordinate completion and cleanup of work of separate sections in preparation for Substantial Completion.

2. Upon determination of Substantial Completion of work or portion thereof, prepare for the Architect/Engineer a list of incomplete or unsatisfactory items.

B. Final Completion:

1. Upon determination that work is at final completion:

a. Submit written notice to Architect/Engineer that the work is ready for final inspection.

b. Secure and transmit to Architect/Engineer required closeout submittals.

c. Owner file copies of all submittals, changes, etc.

C. After Owner acceptance of premises, coordinate access to site by various sections for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

D. Assemble and coordinate closeout submittals specified.

PART 2 – PRODUCTS - Not used.

PART 3 – EXECUTION - Not used.

END OF SECTION 01040.

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SECTION 011100 – STATE OF FLORIDA PRODUCT EVALUATION AND APPROVAL REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Florida Product Evaluation and Approval.

1.2 REFERENCES

A. Florida Statute 553.842

B. Florida Administrative Code 9B-72

C. Definition: Product evaluation and approval system that applies statewide to concurrent with the Florida Building Code.

1.3 RESPONSIBILITY

A. The Contractor is responsible for providing products approved by the State of Florida with approval numbers. Do not use products that do not have a Florida approval number.

1.4 SUBMITTAL

A. Submit a copy of the approved product schedule, (attached at the end of this section), to the Architect within thirty (30) days after the project has been awarded. In addition to State requirements comply with the requirements of the local jurisdiction of the project.

B. Submit the following product approval specification sheet, or local jurisdiction form to obtain building permits.

1.5 CATEGORIES

A. General: Products, methods, or systems of construction used in the exterior envelope of a building must be approved by the Building Department. The products covered are those products, methods or systems that affect the structural integrity of the building envelope, including but not limited to the following categories.

1. Roofing Products.
2. New and Innovative Building Envelope Products.

B. If the Contractor fails to comply with this requirement, non-complying components shall be removed and replaced with components that do comply at no expense to the Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

PRODUCT APPROVAL SPECIFICATION SHEET
Location:_____ Project: _____
Name:_____
As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and the product approval number(s) on the building components listed below if they will be utilized on the construction

project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. More information about statewide product approval can be obtained at www.floridabuilding.org. Complete the following table with products to be used on this project. If not required for this project, mark as Not Applicable, (N/A), add products that may not be listed, but are required for the project, .submit to Architect and Authority Having Jurisdiction.

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
A. EXTERIOR DOORS			
1. Swinging			
2. Sliding			
3. Sectional			
4. Roll up			
5. Automatic			
6. Other			
B. WINDOWS			
1. Single hung			
2. Horizontal Slider			
3. Casement			
4. Double Hung			
5. Fixed			
6. Awning			
7. Pass -through			
8. Projected			
9. Mullion			
10. Wind Breaker			
11 Dual Action			
12. Other			
C. PANEL WALL			
1. Siding			
2. Soffits			
3. EIFS			
4. Storefronts			
5. Curtain walls			
6. Wall louver			
7. Glass block			
8. Membrane			
9. Greenhouse			
10. Other			

Category/Subcategory (cont.)	Manufacturer	Product Description	Approval Number(s)
D. ROOFING PRODUCTS			
1. Asphalt Shingles			
2. Underlayments			
3. Roofing Fasteners			

4. Non-structural Metal Roof			
5. Built-Up Roofing			
6. Modified Bitumen			
7. Single Ply Roofing Sys			
8. Roofing Tiles			
9. Roofing Insulation			
10. Waterproofing			
11. Wood shingles /shakes			
12. Roofing Slate			
13. Liquid Applied Roof Sys			
14. Cements-Adhesives – Coatings			
15. Roof Tile Adhesive			
16. Spray Applied Polyurethane Roof			
17. Other			
E. SHUTTERS			
1. Accordion			
2. Bahama			
3. Storm Panels			
4. Colonial			
5. Roll-up			
6. Equipment			
7. Others			
F. SKYLIGHTS			
1. Skylight			
2. Other			
Category/Subcategory (cont.)	Manufacturer	Product Description	Approval Number(s)
G. STRUCTURAL COMPONENTS			
1. Wood connector/anchor			
2. Truss plates			
3. Engineered lumber			
4. Railing			
5. Coolers-freezers			
6. Concrete Admixtures			
7. Material			
8. Insulation Forms			
9. Plastics			
10. Deck-Roof			
11. Wall			

12. Sheds			
13. Other			
H. NEW EXTERIOR ENVELOPE PRODUCTS			
1.			
2.			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) the performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements.
I understand these products may have to be removed if approval cannot be demonstrated during inspection.

Contractor or Contractor's Authorized Agent Signature

Print Name

Date

Permit #

END OF SECTION 01 11 00

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SECTION 012101 - PROCEDURES AND PERFORMANCE

PART 1 - PROCEDURES

1. Observation: The Architect and his Consulting Engineers may review all the work including Architectural, Civil, Structural, Plumbing, Electrical and Mechanical on this project.

PART 2 - PERFORMANCE

1. Measurements and Dimensions: Before ordering materials or doing work which is dependent for proper size, or installation upon coordination with building conditions, the Contractor shall verify all dimensions by taking measurements at the building and shall be responsible for the correctness of same. No consideration will be given for any claim based on the difference between the actual dimensions and those indicated on the drawings. Any discrepancies between the drawings and/or the specifications and the existing conditions shall be referred to the Architect for adjustment before any work affected thereby is begun.

PART 3 - EXECUTION

Not used.

END OF SECTION 012101

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SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. ONLY PRE-BID SUBSTITUTION REQUESTS WILL BE CONSIDERED.

C. POST BID SUBSTITUTION REQUESTS ARE HEREBY REJECTED IN ACCORDANCE WITH LEON COUNTY SCHOOL BOARD POLICY. REFER TO SECTION-'B-ADDITIONAL INSTRUCTION FOR BIDDERS', -5- 'SUBSTITUTIONS-SECTION- 5.02, OF THE LEON COUNTY SCHOOL BOARD NON-TECHNICAL SPECIFICATIONS.

D. Related Requirements:

1. Section 01 25 00.01 - Substitution Procedures Appendix – CSI Form 13.1A

1.2 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1.3 ACTION SUBMITTALS

A. Substitution Requests: Submit one electronic copy of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles. The following documents shall be required for the Architects review at minimum. Failure to include any item listed shall be grounds for rejection.

1. Substitution Request Form: Use CSI Form 13.1A.
2. Substitution request must be submitted within fifteen (15) days before bid date. Per bid advertisement directions by
3. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

    a. Statement indicating why specified products, fabrication or installation cannot be provided, if applicable.
    b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include an annotated copy of the applicable Specification

Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effects, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES
j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

4. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within ten (10) days of receipt of request.no later than 2 days before bid opening.

a. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.4 QUALITY ASSURANCE

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

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
b. Requested substitution will not adversely affect Contractor's construction schedule.
c. Requested substitution has received necessary approvals of authorities having jurisdiction, including Florida Product Approval number if applicable.
d. Requested substitution is compatible with other portions of the Work.
e. Requested substitution has been coordinated with other portions of the Work.
f. Requested substitution provides specified warranty.
g. If requested substitution involves more than one contractor, the contractor shall certify in writing that the requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed.

PART 3 - EXECUTION (Not Used)

CSI FORM 13.1A follows in section 012500.01

END OF SECTION 012500

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SECTION 01 25 00.01 - CSI FORM 13.1A

SUBSTITUTION REQUEST (After the Bidding/Negotiating Phase)

Project: _____ Substitution Request Number: _____

_____ From: _____

To: _____ Date: _____

_____ A/E Project Number: _____

Re: _____ Contract For: _____

Specification Title: _____ Section: Page: _

Description: _____ Article/Paragraph: _

Proposed Substitution: _____

Manufacturer: _____ Address: _____ Phone: _____

Trade Name: _____ Model No.: _____

Installer: _____ Address: _____ Phone: _____

History: ☐ New product ☐ 1-4 years old ☐ 5-10 years old ☐ More than 10 years old

Differences between proposed substitution and specified product: _____

_____

_____

☐ Point-by-point comparative data attached — REQUIRED BY A/E

Reason for not providing specified item: _____

_____

Similar Installation:

Project: _____ Architect: _____

Address: _____ Owner: _____

_____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

_____

Savings to Owner for accepting substitution: _____ ($ _____).

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

_____

Telephone: _____

Attachments: ☐

A/E's REVIEW AND RECOMMENDATION

☐ Approve Substitution - Make submittals in accordance with Specification Section 01 33 00 Submittal Procedures.
☐ Approve Substitution as noted - Make submittals in accordance with Specification Section 01 33 00 Submittal Procedures.
☐ Reject Substitution - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

OWNER'S REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01 33 00 Submittal Procedures. Prepare Change Order.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 33 00 Submittal Procedures. Prepare Change Order.
☐ Substitution rejected - Use specified materials.

Signed by: _____ Date: _____

Additional Comments: ☐Contractor ☐Subcontractor ☐Supplier ☐Manufacturer ☐A/E

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

B. Related Requirements:

1. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
3. Sub-schedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values coordinated with each phase of payment.
4. Sub-schedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide sub-schedules showing values coordinated with each element.

B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the schedule of values:

a. Project name and location.
b. Owner's name.
c. Owner's Project number.
d. Name of Architect.
e. Architect's Project number.
f. Contractor's name and address.
g. Date of submittal.

2. Arrange schedule of values consistent with format of AIA Document G703.
3. Arrange the schedule of values in tabular form, with separate columns to indicate the following for each item listed:

a. Related Specification Section or division.
b. Description of the Work.
c. Name of subcontractor.
d. Name of manufacturer or fabricator.
e. Name of supplier.
f. Change Orders (numbers) that affect value.
g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.

1) Labor.
2) Materials.
3) Equipment.

4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

a. Differentiate between items stored on-site and items stored off-site.

6. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
7. Purchase Contracts: Provide a separate line item in the schedule of values for each Purchase contract. Show line-item value of Purchase contract. Indicate Owner payments or deposits, if any, and balance to be paid by Contractor.
8. Temporary Facilities: Show the cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
9. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
10. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

1.5 APPLICATIONS FOR PAYMENT

A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments, as certified by Architect and paid for by Owner.

B. Payment Application Times: The date for each progress payment is indicated in the Owner/Contractor Agreement. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.

1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.

C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.

E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.

1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
3. Provide summary documentation for stored materials indicating the following:

    a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment, sub-subcontractors, and suppliers for construction period covered by the previous application].

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit conditional final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).

I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.

    a. Complete administrative actions, submittals, and Work preceding this application, as described in Section 017000 "Contract Closeout."

    b. At Substantial Completion a retainage of five (5) percent of the contract construction cost will be withheld until full completion of final punch list.

2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.
2. Certification of completion of final punch list items.
3. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
4. Updated final statement, accounting for final changes to the Contract Sum.

5. AIA Document G706.
6. AIA Document G706A.
7. AIA Document G707.
8. Evidence that claims have been settled.
9. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
10. Final liquidated damages settlement statement.
11. Proof that taxes, fees, and similar obligations are paid.
12. Waivers and releases.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

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SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Coordination drawings.
2. Requests for Information (RFIs).
3. Project meetings.

B. Related Requirements:

1. Section 017300 "Execution " for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.2 DEFINITIONS

A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents. An RFI may be submitted both Pre and Post Bid. The Contractor shall maintain separate Pre and Post bid RFI’s.

1.3 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A. Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

1.4 GENERAL COORDINATION PROCEDURES

A. Coordination: The General Contractor shall coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence are required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.

2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

1.5 COORDINATION DRAWINGS

A. Coordination Drawings, The General Contractor shall prepare coordination drawings according to requirements in individual Sections, 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. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
b. 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.

2. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
3. 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.
4. 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.

1.6 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
3. Maintain an RFI log for review at every project meeting. Include date submitted and returned and brief description of subject matter.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Sub-contractor.
5. Name of Architect and General Contractor.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor's signature.
13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
14. Offer potential solutions for consideration.

C. RFI Forms: AIA Document G716 or Software-generated form with substantially the same content as indicated above, acceptable to Architect.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day

1. The following RFIs will be returned without action:

a. Requests for approval of submittals.
b. Requests for approval of substitutions.
c. Requests for coordination information already indicated in the Contract Documents.
d. Requests for adjustments in the Contract Time or the Contract Sum.
e. Requests for interpretation of Architect's actions on submittals.
f. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."

a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following: Software log with not less than the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect and General Contractor.
4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

1.7 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated. Meetings shall be scheduled at two-week intervals.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: The contractor shall prepare the meeting agenda. Distribute the agenda to all invited attendees at least two days prior to meeting.
3. Minutes: The contractor shall be responsible for conducting meeting and recording significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

B. Pre-construction Conference: Owner and Architect will schedule and conduct a pre-construction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Attendees: Authorized representatives of Owner, Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following as related to this project:

    a. Tentative construction schedule.
    b. Phasing.
    c. Critical work sequencing and long-lead items.
    d. Designation of key personnel and their duties.
    e. Procedures for processing field decisions and Change Orders.
    f. Procedures for RFIs.
    g. Procedures for testing and inspecting.
    h. Procedures for processing Applications for Payment.
    i. Distribution of the Contract Documents.
    j. Submittal procedures.
    k. Preparation of record documents.
    l. Use of the premises and existing building.
    m. Work restrictions.
    n. Mockups – schedule procedures and requirements.
    o. Working hours.
    p. Owner's occupancy requirements.
    q. Responsibility for temporary facilities and controls.
    r. Procedures for moisture and mold control.
    s. Procedures for disruptions and shutdowns.
    t. Construction waste management and recycling.
    u. Parking availability.
    v. Office, work, and storage areas.
    w. Equipment deliveries and priorities.
    x. First aid.
    y. Security.
    z. Progress cleaning.

3. Pre-Construction Meeting Minutes: The Architect and Owner will conduct the pre-construction meeting and will record and distribute minutes.
4. Do not proceed with work if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

C. Progress Meetings: Conduct progress meetings at monthly intervals.

1. Attendees: In addition to representatives of Owner, General Contractor and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of Project.

    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

        1) Review schedule for next period.

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

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

3. Minutes: The contractor shall be responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

    a. Schedule Updating: The contractor shall revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

1.1 SUMMARY

A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Contractor's Construction Schedule.
2. Construction schedule updating reports.
3. Daily construction reports.
4. Site condition reports.

1.2 INFORMATIONAL SUBMITTALS

A. Format for Submittals: Submit required submittals in the following format:

1. Working electronic copy of schedule file.
2. PDF file.

B. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.

C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.

D. Construction Schedule Updating Reports: Submit with Applications for Payment.

E. Daily Construction Reports: Submit at monthly intervals.

F. Site Condition Reports: Submit at time of discovery of differing conditions.

1.3 COORDINATION

A. Coordinate Contractor's Construction Schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

1.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion. Clearly note the Date of Substantial Completion on the schedule.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
   1. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.

      a. Mechanical, Electrical Plumbing, Roofing.

   2. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
   3. Substantial Completion: Indicate completion in advance of date established for Substantial Completion and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
   4. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.

C. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.

D. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:

   1. Unresolved issues.
   2. Unanswered Requests for Information.
   3. Rejected or unreturned submittals.
   4. Notations on returned submittals.
   5. Pending modifications affecting the Work and the Contract Time.

E. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

   1. Revise the schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
   2. Include a report with an updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
   3. As the Work progresses, indicate final completion percentage for each activity.

F. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.

G. Distribution: Distribute copies of approved schedule to Architect and Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices.
2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

1.5 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:

1. List of subcontractors at Project site.
2. List of separate contractors at Project site.
3. Approximate count of personnel at Project site.
4. Equipment at Project site.
5. Material deliveries.
6. High and low temperatures and general weather conditions, including presence of rain or snow.
7. Testing and inspection.
8. Accidents.
9. Meetings and significant decisions.
10. Stoppages, delays, shortages, and losses.
11. Meter readings and similar recordings.
12. Emergency procedures.
13. Orders and requests of authorities having jurisdiction.
14. Change Orders received and implemented.
15. Equipment or system tests and startups.
16. Partial completions and occupancies.
17. Substantial Completions authorized.

B. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013200

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SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Preconstruction photographs.
2. Concealed Work photographs.
3. Periodic construction photographs.
4. Final Completion construction photographs.
5. Preconstruction video recordings.
6. Periodic construction video recordings.
7. Construction webcam.

B. Related Requirements:

1. Section 017000 "Contract Closeout" for submitting photographic documentation as Project Record Documents at Project closeout.
2. Section 024119 "Selective Demolition" for photographic documentation before selective demolition operations commence.

1.3 INFORMATIONAL SUBMITTALS

A. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph and video recording. Indicate elevation or story of construction. Include same information as corresponding photographic documentation.

B. Digital Photographs: Submit image files within three days of taking photographs.

1. Submit photos electronically. Include copy of key plan indicating each photograph's location and direction.
2. Identification: Provide the following information with each image description in file metadata tag:

a. Name of Project.
b. Name and contact information for the photographer.
c. Name of Architect and Construction Manager.
d. Name of Contractor.
e. Date photograph was taken.

f. Description of location, vantage point, and direction.
g. Unique sequential identifier keyed to accompanying key plan.

C. Video Recordings: Submit video recordings within seven days of recording.

1. Submit video recordings electronically. Include a copy of key plan indicating each video's location and direction.
2. Identification: With each submittal, provide the following information in file metadata tag:

a. Name of Project.
b. Name and address of photographer.
c. Name of Architect and Construction Manager.
d. Name of Contractor.
e. Date video recording was recorded.
f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.

3. Transcript: Prepared on 8-1/2-by-11-inch paper, punched and bound in three-ring binders. Provide label on front and spine. Include a cover sheet with label information. Include name of Project and date of video recording on each page.

1.4 QUALITY ASSURANCE

A. Photographer Qualifications: An individual who has been regularly engaged as a professional photographer of construction projects for not less than three years.

1.5 FORMATS AND MEDIA

A. Digital Photographs: Provide color images in .JPG format, produced by a digital camera with minimum sensor size of 12 megapixels, and at an image resolution of not less than 3200 by 2400 pixels, and with vibration-reduction technology. Use flash in low light levels or backlit conditions.

B. Digital Video Recordings: Provide high-resolution, digital video in .MPEG format, produced by a digital camera with minimum sensor resolution of 12 megapixels and capable of recording in full high-definition mode with vibration-reduction technology. Provide supplemental lighting in low light levels or backlit conditions.

C. Digital Images: Submit digital media as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

D. Metadata: Record accurate date and time from camera.

E. File Names: Name media files with date, Project area and sequential numbering suffix.

1.6 CONSTRUCTION PHOTOGRAPHS

A. Photographer: Engage a qualified photographer to take construction photographs.

B. General: Take photographs with maximum depth of field and in focus.

1. Maintain key plan with each set of construction photographs that identifies each photographic location.

C. Preconstruction Photographs: Before commencement of the Work, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect.

1. Flag excavation areas and construction limits before taking construction photographs.
2. Take 20 photographs to show existing conditions adjacent to property before starting the Work.
3. Take 20 photographs of existing buildings either on or adjoining property, to accurately record physical conditions at the start of construction.
4. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.

D. Concealed Work Photographs: Before proceeding with installing work that will conceal other work, take photographs sufficiently in number, with annotated descriptions, to record nature and location of concealed Work, including, but not limited to, the following:

1. Underground utilities.
2. Underslab services.
3. Piping.
4. Electrical conduit.
5. Waterproofing and weather-resistant barriers.

E. Periodic Construction Photographs: Take 50 photographs weekly coinciding with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.

F. Final Completion Construction Photographs: Take 20 photographs after the date of Substantial Completion for submission as Project Record Documents. Architect] will inform the photographer of desired vantage points.

G. Preconstruction Video Recording: Before starting excavation, demolition, construction, record video recording of Project site and surrounding properties from different vantage points, as directed by Architect

1. Flag excavation areas, construction limits before recording construction video recordings.
2. Show existing conditions adjacent to the Project site before starting the Work.
3. Show existing buildings either on or adjoining Project site to accurately record physical conditions at the start of excavation, demolition, and construction.
4. Show protection efforts by Contractor.

H. Periodic Construction Video Recordings: Record video recording monthly coinciding with the cutoff date associated with each Application for Payment. Select vantage points to show status

of construction and progress since the last video recordings were recorded. Minimum recording time shall be 30 minutes.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013233

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Sections:

1. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.

B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.3 ACTION SUBMITTALS

A. Submittal Schedule: Within thirty days of Notice to Proceed, submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or modifications to submittals noted by the Architect and additional time for handling and reviewing submittals required by those corrections.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings, floor plans and elevations only, will be provided upon request by Architect for Contractor's use in preparing submittals.

1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings upon request by Contractor for use in preparing Shop Drawings.

a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
b. Contractor shall execute a data licensing agreement in the form of AIA Document C106, Digital Data Licensing Agreement.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 15 days for review of each resubmittal.

D. Identification and Information: Place a permanent label or title block on each paper copy submittal item for identification.

1. Indicate the name of firm or entity that prepared each submittal on label or title block.
2. Provide a space approximately 150 by 200 mm (6 by 8 inches) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
3. Include the following information for processing and recording action taken:

a. Project name.
b. Date.
c. Name of Architect.
d. Name of Construction Manager.
e. Name of Contractor.
f. Name of subcontractor.
g. Name of supplier.
h. Name of manufacturer.
i. Submittal number or other unique identifier, including revision identifier.

1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).

j. Number and title of appropriate Specification Section.
k. Drawing number and detail references, as appropriate.
l. Location(s) where product is to be installed, as appropriate.
m. Other necessary identification.

E. Identification and Information: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.

    a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Include the following information on an inserted cover sheet:

    a. Project name.
    b. Date.
    c. Name and address of Architect.
    d. Name of Construction Manager.
    e. Name of Contractor.
    f. Name of firm or entity that prepared submittal.
    g. Name of subcontractor.
    h. Name of supplier.
    i. Name of manufacturer.
    j. Number and title of appropriate Specification Section.
    k. Drawing number and detail references, as appropriate.
    l. Location(s) where product is to be installed, as appropriate.
    m. Related physical samples submitted directly.
    n. Other necessary identification.

F. Options: Identify options requiring selection by the Architect.

G. Deviations: Identify deviations from the Contract Documents on submittals.

H. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.

1. Submit one copy of the submittal to concurrent reviewer in addition to specified number of copies to Architect.

I. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will discard submittals received from sources other than Contractor.

1. Transmittal Form: Use AIA Document G810.
2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents,

including minor variations and limitations. Include the same identification information as related submittal.

J. Resubmittals: Make resubmittals in the same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

K. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

L. Use for Construction: Use only final submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements:

1. Action Submittals: Submit three paper copies of each submittal, unless otherwise indicated. Architect will return two copies.
2. Informational Submittals: Submit two paper copies of each submittal, unless otherwise indicated. Architect will not return copies.
3. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
4. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

    a. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.
    b. Provide a notarized statement on original paper copy certificates and certifications where indicated.

5. Test and Inspection Reports Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.

3. Include the following information, as applicable:

    a. Manufacturer's catalog cuts.
    b. Manufacturer's product specifications.
    c. Standard color charts.
    d. Statement of compliance with specified referenced standards.
    e. Testing by recognized testing agency.
    f. Application of testing agency labels and seals.
    g. Notation of coordination requirements.
    h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

    a. Wiring diagrams showing factory-installed wiring.
    b. Printed performance curves.
    c. Operational range diagrams.
    d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before or concurrent with Samples.
6. Submit Product Data in the following format:

    a. Three paper copies of Product Data, unless otherwise indicated. Architect will return two copies.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based upon Architect's digital data drawing files is otherwise permitted.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

    a. Identification of products.
    b. Schedules.
    c. Compliance with specified standards.
    d. Notation of coordination requirements.
    e. Notation of dimensions established by field measurement.
    f. Relationship and attachment to adjoining construction clearly indicated.
    g. Seal and signature of professional engineer if specified.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 215 by 280 mm (8-1/2 by 11 inches) but no larger than 600 by 900 mm (24 by 36 inches).
3. Submit Shop Drawings in the following format:

    a. Two opaque (bond) copies of each submittal. Architect will return one copy.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:

    a. Generic description of Sample.
    b. Product name and name of manufacturer.
    c. Sample source.
    d. Number and title of applicable Specification Section.

3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

    a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

    a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

    a. Number of Samples: Submit two sets of Samples. Architect will retain one Sample sets; remainder will be returned.

        1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."

F. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."

G. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."

H. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A.

1. Submit subcontract list in the following format:

a. Number of Copies: Two paper copies of subcontractor list, unless otherwise indicated. Architect will return one copy.

I. Coordination Drawings: Comply with requirements specified in Division 01 Section "Project Management and Coordination."

J. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

K. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on American Welding Society (AWS) forms. Include names of firms and personnel certified.

L. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

M. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

N. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

O. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

P. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

Q. Product Test Reports: Submit written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

R. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.

S. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."

T. Field Test Reports: Submit reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

U. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."

V. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Project Closeout and Maintenance/Material Submittals: Refer to requirements in Division 01 Section "Closeout Procedures."

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 33 00

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SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with the Contract Document requirements.

1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
2. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.2 DEFINITIONS

A. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.

1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).

D. Mockups: Physical assemblies of portions of the Work constructed to establish the standard by which the Work will be judged. Mockups are not Samples.

1. Mockups are used for one or more of the following:

a. Verify selections made under Sample submittals.
b. Demonstrate aesthetic effects.
c. Demonstrate the qualities of products and workmanship.
d. Demonstrate successful installation of interfaces between components and systems.
e. Perform preconstruction testing to determine system performance.

2. Product Mockups: Mockups that may include multiple products, materials, or systems specified in a single Section.
3. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction.

E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.

F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

G. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" has the same meaning as the term "testing agency."

I. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

J. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect.

1.3 DELEGATED DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If the criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated Design Services Statement: Submit a statement, signed and sealed by the responsible design professional licensed in the jurisdiction where the project is located, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.4 CONFLICTING REQUIREMENTS

A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified is the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 INFORMATIONAL SUBMITTALS

A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:

1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
2. Main wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.

B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

C. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

1.6 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, telephone number, and email address of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.

10. Record of temperature and weather conditions at time of sample taking and testing and inspection.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Statement on condition of substrates and their acceptability for installation of product.
2. Statement that products at Project site comply with requirements.
3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
5. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Statement that equipment complies with requirements.
2. Results of operational and other tests and a statement of whether observed performance complies with requirements.
3. Other required items indicated in individual Specification Sections.

1.7 QUALITY ASSURANCE

A. Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce the required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce the required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed

for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.

F. Specialists: Certain Specification Sections require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists will satisfy qualification requirements indicated and engage in the activities indicated.

1. Requirements of authorities having jurisdiction supersede requirements for specialists.

G. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented according to ASTM E329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:

a. Provide test specimens representative of proposed products and construction.
b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
c. When testing is complete, remove test specimens and test assemblies,; do not reuse products on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups of size indicated.
2. Build mockups in location indicated or, if not indicated, as directed by Architect.
3. Notify the Architect seven days in advance of dates and times when mockups will be constructed.

4. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed to perform the same tasks during the construction at Project.
5. Demonstrate the proposed range of aesthetic effects and workmanship.
6. Obtain Architect's approval of mockups before starting corresponding work, fabrication, or construction.

    a. Allow seven days for initial review and each re-review of each mockup.

7. Promptly correct unsatisfactory conditions noted by Architect's preliminary review, to the satisfaction of the Architect, before completion of final mockup.
8. Approval of mockups by the Architect does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
9. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
10. Demolish and remove mockups when directed unless otherwise indicated.

L. Specialty Mockups: See Section 014339 "Mockups" for additional construction requirements for integrated exterior mockups and room mockups.

1.8 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
2. Costs for retesting and reinspecting construction that replaces or is necessitated by Work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.

1. Engage a qualified testing agency to perform quality-control services.

    a. Contractor will not employ same entity engaged by Owner, unless agreed to in writing by Owner.

2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected Work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform duties of Contractor.

E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."

F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

G. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
6. Security and protection for samples and for testing and inspection equipment at Project site.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.9 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency and special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, as indicated in the Statement of Special Inspections attached to this Section, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's and authorities' having jurisdiction reference during normal working hours.

1. Submit log at Project closeout as part of Project Record Documents.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspection, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as

possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

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SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. Leon County School Board: The project owner and permitting authority having jurisdiction (AHJ)

C. Florida Building Code: shall include the Florida Building Code (FBC), Florida Accessibility Code Florida Plumbing Code, Florida Mechanical Code, Florida Energy Code,

D. Florida Fire Prevention Code (FFPC): A document prepared and issued by the Florida State Fire Marshal.

E. "Accepted": When used to convey Architect's action on Contractor's submittals, applications, and requests, "accepted" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

F. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

G. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

H. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

I. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

J. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.

K. "Provide": Furnish and install, complete and ready for the intended use.

L. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

M. “Designer-Builder, Architect, General Contractor” For purposes of this project, these terms collectively and individually refer to the Design Build Team.

1.2 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source.

1.3 ABBREVIATIONS AND ACRONYMS

A. Project Specific and Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."

B. 1. BDS– Bay District Schools.

C. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

1. AABC - Associated Air Balance Council; www.aabc.com.
2. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
3. AAPFCO - Association of American Plant Food Control Officials; www.aapfco.org.
4. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
5. AATCC - American Association of Textile Chemists and Colorists; www.aatcc.org.
6. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
7. ACI - American Concrete Institute; (Formerly: ACI International); www.concrete.org.
8. ACPA - American Concrete Pipe Association; www.concrete-pipe.org.
9. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
10. AF&PA - American Forest & Paper Association; www.afandpa.org.
11. AGA - American Gas Association; www.aga.org.
12. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
13. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
14. AI - Asphalt Institute; www.asphaltinstitute.org.
15. AIA - American Institute of Architects (The); www.aia.org.
16. AISC - American Institute of Steel Construction; www.aisc.org.
17. AISI - American Iron and Steel Institute; www.steel.org.
18. AITC - American Institute of Timber Construction; www.aitc-glulam.org.
19. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
20. ANSI - American National Standards Institute; www.ansi.org.

21. AOSA - Association of Official Seed Analysts, Inc.; www.aosaseed.com.
22. APA - APA - The Engineered Wood Association; www.apawood.org.
23. APA - Architectural Precast Association; www.archprecast.org.
24. API - American Petroleum Institute; www.api.org.
25. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
26. ARI - American Refrigeration Institute; (See AHRI).
27. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
28. ASCE - American Society of Civil Engineers; www.asce.org.
29. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
30. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
31. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
32. ASSE - American Society of Safety Engineers (The); www.asse.org.
33. ASSE - American Society of Sanitary Engineering; www.asse-plumbing.org.
34. ASTM - ASTM International; (American Society for Testing and Materials International); www.astm.org.
35. ATIS - Alliance for Telecommunications Industry Solutions; www.atis.org.
36. AWEA - American Wind Energy Association; www.awea.org.
37. AWI - Architectural Woodwork Institute; www.awinet.org.
38. AWMAC - Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
39. AWPA - American Wood Protection Association; (Formerly: American Wood-Preservers' Association); www.awpa.com.
40. AWS - American Welding Society; www.aws.org.
41. AWWA - American Water Works Association; www.awwa.org.
42. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
43. BIA - Brick Industry Association (The); www.gobrick.com.
44. BICSI - BICSI, Inc.; www.bicsi.org.
45. BIFMA - BIFMA International; (Business and Institutional Furniture Manufacturer's Association); www.bifma.com.
46. BISSC - Baking Industry Sanitation Standards Committee; www.bissc.org.
47. BWF - Badminton World Federation; (Formerly: International Badminton Federation); www.bwfbadminton.org.
48. CDA - Copper Development Association; www.copper.org.
49. CEA - Canadian Electricity Association; www.electricity.ca.
50. CEA - Consumer Electronics Association; www.ce.org.
51. CFFA - Chemical Fabrics & Film Association, Inc.; www.chemicalfabricsandfilm.com.
52. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
53. CGA - Compressed Gas Association; www.cganet.com.
54. CIMA - Cellulose Insulation Manufacturers Association; www.cellulose.org.
55. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
56. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
57. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
58. CPA - Composite Panel Association; www.pbmdf.com.
59. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.
60. CRRC - Cool Roof Rating Council; www.coolroofs.org.
61. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
62. CSA - Canadian Standards Association; www.csa.ca.

63. CSA - CSA International; (Formerly: IAS - International Approval Services); www.csa-international.org.
64. CSI - Construction Specifications Institute (The); www.csinet.org.
65. CSSB - Cedar Shake & Shingle Bureau; www.cedarbureau.org.
66. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.cti.org.
67. CWC - Composite Wood Council; (See CPA).
68. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
69. DHI - Door and Hardware Institute; www.dhi.org.
70. ECA - Electronic Components Association; (See ECIA).
71. ECAMA - Electronic Components Assemblies & Materials Association; (See ECIA).
72. ECIA ? Electronic Components Industry Association; www.eciaonline.org.
73. EIA - Electronic Industries Alliance; (See TIA).
74. EIMA - EIFS Industry Members Association; www.eima.com.
75. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
76. ESD - ESD Association; (Electrostatic Discharge Association); www.esda.org.
77. ESTA - Entertainment Services and Technology Association; (See PLASA).
78. EVO - Efficiency Valuation Organization; www.evo-world.org.
79. FIBA - Federation Internationale de Basketball; (The International Basketball Federation); www.fiba.com.
80. FIVB - F?d?ration Internationale de Volleyball; (The International Volleyball Federation); www.fivb.org.
81. FM Approvals - FM Approvals LLC; www.fmglobal.com.
82. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
83. FRSA - Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.; www.floridaroof.com.
84. FSA - Fluid Sealing Association; www.fluidsealing.com.
85. FSC - Forest Stewardship Council U.S.; www.fscus.org.
86. GA - Gypsum Association; www.gypsum.org.
87. GANA - Glass Association of North America; www.glasswebsite.com.
88. GS - Green Seal; www.greenseal.org.
89. HI - Hydraulic Institute; www.pumps.org.
90. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
91. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
92. HPVA - Hardwood Plywood & Veneer Association; www.hpva.org.
93. HPW - H. P. White Laboratory, Inc.; www.hpwhite.com.
94. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
95. IAS - International Accreditation Service; www.iasonline.org.
96. IAS - International Approval Services; (See CSA).
97. ICBO - International Conference of Building Officials; (See ICC).
98. ICC - International Code Council; www.iccsafe.org.
99. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
100. ICPA - International Cast Polymer Alliance; www.icpa-hq.org.
101. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
102. IEC - International Electrotechnical Commission; www.iec.ch.
103. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
104. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
105. IESNA - Illuminating Engineering Society of North America; (See IES).
106. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
107. IGMA - Insulating Glass Manufacturers Alliance; www.igmaonline.org.

108. IGSHPA - International Ground Source Heat Pump Association; www.igshpa.okstate.edu.
109. ILI - Indiana Limestone Institute of America, Inc.; www.iliai.com.
110. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
111. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org.
112. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).
113. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
114. ISO - International Organization for Standardization; www.iso.org.
115. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
116. ITU - International Telecommunication Union; www.itu.int/home.
117. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.
118. LMA - Laminating Materials Association; (See CPA).
119. LPI - Lightning Protection Institute; www.lightning.org.
120. MBMA - Metal Building Manufacturers Association; www.mbma.com.
121. MCA - Metal Construction Association; www.metalconstruction.org.
122. MFMA - Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
123. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
124. MHIA - Material Handling Industry of America; www.mhia.org.
125. MIA - Marble Institute of America; www.marble-institute.com.
126. MMPA - Moulding & Millwork Producers Association; (Formerly: Wood Moulding & Millwork Producers Association); www.wmmpa.com.
127. MPI - Master Painters Institute; www.paintinfo.com.
128. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
129. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
130. NACE - NACE International; (National Association of Corrosion Engineers International); www.nace.org.
131. NADCA - National Air Duct Cleaners Association; www.nadca.com.
132. NAIMA - North American Insulation Manufacturers Association; www.naima.org.
133. NBGQA - National Building Granite Quarries Association, Inc.; www.nbgqa.com.
134. NCAA - National Collegiate Athletic Association (The); www.ncaa.org.
135. NCMA - National Concrete Masonry Association; www.ncma.org.
136. NEBB - National Environmental Balancing Bureau; www.nebb.org.
137. NECA - National Electrical Contractors Association; www.necanet.org.
138. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
139. NEMA - National Electrical Manufacturers Association; www.nema.org.
140. NETA - InterNational Electrical Testing Association; www.netaworld.org.
141. NFHS - National Federation of State High School Associations; www.nfhs.org.
142. NFPA - NFPA; (National Fire Protection Association); www.nfpa.org.
143. NFPA - NFPA International; (See NFPA).
144. NFRC - National Fenestration Rating Council; www.nfrc.org.
145. NHLA - National Hardwood Lumber Association; www.nhla.com.
146. NLGA - National Lumber Grades Authority; www.nlga.org.
147. NOFMA - National Oak Flooring Manufacturers Association; (See NWFA).
148. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
149. NRCA - National Roofing Contractors Association; www.nrca.net.

150. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
151. NSF - NSF International; (National Sanitation Foundation International); www.nsf.org.
152. NSPE - National Society of Professional Engineers; www.nspe.org.
153. NSSGA - National Stone, Sand & Gravel Association; www.nssga.org.
154. NTMA - National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
155. NWFA - National Wood Flooring Association; www.nwfa.org.
156. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
157. PDI - Plumbing & Drainage Institute; www.pdionline.org.
158. PLASA - PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); www.plasa.org.
159. RCSC - Research Council on Structural Connections; www.boltcouncil.org.
160. RFCI - Resilient Floor Covering Institute; www.rfci.com.
161. RIS - Redwood Inspection Service; www.redwoodinspection.com.
162. SAE - SAE International; (Society of Automotive Engineers); www.sae.org.
163. SCTE - Society of Cable Telecommunications Engineers; www.scte.org.
164. SDI - Steel Deck Institute; www.sdi.org.
165. SDI - Steel Door Institute; www.steeldoor.org.
166. SEFA - Scientific Equipment and Furniture Association; www.sefalabs.com.
167. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
168. SIA - Security Industry Association; www.siaonline.org.
169. SJI - Steel Joist Institute; www.steeljoist.org.
170. SMA - Screen Manufacturers Association; www.smainfo.org.
171. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
172. SMPTE - Society of Motion Picture and Television Engineers; www.smpte.org.
173. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
174. SPIB - Southern Pine Inspection Bureau; www.spib.org.
175. SPRI - Single Ply Roofing Industry; www.spri.org.
176. SRCC - Solar Rating and Certification Corporation; www.solar-rating.org.
177. SSINA - Specialty Steel Industry of North America; www.ssina.com.
178. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
179. STI - Steel Tank Institute; www.steeltank.com.
180. SWI - Steel Window Institute; www.steelwindows.com.
181. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
182. TCA - Tilt-Up Concrete Association; www.tilt-up.org.
183. TCNA - Tile Council of North America, Inc.; (Formerly: Tile Council of America); www.tileusa.com.
184. TEMA - Tubular Exchanger Manufacturers Association, Inc.; www.tema.org.
185. TIA - Telecommunications Industry Association; (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org.
186. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
187. TMS - The Masonry Society; www.masonrysociety.org.
188. TPI - Truss Plate Institute; www.tpinst.org.
189. TPI - Turfgrass Producers International; www.turfgrasssod.org.
190. TRI - Tile Roofing Institute; (Formerly: National Tile Roofing Manufacturing Association); www.tileroofing.org.
191. UBC - Uniform Building Code; (See ICC).

192. UL - Underwriters Laboratories Inc.; www.ul.com.
193. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
194. USAV - USA Volleyball; www.usavolleyball.org.
195. USGBC - U.S. Green Building Council; www.usgbc.org.
196. USITT - United States Institute for Theatre Technology, Inc.; www.usitt.org.
197. WASTEC - Waste Equipment Technology Association; www.wastec.org.
198. WCLIB - West Coast Lumber Inspection Bureau; www.wclib.org.
199. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
200. WDMA - Window & Door Manufacturers Association; www.wdma.com.
201. WI - Woodwork Institute; (Formerly: WIC - Woodwork Institute of California); www.wicnet.org.
202. WMMPA - Wood Moulding & Millwork Producers Association; (See MMPA).
203. WSRCA - Western States Roofing Contractors Association; www.wsrca.com.
204. WPA - Western Wood Products Association; www.wwpa.org.

D. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

1. DIN - Deutsches Institute for Normung e.V.; www.din.de.
2. IAPMO - International Association of Plumbing and Mechanical Officials; www.iapmo.org.
3. ICC - International Code Council; www.iccsafe.org.
4. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.

E. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

1. COE - Army Corps of Engineers; www.usace.army.mil.
2. CPSC - Consumer Product Safety Commission; www.cpsc.gov.
3. DOC - Department of Commerce; National Institute of Standards and Technology; www.nist.gov.
4. DOD - Department of Defense; http://dodssp.daps.dla.mil.
5. DOE - Department of Energy; www.energy.gov.
6. EPA - Environmental Protection Agency; www.epa.gov.
7. FAA - Federal Aviation Administration; www.faa.gov.
8. FG - Federal Government Publications; www.gpo.gov.
9. GSA - General Services Administration; www.gsa.gov.
10. HUD - Department of Housing and Urban Development; www.hud.gov.
11. LBL - Lawrence Berkeley National Laboratory; Environmental Energy Technologies Division; http://eetd.lbl.gov.
12. OSHA - Occupational Safety & Health Administration; www.osha.gov.
13. SD - Department of State; www.state.gov.
14. TRB - Transportation Research Board; National Cooperative Highway Research Program; www.trb.org.
15. USDA - Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory; www.ars.usda.gov.
16. USDA - Department of Agriculture; Rural Utilities Service; www.usda.gov.
17. USDJ - Department of Justice; Office of Justice Programs; National Institute of Justice; www.ojp.usdoj.gov.
18. USP - U.S. Pharmacopeia; www.usp.org.

19. USPS - United States Postal Service; www.usps.com.

F. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list.

1. CFR - Code of Federal Regulations; Available from Government Printing Office; www.gpo.gov/fdsys.
2. DOD - Department of Defense; Military Specifications and Standards; Available from Department of Defense Single Stock Point; http://dodssp.daps.dla.mil.
3. DSCC - Defense Supply Center Columbus; (See FS).
4. FED-STD - Federal Standard; (See FS).
5. FS - Federal Specification; Available from Department of Defense Single Stock Point; http://dodssp.daps.dla.mil.

    a. Available from Defense Standardization Program; www.dsp.dla.mil.
    b. Available from General Services Administration; www.gsa.gov.
    c. Available from National Institute of Building Sciences/Whole Building Design Guide; www.wbdg.org/ccb.

6. MILSPEC - Military Specification and Standards; (See DOD).
7. USAB - United States Access Board; www.access-board.gov.
8. USATBCB - U.S. Architectural & Transportation Barriers Compliance Board; (See USAB).

G. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

1. CBHF; State of California; Department of Consumer Affairs; Bureau of Electronic Appliance and Repair, Home Furnishings and Thermal Insulation; www.bearhfti.ca.gov.
2. CCR; California Code of Regulations; Office of Administrative Law; California Title 24 Energy Code; www.calregs.com.
3. CDHS; California Department of Health Services; (See CDPH).
4. CDPH; California Department of Public Health; Indoor Air Quality Program; www.cal-iaq.org.
5. CPUC; California Public Utilities Commission; www.cpuc.ca.gov.
6. SCAQMD; South Coast Air Quality Management District; www.aqmd.gov.
7. TFS; Texas Forest Service; Forest Resource Development and Sustainable Forestry; http://txforestservice.tamu.edu.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 014330 - QUALITY ASSURANCE PROGRAM FOR FIRESTOPPING PENETRATIONS AND JOINTS

PART 1 - GENERAL

1.1 SUMMARY:

A. In compliance with the Florida Fire Prevention Code (F.F.P.C.) the Owner will employ a Special Inspector to prepare and monitor a Quality Assurance Program for the installation of firestop devices and fire-resistive systems installed to protect penetrations and joints.

B. Related work specified elsewhere:

1. Firestopping.

1.2 GENERAL:

A. The contract requirements for this project are contained in the Contract Documents. The following guidelines shall be used in conjunction with a careful study of the Contract Documents.

1. Review the Contract Documents and ensure that they are approved and available before the start of any phase of the firestopping work.

2. Review, with the Contractor, the construction procedure before the start of any phase of firestopping work and ensure that it accommodates the design.

3. Review, with the independent testing laboratory and Contractor, the requirements as to the type of inspection and testing that is necessary before the start of any phase of the firestopping work. Establish a clear method for marking all tested and inspected items. Confirm that the Testing Agency is using qualified personnel and completing all tests and inspections in a timely and professional manner.

4. After delivery to the job, inspect firestopping materials for compliance with the Contract Documents and identify damage and flaws. Confirm that the firestopping materials are being protected and stored properly.

5. Verify that all tests, sampling or reports have been completed before the finished work is covered and no longer capable of being inspected or tested.

1.3 RESPONSIBILITIES OF THE SPECIAL INSPECTOR:

A. The Special Inspector will be responsible to the enforcement agency (the Authority Having Jurisdiction (AHJ)) and will report their inspection results in accordance with the current governing Florida Fire Protection Code (F.F.P.C.).

B. A Special Inspector shall be one of the following:

1. A certified Code Official/Inspector, licensed Architect or engineer, licensed professional in the construction industry, certified representative of a quality assurance or an accredited testing laboratory.

2. A Special Inspector shall have a minimum of two (2) years in construction field experience.

C. The Special Inspector shall present credentials to and be accepted by the AHJ. The Special Inspector will submit the proposed report format documents to the AHJ.

D. The Special Inspector shall be completely independent of the Installer, Contractor, Manufacturer or supplier of any material being inspected. The Special Inspector shall not be a competitor of the Installer, Contractor, Manufacturer, or supplier of any materials being inspected.

E. The Special Inspector is responsible for observing and verifying that the construction of the firestop and fire-resistive joint systems comply with the Contract Documents. Contract Documents are defined as the permitted plans, addenda, supplemental instructions, the specifications with all amendments thereto, approved submittals, and this quality program.

F. The Special Inspector may use a representative to perform inspection work. The Special Inspector shall insure the authorized representative is qualified by education to perform the duties assigned by the Special Inspector and shall maintain responsible supervisory control over the representative pursuant to the AHJ. The Special Inspector shall be responsible for the work of the authorized representative, including reviewing reports and spot checks. The Special Inspector shall personally visit the project site at points during construction which he deems key to the Quality Assurance Program.

G. The Special Inspector or their authorized representative will visit the project site as required by the construction activity to inspect the elements during the progress of the work. Further, it is required that the Special Inspector visit the project on a regular periodic basis during construction of the of elements.

H. The Special Inspector will report inspections of materials, workmanship or other features of construction deviating from the requirements of the Contract Documents. Guidelines for inspections covering specific areas of' construction are listed herein. The Special Inspector shall complete inspection reports after each inspection, sign each report and forward them to the Architect of Record, with copies to the Engineer of Record, Owner and Contractor. Submit reports on a monthly basis.

I. The acceptance of a firestop or fire resistive component by the Special Inspector in no way relieves the Contractor of responsibility for complying with the requirements of the Contract Documents.

J. Neither the Special Inspector or their authorized representatives shall make design decisions or direct the Contractor to deviate from the approved Contract Documents. Deviations from the approved Contract Documents shall be brought to the attention of the Contractor in a timely manner, so as to avert undue expense. If the Contractor corrects, to the satisfaction of the Special Inspector, no further action is necessary. If the deviations are not corrected to the satisfaction of the Special Inspector, they shall be brought to the attention of the Registered Design Professional of record and the Owner.

K. The Special Inspector shall institute Quality Assurance procedures including, but not limited to, requiring scheduled and unscheduled visits, utilization of relevant check lists, use of an inspection report and insuring that the inspector or the authorized representative is at the project whenever so required by the Quality Assurance Program.

L. The Special Inspector will maintain a written record of Quality Assurance Program building inspection activities and will render signed reports promptly to the Owner with copies to the Architect of Record, the Engineer of Record and the Contractor. Individual reports may include any or all of the following:

1. General report on construction progress.

2. Weather conditions.

3. Other personnel present during the inspections.

4. Detailed check-off reports of deficiencies previously noted.

5. Reports of type corrections of deficiencies previously noted.

6. Special test reports, sketches or other supplemental data.

M. The Special Inspector shall provide inspection services and/or testing which is in accordance with the following: Florida Fire Prevention Code - 6 th Edition; NFPA 1 Fire Code; Chapter 12 “Features of Fire Protection”; sections 12.3.2 Quality Assurance for Penetrations and Joints; 12.3.2.1 and 12.3.2.2.

N. The Special Inspector shall provide inspection services and testing per the following standards:

1. ASTM E814, Standard Test Method for Fire Tests of Through Penetration Fire Stops

2. Or ANSI/UL 1479, Standard for Fire Tests of Through Penetration Firestops.

3. ASTM E2174, Standard Practice for On-site Inspection of Installed Fire Stops.

4. ASTM E1966, Standard Test Method for Fire-resistive Joint Systems

5. Or ANSI/UL 2079, Standard Tests for Fire Resistance of Building Joint Systems.

6. ASTM E2393, Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers.

O. The Quality Assurance Program allows for general and specific items of concern, it does not limit the Special Inspector to only items listed. The Special Inspector's judgment shall prevail on items not specifically covered.

P. The Special Inspector shall provide a final closing document containing all previous reports, correspondence and information for the RDP to review for compliance of the original quality assurance program intent. Closing documents shall be signed and sealed by the RDP then submitted to the AHJ.

1.4 RESPONSIBILITIES OF THE CONTRACTOR:

A. The Contractor shall furnish the Special Inspector, and keep current, a schedule of Construction. The Contractor shall notify the Special Inspector 48 hours prior to the need for an inspection. The Contractor shall not cover work needing inspection prior to inspection by the Special Inspector. The Contractor shall make all areas available and safe for inspection.

B. The Contractor shall provide the Special Inspector with a copy of each approved submittal related to firestop and fire resistive joint systems, materials and components for use in verifying proper construction. Such submittals shall include, but not be limited to, the following:

1. Contract documents, including all revisions.

2. Firestop and Joint shop drawings and product data.

C. All submittals provided to the Special Inspector shall bear the stamp and initials of the Contractor and the Architect or Engineer of Record.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used) End of Section

END OF SECTION 014330

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for support facilities, and security and protection facilities.

B. Related Requirements:

1. Section 010100 "Summary of Work" for work restrictions and limitations on utility interruptions.

1.2 INFORMATIONAL SUBMITTALS

A. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

C. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.

1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
2. Indicate methods to be used to avoid trapping water in finished work.

1.3 QUALITY ASSURANCE

A. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

B. Accessible Temporary Egress: Comply with applicable provisions in the United States Access Board's ADA-ABA Accessibility Guidelines and the Florida Building Code as required.

1.4 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

3.2 SUPPORT FACILITIES INSTALLATION

A. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

B. Parking: parking areas for construction personnel.

C. Storage and Staging: Use designated areas of Project site for storage and staging needs.

D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.

E. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs as indicated on Drawings.
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

    a. Provide temporary, directional signs for construction personnel and visitors.

3. Maintain and touch up signs so they are legible at all times.

F. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

G. Temporary Elevator Use: Use of elevators is not permitted.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.

B. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

C. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

D. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.

E. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

F. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide signage directing occupants to temporary egress.

G. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site.
4. Comply with the requirements of the Florida Building Code.

3.4 MOISTURE AND MOLD CONTROL

A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.

B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Discard or replace water-damaged material.
2. Do not install material that is wet.
3. Discard and replace stored or installed material that begins to grow mold.
4. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.

D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

3.5 OPERATION, TERMINATION, AND REMOVAL

A. Maintenance: Maintain facilities in good operating condition until removal.

B. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

END OF SECTION 015000

SECTION 017000 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 REQUIREMENTS:

A. Closeout is hereby defined to include general requirement near end of Contract Time in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner and similar actions evidencing completion of the Work. Time of closeout is directly related to "Substantial Completion" and therefore may be either a single time period for entire work or a series of time periods for individual parts of the work which have been certified as substantially complete at different dates. That time variation (if any) shall be applicable to other provisions of this section.

1.2 PREREQUISITES TO SUBSTANTIAL COMPLETION:

A. Prior to requesting Architect's/Engineer's inspection for certification of substantial completion for either entire Work or portions thereof, complete the following and list known exceptions in request:

1. In progress payment request, show either 100% completion for portion of work claimed as "substantially complete" or list incomplete items, value of incompletion and reasons for being incomplete.

2. Include supporting documentation for completion as indicated in these Contract Documents.

3. Submit statement showing accounting of changes to the Contract sum.

4. Advise Owner of pending insurance change-over requirements.

5. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents.

6. Obtain and submit releases enabling Owner's full and unrestricted use of the Work and access to services and utilities, including (where required) occupancy permits, operating certificates and similar releases.

7. Deliver tools, spare parts, extra stocks of materials and similar physical items to Owner. Obtain signed delivery receipt.

8. Discontinue (or change over) and remove from the project site temporary facilities and services, along with construction tools and facilities, mock-ups and similar elements.

9. Deliver original, fully executed hard PERMIT Card with all appropriate signatures indicating each applicable Division is finally completed and signed off by the appropriate tradesperson.

B. Upon receipt of Contractor's request, Architect/Engineer will either proceed with inspection or advise contractor of prerequisites not fulfilled. Following initial inspection, Architect/Engineer will either prepare certificate of substantial completion or advise the contractor of work which must be performed prior to issuance of certificate; and repeat inspection when requested and assured that work has been substantially completed. Results of completed inspection will form initial "punch-list" for final acceptance.

1.3 PREREQUISITES TO FINAL ACCEPTANCE

A. Prior to requesting Architect's/Engineer's final inspection for certification of final acceptance and final payment as required by General Conditions, complete the following and list known exceptions (if any) in request:

1. Submit final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.

2. Submit updated final statement accounting for additional (final) changes to Contract Sum.

3. Submit certified copy of Architect's/Engineer's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, endorsed and dated by Architect/Engineer.

4. Submit final meter readings for utilities, measured record of stored fuel and similar data as of time of substantial completion or when Owner took possession of and responsibility for corresponding elements of the work.

5. Submit original Consent of Surety.

6. Submit final liquidated damages settlement statement, acceptable to Owner.

7. Submit record drawings, maintenance manuals, final project photographs, damage or settlement survey, property survey and similar final record information.

8. Complete final cleaning up requirements, including touch-up of marred surfaces.

9. Touch-up and otherwise repair and restore marred exposed finishes.

10. Revise and submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Re-inspection Procedure:

1. Upon receipt of Contractor's notice that work has been completed including punch-list items resulting from earlier inspections, and excepting incomplete items delayed because of acceptable circumstances, Architect/Engineer will re-inspect work. Upon completion of re-inspection, Architect/Engineer will either prepare certificate of final acceptance or advise Contractor of work not completed or obligations not fulfilled as required for final acceptance. If necessary, procedure will be repeated.

2. If re-inspections of above referenced items are required by the Architect/Engineer due to the failure of any of the Work to comply with the claims made by the Contractor as to the status of their completeness, the Owner will deduct the costs incurred by such re-inspections from the Contract amount.

1.4 RECORD DOCUMENT SUBMITTAL:

A. Specific requirements for record documents are indicated in individual sections of these specifications. Other requirements are indicated in General Conditions. General submittal requirements are indicated in Section 01 33 00. Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for Architect's/Engineer's reference during normal working hours.

At time of final acceptance, submit complete sets of all required record documents to the Architect/Engineer for Owner's records.

B. Record Drawings:

1. Maintain a white-print set of contract drawings and shop drawings in clean, undamaged condition with mark-up of actual installations which vary substantially from the work as originally shown. Mark whichever drawings are most capable of showing "field" condition fully and accurately; however, where shop drawings are used for mark-up, record a cross-reference at corresponding location on working drawings. Mark-up new information which is recognized to be of importance to Owner but was for some reason not shown on either contract drawings or shop drawings. Give particular attention to concealed work which would be difficult to measure and record at a later date. Note related change order numbers where applicable.

2. Upon completion of the Work, this data shall be recorded to scale electronically, by a competent draftsman, Where changes are to be recorded, the drawings shall reflect the work as-built. Where the work was installed exactly as shown on the Contract drawings, the prints shall not be disturbed. In showing the changes, the same legend shall be used to identify piping, etc., as was used on the Contract Drawings. The contractor may insert keyed photographs of concealed elements of construction directly on the drawings. In so doing, the photographs shall be identified by number and/ or letter and their location keyed into the location on the drawings.

3. The Contractor shall review the completed record drawings and ascertain that all data furnished on the drawings are accurate and truly represent the Work as actually installed. When manholes, boxes, underground conduits, plumbing, hot or chilled water lines, etc., are involved as part of the Work, the Contractor shall furnish true elevations and locations, all properly referenced for the site. Information for reference data can be obtained from the office of the Architect/Engineer. Upon completion, the subcontractor involved shall date and sign the drawings, signifying compliance with the requirements set forth herein prior to submission of prints required.

4. The Contractor shall sign and date all pages to certify completeness of the Record Set of Drawings. Contractor shall submit the two sets of prints to the Architect/Engineer for the Owner.

5. Provide as-built surveys as may be required by various Authorities Having Jurisdiction including but not limited to the Water Management District. Refer to requirements elsewhere in the project documents for specific requirements.

C. Electronic Files of Record Drawings

1. If the Construction Documents were created by Computer Aided Drafting (CAD) then upon the receipt of the final record drawings from the Contractor, the Architect/Engineer shall revise the electronic files to reflect the as-built conditions. The CAD files shall be in a file format that can be read by Autocad version 2020.

2. A copy of the electronic files shall be recorded onto compact disk media. Two (2) copies of the disk shall be submitted to the Owner at time of transference of the Record Drawings.
   a. Each disk shall be labeled with:
      - Name of Project
      - Name of General Contractor and or Construction Manager at Risk
      - Name of Architect, or Engineer, and their Address
      - Description of software used to create files

D. Record Specifications:

Maintain one copy of specifications including addenda, change orders and similar modifications issued in printed form during construction and mark-up variations (of substance) in actual Work in comparison with text of specifications and modifications as issued. Give particular attention to substitutions, selection of options and similar information on work where it is concealed or cannot otherwise be readily discerned at a later date by direct observation. Note related record drawing information and product data where applicable.

E. Record Shop Drawings and Product Data:

Maintain one copy of each product data submittal and mark-up significant variations in actual work in comparison with submitted information. Include both variations from manufacturer's instructions and recommendations for installation. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned at a later date by direct observation. Note related change orders and mark-up or record drawings and specifications.

F. Record Sample Submittal:

Immediately prior to date(s) of substantial completion, Architect/Engineer (and including Owner's personnel where desired) will meet with Contractor at site and will determine which (if any) of submitted samples maintained by Contractor during progress of the work are to be transmitted to Owner for record purposes. Comply with Architect's/Engineer's instructions for packaging, identification marking and delivery to owner's sample storage space.

G. Miscellaneous Record Submittals:

Refer to other sections of these specifications for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to date(s) of substantial completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference.

H. Warranties and Bonds:

See section 01 74 00

FINAL CLEANING

A. Special cleaning for specific units of work is specified in sections of Divisions 2 through 16. General cleaning during progress or work is specified in General Conditions and as temporary service in "Temporary Facilities" section of this Division. Provide final cleaning of the work at time indicated, consisting of cleaning each surface or unit of Work to normal "clean" condition expected for a first-class building cleaning and maintenance program. Comply with manufacturer's instructions for cleaning operations. The following are examples of cleaning levels required:

1. Remove labels which are not required as permanent labels.

2. Clean transparent materials including mirrors and window or glass to a polished condition removing substances which are noticeable as vision-obscuring materials. replace broken glass and damaged transparent materials.

3. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of dust, stains, films and similar noticeable distracting substances. Avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.

4. Wipe surfaces of mechanical and electrical equipment clean; remove excess lubrication and other substance.

5. Remove debris and surface dust from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes and similar spaces.

6. Clean project site (yard and grounds) of litter and foreign substances. Sweep paved areas to a broom-clean condition; remove stains, petro-chemical spills and other foreign deposits. Rake grounds which are neither planted nor paved, to a smooth, even-textured surface.

B. Removal of Protection:

Remove temporary protection devices and facilities which were installed during course of the Work to protect previously completed Work during remainder of construction period, take special care to remove all protective covers from fire alarm detectors.

C. Compliances:

Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at site or bury debris or excess materials on Owner's property or discharge volatile or other harmful or dangerous materials into drainage systems; remove waste materials from site and dispose of in a lawful manner.

Where extra materials of value remaining after completion of associated Work have become Owner's property, dispose of these to Owner's best advantage as directed.

CLOSEOUT DOCUMENTS CHECKLIST

All items listed below, with the exception of Item No. 1 and Item No. 2 shall be bound in individual heavy

duty 3-ring vinyl covered binders. Mark appropriate identification on front and spine of each binder.

All items shall be submitted in triplicate within fifteen day of Substantial Completion for the project.

1. Application and Certification for Payment (Final). Four copies with original signatures and seals.

2. Final schedule of contract values. Four copies attached to Application and Certification for Payment.

3. Contractor's Affidavit of Payment of Debts (AIA G706).

4. Contractor's Affidavit of Release of Liens from all Contractors, Subcontractors, and Suppliers (AIA G706A).

5. Power of Attorney from Surety to make Final Payment.

6. Consent of Surety to Final Payment (AIA G707).

7. Contractor's Guarantee and Warranties as specified under Division 01740.

8. Fully executed Roof Warranty in the name of the Owner.

9. Special warranties as required by the specifications, in the name of the Owner.

10. Provide a list summarizing the various guarantees and warranties and stating the following with respect to each:
    a. Character of work affected.
    b. Name, address and telephone number of each Subcontractor.
    c. Name, address and telephone number of each local firm designated to provide warranty service for an out-of-town firm. Copy of agreement between the firms.
    d. Period of guarantee and effective date.
    e. Statement of guarantee in the following form.

    "If within any guarantee period, repairs or changes are required in conjunction with the guarantee work, which in the opinion of the Architect or Engineer is rendered necessary as the result of the use of materials, equipment or workmanship, which are defective or inferior, or not in accordance with the terms of the Contract, the Contractor shall, upon written notice from the Owner, and without expense to the Owner, proceed within twenty four (24) house to place in satisfactory condition in every particular all of such guaranteed work, correct all defects therein; and make good all damages to the structure or site or equipment or contents thereof disturbed in fulfilling any such guarantee work.

11. Operation and Maintenance Manuals.

12. Notarized Affidavit of all Subcontractor payrolls, bills for materials/equipment and other indebtedness paid and satisfied.

13. As-built drawings. Provide in accordance with other specification sections.

14. Punch lists signed off by Owner's Representatives.

15. Certificate of Occupancy.

END OF SECTION 01 70 00

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SECTION 017300 – EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work, including, but not limited to, the following:

1. Construction layout.
2. Installation of the Work.
3. Cutting and patching.
4. Progress cleaning.
5. Starting and adjusting.
6. Protection of installed construction.
7. Correction of the Work.

B. Related Requirements:

1. Section 017000 "Contract Closeout " for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
2. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.

1.2 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.3 QUALITY ASSURANCE

A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: When cutting and patching structural elements, or when encountering the need for cutting and patching of elements whose structural function is not known, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.

2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials. Use materials that are not considered hazardous.

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

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine roofs for suitable conditions where products and systems are to be installed.
2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect in accordance with requirements in Section 013100 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks and existing conditions. If discrepancies are discovered, notify Architect promptly.

B. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 INSTALLATION

A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.

2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure satisfactory results as judged by Architect. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations, so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy of type expected for Project.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.

F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.

G. Templates: Obtain and distribute to the parties involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.

1. Allow for building movement, including thermal expansion and contraction.
2. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Architect. Fit exposed connections together to form hairline joints.

3.5 CUTTING AND PATCHING

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

C. Temporary Support: Provide temporary support of Work to be cut.

D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
5. Proceed with patching after construction operations requiring cutting are complete.

G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as practicable, as judged by Architect. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

    a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    b. Restore damaged pipe covering to its original condition.
3. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

H. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.6 PROGRESS CLEANING

A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

    a. Use containers intended for holding waste materials of type to be stored.

4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

F. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.

G. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

H. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

I. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in the condition that existed at commencement of the Work.

C. Comply with the manufacturer's written instructions for temperature and relative humidity.

3.8 CORRECTION OF THE WORK

A. Repair or remove and replace damaged, defective, or nonconforming Work. Restore damaged substrates and finishes.

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.

C. Restore permanent facilities used during construction to their specified condition.

D. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

F. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

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SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Disposing of nonhazardous demolition and construction waste.

1.2 DEFINITIONS

A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.

C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner’s property.

1.3 QUALITY ASSURANCE

A. Waste Management Coordinator Qualifications: Experienced firm, or individual employed and assigned by General Contractor, with a record of successful waste management coordination of projects with similar requirements.

1.4 WASTE MANAGEMENT PLAN

A. Submit waste management plan.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. General: Except for items or materials to be salvaged or recycled, remove waste materials and legally dispose of at designated spoil areas on Owner’s property.

C. Burning: Do not burn waste materials.

END OF SECTION 017419

SECTION 017800 - WARRANTIES AND BONDS

PART 1 - GENERAL

REQUIREMENTS:

A. Preparation and submittal of warranties and bonds.

B. Schedule of submittals.

RELATED REQUIREMENTS:

A. Section of 01 70 00 - Contract Closeout

B. Individual Specifications Sections: Warranties and bonds required for specific Products or work.

FORM OF SUBMITTALS:

Bind with operation and maintenance manuals specified in Section 01 73 00.

PREPARATION OF SUBMITTALS:

A. Obtain warranties and bonds, executed in triplicate (3) by responsible subcontractors, suppliers, and manufacturers within ten days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.

B. Verify that documents are in proper form, contain full information, and are notarized.

C. Co-execute submittals when required.

D. Retain warranties and bonds until time specified for submittal.

TIME OF SUBMITTALS:

A. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.

B. For items of Work when acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

WARRANTY SERVICE

A. The Contractor shall proceed with warranty repair or replacement within 24 hours of being notified that a warranty deficiency exists.

B. In order to insure prompt and effective correction of warranty deficiencies, the Contractor shall, if he or any of his Subcontractors do not maintain fully staffed service organizations within Leon County, designate firms within Leon County authorized to perform warranty work on the Contractor's behalf. The name, addresses, and phone numbers of these designated firms shall be included within the closeout documents, along with affidavits signed by officers of the designated firms stating that they have been retained and will perform required warranty service.

END OF SECTION 01 74 00

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Product maintenance manuals.

1.2 CLOSEOUT SUBMITTALS

A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect and their consultants will comment on whether content of operation and maintenance submittals is acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operation and maintenance manuals in the following format:

1. Submit on digital media acceptable to Architect. Enable reviewer comments on draft submittals.
2. Submit three paper copies.

C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.

1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

D. Comply with Section 017000 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

1.3 FORMAT OF OPERATION AND MAINTENANCE MANUALS

A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by the manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document the files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

B. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
2. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

    a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
    b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in the manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

1.4 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.
2. Table of contents.
3. Manual contents.

B. Title Page: Include the following information:

1. Subject matter included in manual.
2. Name and address of Project.
3. Name and address of Owner.
4. Date of submittal.
5. Name and contact information for Contractor.
6. Name and contact information for Construction Manager.
7. Name and contact information for Architect.
8. Name and contact information for Commissioning Authority.
9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
10. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

1.5 EMERGENCY MANUALS

A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.

B. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

C. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
3. Gas leak.
4. Water leak.
5. Power failure.
6. Water outage.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

D. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

E. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

1.6 SYSTEMS AND EQUIPMENT OPERATION MANUALS

A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.

B. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Performance and design criteria if Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

C. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

D. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

F. Piped Systems: Diagram piping as installed, and identify color coding where required for identification.

1.7 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.

B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds, as described below.

C. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

    a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

H. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1.8 PRODUCT MAINTENANCE MANUALS

A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Material and chemical composition.
5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017823

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SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for Project Record Documents, including the following:

1. Record Drawings.
2. Record specifications.
3. Record Product Data.

B. Related Requirements:

1. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.2 CLOSEOUT SUBMITTALS

A. Record Drawings: Comply with the following:

1. Initial Submittal
   a. Submit PDF electronic files of scanned Record Prints
2. Final Submittal:
   a. Submit Record Digital Data Files

B. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.

1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

1.3 RECORD DRAWINGS

A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

1. Preparation: Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.

   a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
   b. Accurately record information in an acceptable drawing technique.
   c. Record data as soon as possible after obtaining it.

d. Record and check the markup before enclosing concealed installations.
e. Cross-reference record prints to corresponding photographic documentation.

2. Content: Types of items requiring marking include, but are not limited to, the following:

a. Dimensional changes to Drawings.
b. Revisions to details shown on Drawings.
c. Locations of concealed internal utilities.
d. Changes made by Change Order or Construction Work Change Directive.
e. Changes made following Architect's written orders.
f. Details not on the original Contract Drawings.
g. Field records for variable and concealed conditions.
h. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
7. Keyed in color photographs illustrating concealed conditions may be inserted on the drawings.

B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:

1. Format: Annotated PDF electronic file with comment function enabled.
2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
3. Architect will furnish Contractor with one set of digital data files of the Contract Drawings for use in recording information.

C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Format: Annotated PDF electronic file with comment function enabled.
3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
4. Identification: As follows:

a. Project name.

b. Date.
c. Designation "PROJECT RECORD DRAWINGS."
d. Name of Architect
e. Name of General Contractor and Trade Contractor.
f. Name of Contractor.

1.4 RECORD PRODUCT DATA

A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until end of Project.

B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to the Project site and changes in manufacturer's written instructions for installation.

C. Format: Submit Record Product Data as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Product Data.

1. Include Record Product Data directory organized by Specification Section number and title, electronically linked to each item of Record Product Data.

1.5 MAINTENANCE OF RECORD DOCUMENTS

A. Maintenance of Record Documents: Store Record Documents in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017839

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SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Salvage of existing items to be reused or recycled.

B. Related Requirements:

1. Section 010100 "Summary of Work" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
2. Section 017300 "Execution" for cutting and patching procedures.

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.

B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse or store.

C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.3 MATERIALS OWNERSHIP

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

1.4 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

1. Inspect and discuss the condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.

3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For refrigerant recovery technician.

B. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.

C. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

D. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by salvage and demolition operations. Comply with Section 013233 "Photographic Documentation." Submit before Work begins.

E. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

1.6 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

1.7 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. Hazardous materials will be removed by Owner before start of the Work.
2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

1.8 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor before proceeding.

B. Notify warrantor on completion of selective demolition and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

1.9 COORDINATION

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

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

C. Verify that hazardous materials have been remediated before proceeding with building demolition operations.

D. Survey of Existing Conditions: Record existing conditions by use of measured drawings preconstruction photographs or video and templates.

1. Inventory and record the condition of items to be removed and salvaged.
2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
1. Arrange to shut off utilities with utility companies.
2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.

    a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
    c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
    f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
    g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

3.3 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage
3. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."
4. Proceed with demolition only when existing and forecasted weather conditions permit the existing roofing system to be removed properly and timely to prevent water leakage to existing structure.

B. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
5. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
6. Maintain adequate ventilation when using cutting torches.
7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
9. Dispose of demolished items and materials promptly. Comply with requirements in Section 017419 "Construction Waste Management and Disposal."

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

C. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Roofing: Remove no more existing roofing than what can be covered in one day by new roofing and so that building interior remains watertight and weathertight. See Section 075423 Thermoplastic-Polyolefin Roofing for new roofing requirements.

1. Remove existing roof membrane, flashings, copings, and roof accessories.
2. Remove existing roofing system down to substrate.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction. and recycle or dispose of them according to Section 017419 "Construction Waste Management and Disposal."

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

B. Burning: Do not burn demolished materials.

3.7 CLEANING

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

END OF SECTION 024119

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SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Wood blocking**,** cants, and nailers.

1.3 DEFINITIONS

A. Dimension Lumber: Lumber of 2 inches nominal or greater size but less than 5 inches nominal size in least dimension.

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. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

B. Sustainable Design Submittals:

1. Product Data: For installation adhesives, indicating VOC content

1.5 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For the following, from ICC-ES:

1. Preservative-treated wood.

1.6 QUALITY ASSURANCE

A. Testing Agency Qualifications: 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.

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. 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.

B. Maximum Moisture Content of Lumber: 19 percent unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with 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, chemical formulations shall 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 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 miscellaneous carpentry unless otherwise indicated.

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.

2.3 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Furring.

B. Dimension Lumber Items: Standard, Stud, or No. 3 grade lumber of any of the following species:

1. Hem-fir (north); NLGA.
2. Mixed southern pine or southern pine; SPIB.
3. Spruce-pine-fir; NLGA.
4. Hem-fir; WCLIB or WWPA.
5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
6. Western woods; WCLIB or WWPA.
7. Northern species; NLGA.
8. Eastern softwoods; NeLMA.

C. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

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.

2.4 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. Where 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 A153/A153M.

B. Nails, Brads, and Staples: ASTM F1667.

C. Screws for Fastening to Metal Framing: ASTM C1002, length as recommended by screw manufacturer for material being fastened.

D. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.

E. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01, ICC-ES AC58, ICC-ES AC193, or ICC-ES AC308 as appropriate for the substrate.

1. Material: Carbon-steel components, zinc plated to comply with ASTM B633, Class Fe/Zn 5.

2.5 MISCELLANEOUS MATERIALS

A. Adhesives for Gluing Furring and Sleepers to Concrete or Masonry: Formulation complying with ASTM D3498 that is approved for use indicated by adhesive manufacturer.

1. Adhesives shall have a VOC content of 70 g/L or less.

B. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, rubberized-asphalt 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.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry accurately to other construction. Locate furring, nailers, blocking, and similar supports to comply with requirements for attaching other construction.

C. 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.

D. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.

E. Do not splice structural members between supports unless otherwise indicated.

F. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

G. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

H. Comply with AWPA 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.

I. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

J. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
2. ICC-ES evaluation report for fastener.

K. 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.

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 miscellaneous rough carpentry from weather. If, despite protection, miscellaneous rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061053

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 thermoplastic polyolefin (TPO) roofing system.
2. Roof insulation.
3. Cover board.
4. Flexible Walkways.

B. Related Requirements:

1. Section 061053 "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking; and for wood-based, structural-use roof deck panels.
2. Section 076200 "Sheet Metal Flashing and Trim" for metal roof flashings and counterflashing.
3. Section 077100 "Roof Specialties" for manufactured copings and roof edge flashings.
4. Section 079200 "Joint Sealants" for joint sealants, joint fillers, and joint preparation.

1.3 DEFINITIONS

A. Roofing Terminology: Definitions in ASTM D1079 and glossary in NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to Work of this Section.

1.4 PREINSTALLATION MEETINGS

A. 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, air barrier 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. 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 affects 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.

B. Preinstallation 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, air barrier 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 affects 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.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Sustainable Design Submittals:

1. Provide VOC content for adhesives and sealants.

C. Shop Drawings: Include roof plans, sections, details, and attachments to other work, including the following:

1. Layout and thickness of insulation.
2. Base flashings and membrane termination details.
3. Flashing details at penetrations.
4. Tapered insulation layout, thickness, and slopes.
5. Roof plan showing orientation of steel roof deck and orientation of roof membrane, fastening spacings, and patterns for mechanically fastened roofing system.
6. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

7. Tie-in with adjoining air barrier.

D. Samples for Verification: For the following products:

1. Roof membrane and flashings, of color required.
2. Walkway pads or rolls, of color required.

E. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Manufacturer Certificates:

1. Performance Requirement Certificate: Signed by roof membrane manufacturer, certifying that roofing system complies with requirements specified in "Performance Requirements" Article.

a. Submit evidence of compliance with performance requirements.

2. Special Warranty Certificate: Signed by roof membrane manufacturer, certifying that all materials supplied under this Section are acceptable for special warranty.

C. Field quality-control reports.

D. Sample Warranties: For manufacturer's 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 roofing system identical to that used for this Project.

B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

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.

D. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.

1.10 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit the roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.

1. Special warranty is full a full weather tightness warranty and includes roof membrane, base flashings, roof insulation, fasteners, cover boards, and other components of roofing system.
2. Warranty Period: 20 years from date of Substantial Completion.

B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of roofing system such as roof membrane, base flashing, roof insulation, fasteners, cover boards, and walkway products, for the following warranty period:

1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General Performance: Installed roofing system and 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. Roof system and flashings shall remain watertight.

1. Accelerated Weathering: Roof membrane shall withstand 2000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746, ASTM D4272, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.

B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

C. Wind Uplift Resistance: Design roofing system to resist the following wind uplift pressures when tested according to FM Approvals 4474, UL 580, or UL 1897:

1. See Structural Drawings.

D. Energy Performance: Roofing system shall have an initial solar reflectance of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

E. Exterior Fire-Test Exposure: ASTM E108 or UL 790, Class A; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

2.2 THERMOPLASTIC POLYOLEFIN (TPO) ROOFING

A. TPO Sheet: ASTM D6878/D6878M, internally fabric- or scrim-reinforced, uniform flexible TPO sheet.

1. Provide product by manufacturer “”Garland” or comparable products by one of the following:

a. Suprema
b. FiberTite

2. Source Limitations: Obtain components for roofing system from roof membrane manufacturer or manufacturers approved by roof membrane manufacturer.
3. Thickness: 60 mils, nominal.
4. Fleece back
5. Exposed Face Color: White.
6. Solar Reflectance Index (SRI): 78

2.3 AUXILIARY ROOFING MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with other roofing components.

1. Adhesive and Sealants: Comply with VOC limits of authorities having jurisdiction.

B. Sheet Flashing: Manufacturer's standard unreinforced TPO sheet flashing, 55 mils thick, minimum, of same color as TPO sheet.

C. Prefabricated Pipe Flashings: Pre-molded flexible membrane pipe collar with aluminum ring bonded to base as recommended by roof membrane manufacturer.

D. Roof Vents: As recommended by roof membrane manufacturer.

1. Size: Not less than 4-inch diameter.

E. Bonding Adhesive: Manufacturer's standard.

F. Slip Sheet: Manufacturer's standard, of thickness required for application.

G. Metal Termination Bars: Manufacturer's standard, predrilled stainless steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.

H. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roofing components to substrate, and acceptable to roofing system manufacturer.

I. 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.

2.4 ROOF INSULATION

A. General: Preformed roof insulation boards manufactured or approved by TPO roof membrane manufacturer, approved for use in SPRI's Directory of Roof Assemblies listed roof assemblies.

B. Polyisocyanurate Board Insulation: ASTM C1289, Type II, Class 2, Grade 2, felt or glass-fiber mat facer on both major surfaces.

1. Compressive Strength: 20 psi.
2. Size: 48 by 48 inches.
3. Thickness:

a. Base Layer: 1-1/2 inches.
b. Upper Layer: 2 inches .

4. Provide factory, tapered insulation boards where indicated for sloping to drain. Fabricate with ¼” per 12” in taper, unless otherwise indicated.
5. Provide performed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricated to slopes indicated.
6. Total Minimum R-value = 25 c.i.

2.5 INSULATION ACCESSORIES

A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with other roofing system components.

B. Fasteners: Factory-coated steel fasteners with 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.

C. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer as follows:

1. Modified asphaltic, asbestos-free, cold-applied adhesive.
2. Bead-applied, low-rise, one-component or multicomponent urethane adhesive.
3. Full-spread, spray-applied, low-rise, two-component urethane adhesive.
4. Basis of Design (product standard):

a. OMG Inc.; Olybond 500

D. Cover Board: ASTM C1177/C1177M, glass-mat, water-resistant gypsum board or ASTM C1278/C1278M fiber-reinforced gypsum board.

1. Manufacturer: Provide product:

a. 1/2” IsoGard HD by Firestone Building Products

2. Thickness: 1/2 inch.
3. Strength: 120 psi

2.6 WALKWAYS

A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads or rolls, approximately 3/16 inch thick and acceptable to roofing system manufacturer.

1. Size: Approximately 36 by 60 inches.
2. Color: Contrasting with roof membrane.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.

1. Verify that roof openings and penetrations are in place, curbs are set and braced, and 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 minimum concrete drying period recommended by roofing system manufacturer has passed.

4. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than 75 percent, or as recommended by roofing system manufacturer, when tested according to ASTM F2170.

    a. Test Frequency: One test probe per each 1000 sq. ft., or portion thereof, of roof deck, with not less than three tests probes.
    b. Submit test reports within 24 hours after performing tests.

5. Verify that concrete-curing compounds that will impair adhesion of roofing components to roof deck have been removed.
6. Verify that minimum curing period recommended by roofing system manufacturer for lightweight insulating concrete roof decks has passed.

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 system 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. Perform fastener-pullout tests according to roof system manufacturer's written instructions.

1. Submit test result within 24 hours after performing tests.

    a. Include manufacturer's requirements for any revision to previously submitted fastener patterns required to achieve specified wind uplift requirements.

D. Install sound-absorbing insulation strips according to acoustical roof deck manufacturer's written instructions.

3.3 INSTALLATION OF ROOFING, GENERAL

A. Install roofing system according to roofing system manufacturer's written instructions.

B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning Work on adjoining roofing.

C. Coordinate installation and transition of roofing system component serving as an air barrier with air barrier specified under Section 072726 "Fluid-Applied Membrane Air Barriers."

3.4 INSTALLATION OF INSULATION

A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at end of workday.

B. Comply with roofing system and roof insulation manufacturer's written instructions for installing roof insulation.

C. Installation Over Metal Decking:

1. Install base layer of insulation with joints staggered not less than 24 inches in adjacent rows and with long joints continuous at right angle to flutes of decking.

    a. Locate end joints over crests of decking.
    b. 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.
    c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
    d. Make joints between adjacent insulation boards not more than 1/4 inch in width.
    e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.

        1) Trim insulation so that water flow is unrestricted.

    f. Fill gaps exceeding 1/4 inch with insulation.
    g. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
    h. Loosely lay base layer of insulation units over substrate.
    i. Mechanically attach base layer of insulation using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to metal decks.

        1) Fasten insulation according to requirements in FM Approvals' RoofNav for specified Windstorm Resistance Classification.
        2) Fasten insulation to resist specified uplift pressure at corners, perimeter, and field of roof.

2. Install upper layers of insulation and tapered insulation with joints of each layer offset not less than 12 inches from previous layer of insulation.

    a. Staggered end joints within each layer not less than 24 inches in adjacent rows.
    b. Install with long joints continuous and with end joints staggered not less than 12 inches in adjacent rows.
    c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
    d. Make joints between adjacent insulation boards not more than 1/4 inch in width.
    e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.

        1) Trim insulation so that water flow is unrestricted.

f. Fill gaps exceeding 1/4 inch with insulation.
g. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
h. Loosely lay each layer of insulation units over substrate.
i. Adhere each layer of insulation to substrate using adhesive according to FM Approvals' RoofNav listed roof assembly requirements for specified Windstorm Resistance Classification and FM Global Property Loss Prevention Data Sheet 1-29, as follows:

1) Set each layer of insulation in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F of equiviscous temperature.
2) Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
3) Set each layer of insulation in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.

D. Installation Over Gypsum Concrete Decks:

1. Install base layer of insulation with joints staggered not less than 24 inches in adjacent rows.

a. 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.
b. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
c. Make joints between adjacent insulation boards not more than 1/4 inch in width.
d. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.

1) Trim insulation so that water flow is unrestricted.

e. Fill gaps exceeding 1/4 inch with insulation.
f. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
g. Loosely lay base layer of insulation units over substrate.
h. Adhere base layer of insulation to concrete roof deck according to FM Approvals' RoofNav listed roof assembly requirements for specified Windstorm Resistance Classification and FM Global Property Loss Prevention Data Sheet 1-29, as follows:

1) Prime surface of concrete deck with asphalt primer at rate of 3/4 gal./100 sq. ft., and allow primer to dry.
2) Set insulation in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F of equiviscous temperature.
3) Set insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
4) Set insulation in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.

2. Install upper layers of insulation and tapered insulation with joints of each layer offset not less than 12 inches from previous layer of insulation.

a. Staggered end joints within each layer not less than 24 inches in adjacent rows.
b. Install with long joints continuous and with end joints staggered not less than 12 inches in adjacent rows.
c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
d. Make joints between adjacent insulation boards not more than 1/4 inch in width.
e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.

    1) Trim insulation so that water flow is unrestricted.

f. Fill gaps exceeding 1/4 inch with insulation.
g. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
h. Adhere each layer of insulation to substrate using adhesive according to FM Approvals' RoofNav listed roof assembly requirements for specified Windstorm Resistance Classification and FM Global Property Loss Prevention Data Sheet 1-29, as follows:

    1) Set each layer of insulation in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F of equiviscous temperature.
    2) Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
    3) Set each layer of insulation in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.

3.5 INSTALLATION OF COVER BOARDS

A. 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 in each direction.

1. Trim cover board neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
2. At internal roof drains, conform to slope of drain sump.

    a. Trim cover board so that water flow is unrestricted.

3. Cut and fit cover board tight to nailers, projections, and penetrations.
4. Loosely lay cover board over substrate.
5. Adhere cover board to substrate using adhesive as follows:
    a. Set cover board in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
    b. Set cover board in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.

B. Install slip sheet over cover board and beneath roof membrane.

3.6 INSTALLATION OF ADHERED ROOF MEMBRANE

A. Adhere roof membrane over area to receive roofing according to roofing system manufacturer's written instructions.

B. Unroll roof membrane and allow to relax before installing.

C. Start installation of roofing in presence of roofing system manufacturer's technical personnel.

D. Accurately align roof membrane and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

E. Bonding Adhesive: Apply to substrate and underside of roof membrane at rate required by manufacturer and allow to partially dry before installing roof membrane. Do not apply to splice area of roof membrane.

F. In addition to adhering, mechanically fasten roof membrane securely at terminations, penetrations, and perimeter of roofing.

G. Apply roof membrane with side laps shingled with slope of roof deck where possible.

H. Seams: Clean seam areas, overlap roof membrane, and hot-air weld side and end laps of roof membrane and sheet flashings, 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 roof membrane and sheet flashings.
2. Verify the field strength of seams a minimum of twice daily, and repair seam sample areas.
3. Repair tears, voids, and lapped seams in roof membrane that do not comply with requirements.

I. Spread sealant bed over deck-drain flange at roof drains, and securely seal roof membrane in place with clamping ring.

3.7 INSTALLATION OF BASE FLASHING

A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to roofing system manufacturer's written instructions.

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 INSTALLATION OF WALKWAYS

A. Flexible Walkways:

1. Install flexible walkways at the following locations:

   a. Between each rooftop unit location, creating a continuous path connecting rooftop unit locations.
   b. Between each roof hatch and each rooftop unit location or path connecting rooftop unit locations.
   c. Between each roof access ladder and each rooftop unit location or path connecting rooftop unit locations.
   d. Any additional locations indicated on Drawings.

2. Provide 6-inch clearance between adjoining pads.
3. 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 to inspect substrate conditions, surface preparation, roof membrane application, sheet flashings, protection, and drainage components, and to furnish reports to Architect.

B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion, in presence of Architect, and to prepare inspection report.

C. Repair or remove and replace components of the roofing system where inspections indicate that they do not comply with specified requirements.

D. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.10 PROTECTING AND CLEANING

A. Protect the roofing system from damage and wear during remainder of construction period. When the remaining construction does not affect or endanger roofing system, inspect roofing system 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 roofing system that does not comply with requirements, repair substrates, and repair or reinstall 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 the manufacturer of affected construction.

END OF SECTION 075423

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Custom flashing and trim fabrications, made from the following:

1. Sheet metal materials.
2. Underlayment.
3. Miscellaneous materials.

B. Related Requirements:

1. Section 061053 "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking.
2. Section 077100 "Roof Specialties" for manufactured copings, roof-edge specialties, roof-edge drainage systems, reglets, and counterflashings.
3. Section 077200 "Roof Accessories" for set-on-type curbs, equipment supports, roof hatches, vents, and other manufactured roof accessory units.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For sheet metal flashing and trim.

1. Plans, elevations, sections, and attachment details.
2. Fabrication and installation layouts, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled Work.
3. Identification of material, thickness, weight, and finish for each item and location in Project.
4. Details for forming, including profiles, shapes, seams, and dimensions.
5. Details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
6. Details of termination points and assemblies.
7. Details of roof-penetration flashing.
8. Details of edge conditions, including eaves, ridges, valleys, rakes, crickets, flashings, and counterflashings.
9. Details of special conditions.
10. Details of connections to adjoining work.
11. Formed flashing and trim at scale of not less than 1-1/2 inches per 12 inches.

1.3 INFORMATIONAL SUBMITTALS

A. Certificates: For each type of coping and roof edge flashing that is ANSI/SPRI/FM 4435/ES-1 tested.

B. Qualification Statements: For fabricator.

C. Sample warranties.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For sheet metal flashing and trim, and its accessories.

1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: Entity that employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.

1. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
2. Protect stored sheet metal flashing and trim from contact with water.

B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

1.7 COORDINATION

A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.

B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

1.8 WARRANTY

A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Delta E units when tested in accordance with ASTM D2244.
b. Chalking in excess of a No. 8 rating when tested in accordance with 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. Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, are to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim are not to rattle, leak, or loosen, and are to remain watertight.

B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual: Architectural Metal Flashing, Condensation and Air Leakage Control, and Reroofing" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

C. SPRI Wind Design Standard: Manufacture and install roof edge flashings and copings tested in accordance with ANSI/SPRI/FM 4435/ES-1 and capable of resisting the following design pressure:

1. Design Pressure: As indicated on Drawings.

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 SHEET METAL MATERIALS

A. Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

B. Aluminum Sheet: Coil-coated sheet, ASTM B209/B209M, alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.

1. Thickness: 0.040 inch.
2. Surface: Smooth, flat.
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 minimum total dry film thickness of 0.5 mil.

4. As-Milled Finish: Mill.

C. Stainless Steel Sheet: ASTM A240/A240M, Type 304, dead soft, fully annealed.

1. Nominal Thickness: 0.0188 inch.
2. Surface: Smooth, flat.
3. Exterior Finish: ASTM A480/A480M, No. 2D (dull, cold rolled).

    a. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

2.3 UNDERLAYMENT

A. Self-Adhering, High-Temperature Sheet Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 30 mils thick, specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 240 deg F; ASTM D1970/D1970M.
2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F or lower; ASTM D1970/D1970M.

1. Manufacturer: Subject to compliance with requirements, provide one of the following:

    a. Carlisle Residential, a division of Carlisle Construction Materials; WIP 300HT.
    b. Grace Construction Products, a unit of W. R. Grace & Co.-Conn.; Grace Ice and Water Shield HT.
    c. Henry Company; Blueskin PE200 HT.
    d. Kirsch Building Products, LLC; Sharkskin Ultra SA.
    e. Metal-Fab Manufacturing, LLC; MetShield.
    f. Owens Corning; WeatherLock Specialty Tile & Metal Underlayment.
    g. Polyguard Products, Inc.; Deck Guard HT.
    h. Protecto Wrap Company; Protecto Jiffy Seal Ice & Water Guard HT.
    i. SDP Advanced Polymer Products Inc; Palisade SA-HT.

B. Slip Sheet: Rosin-sized building paper, 3 lb/100 sq. ft. minimum, of type required for application.

2.4 MISCELLANEOUS MATERIALS

A. Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal unless otherwise indicated.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal.

1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.

a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
b. Blind Fasteners: High-strength aluminum or stainless steel rivets suitable for metal being fastened.
c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.

2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
3. Fasteners for Stainless Steel Sheet: Series 300 stainless steel.

C. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.

D. Elastomeric Sealant: ASTM C920, elastomeric silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

E. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

F. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

G. Bituminous Coating: Cold-applied asphalt emulsion in accordance with ASTM D1187/D1187M.

H. Asphalt Roofing Cement: ASTM D4586/D4586M, asbestos free, of consistency required for application.

2.5 FABRICATION, GENERAL

A. Custom fabricate sheet metal flashing and trim to comply with details indicated and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required.

1. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
2. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
3. Verify shapes and dimensions of surfaces to be covered and obtain field measurements for accurate fit before shop fabrication.
4. Form sheet metal flashing and trim to fit substrates without excessive oil-canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
5. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.

B. Fabrication Tolerances:

1. Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 ft. on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
2. Use lapped expansion joints only where indicated on Drawings.

D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal in accordance with cited sheet metal standard to provide for proper installation of elastomeric sealant.

E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

F. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.

G. Seams:
1. Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use

H. Do not use graphite pencils to mark metal surfaces.

2.6 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

A. Base Flashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
1. Aluminum: 0.040 inch thick.

B. Counterflashing: Shop fabricate interior and exterior corners. Fabricate from the following materials:
1. Aluminum: 0.032 inch thick.

C. Flashing Receivers: Fabricate from the following materials:
1. Aluminum: 0.032 inch thick.

D. Roof-Penetration Flashing: Fabricate from the following materials:
1. Stainless Steel: 0.0188 inch thick.

E. Roof-Drain Flashing: Fabricate from the following materials:

1. Stainless Steel: 0.0156 inch thick.

2.7 WALL SHEET METAL FABRICATIONS

A. Through-Wall Flashing: Fabricate continuous flashings in minimum 96-inch- long, but not exceeding 12 ft. long, sections, under copings, and at shelf angles. Fabricate discontinuous lintel, sill, and similar flashings to extend 6 inches beyond each side of wall openings; and form with 2-inch- high, end dams. Fabricate from the following materials:

1. Stainless Steel: 0.0156 inch thick.

B. Opening Flashings in Frame Construction: Fabricate head, sill, jamb, and similar flashings to extend 4 inches beyond wall openings. Form head and sill flashing with 2-inch- high, end dams. Fabricate from the following materials:

1. Aluminum: 0.032 inch thick.

2.8 MISCELLANEOUS SHEET METAL FABRICATIONS

A. Equipment Support Flashing: Fabricate from the following materials:

1. Stainless Steel: 0.0188 inch thick.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrates, and other conditions affecting performance of the Work.

1. Verify compliance with requirements for installation tolerances of substrates.
2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
3. Verify that air- or water-resistant barriers have been installed over substrate to prevent air infiltration or water penetration.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF UNDERLAYMENT

A. Self-Adhering, High-Temperature Sheet Underlayment:

1. Install self-adhering, high-temperature sheet underlayment; wrinkle free.
2. Prime substrate if recommended by underlayment manufacturer.
3. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures.
4. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses.

5. Overlap side edges not less than 3-1/2 inches. Roll laps and edges with roller.
6. Roll laps and edges with roller.
7. Cover underlayment within 14 days.

B. Install slip sheet, wrinkle free, over underlayment before installing sheet metal flashing and trim.

1. Install in shingle fashion to shed water.
2. Lapp joints not less than 4 inches.

3.3 INSTALLATION OF SHEET METAL FLASHING AND TRIM, GENERAL

A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.

1. Install fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, sealant.
3. Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement.
4. Install sheet metal flashing and trim to fit substrates and to result in watertight performance.
5. Space individual cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
6. Install exposed sheet metal flashing and trim with limited oil-canning, and free of buckling and tool marks.
7. Do not field cut sheet metal flashing and trim by torch.
8. Do not use graphite pencils to mark metal surfaces.

B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.

1. Coat concealed side of uncoated-aluminum and stainless steel sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.

1. Space movement joints at maximum of 10 ft. with no joints within 24 inches of corner or intersection.
2. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
3. Use lapped expansion joints only where indicated on Drawings.

D. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance .

E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.

F. Seal joints as required for watertight construction.

1. Use sealant-filled joints unless otherwise indicated.

a. Embed hooked flanges of joint members not less than 1 inch into sealant.
b. Form joints to completely conceal sealant.
c. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way.
d. Adjust setting proportionately for installation at higher ambient temperatures.

1) Do not install sealant-type joints at temperatures below 40 deg F.

2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."

3.4 INSTALLATION OF SLOPED ROOF SHEET METAL FABRICATIONS

A. Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and cited sheet metal standard.

1. Provide concealed fasteners where possible, and set units true to line, levels, and slopes.
2. Install work with laps, joints, and seams that are permanently watertight and weather resistant.

B. Roof Edge Flashing:

1. Install roof edge flashings in accordance with ANSI/SPRI/FM 4435/ES-1.

C. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches over base flashing. Install stainless steel draw band and tighten.

D. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with elastomeric sealant and clamp flashing to pipes that penetrate roof.

3.5 INSTALLATION OF WALL SHEET METAL FABRICATIONS

A. Install sheet metal wall flashing to intercept and exclude penetrating moisture in accordance with cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.

B. Opening Flashings in Frame Construction: Install continuous head, sill,[jamb,] and similar flashings to extend 4 inches beyond wall openings.

3.6 INSTALLATION OF MISCELLANEOUS SHEET METAL FABRICATIONS

A. Equipment Support Flashing:

1. Coordinate installation of equipment support flashing with installation of roofing and equipment.
2. Weld or seal flashing with elastomeric sealant to equipment support member.

3.7 INSTALLATION TOLERANCES

A. Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 ft. on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.8 CLEANING

A. Clean and neutralize flux materials. Clean off excess solder.

B. Clean off excess sealants.

3.9 PROTECTION

A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

B. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended in writing by sheet metal flashing and trim manufacturer.

C. Maintain sheet metal flashing and trim in clean condition during construction.

D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures, as determined by Architect.

END OF SECTION 076200

SECTION 077100 - ROOF SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Manufactured units for the following applications:

1. Roof-edge drainage systems.
2. Reglets and counterflashings.

B. Related Requirements:

1. Section 061053 "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking.
2. Section 076200 "Sheet Metal Flashing and Trim" for custom- and site-fabricated, sheet metal flashing and trim.
3. Section 077200 "Roof Accessories" for manufactured roof curbs, equipment supports, roof hatches, vents, and other manufactured roof accessory units.
4. Section 079200 "Joint Sealants" for field-applied sealants between roof specialties and adjacent materials.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of roof specialty.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For roof specialties.

1. Indicate profile and pattern of seams and layout of fasteners, cleats, clips, and other attachments.
2. Details of termination points and assemblies, including fixed points.
3. Details of special conditions.

C. 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 roof-edge drainage systems and reglets and counterflashings made from 12-inch lengths of full-size components in specified material, and including fasteners, cover joints, accessories, and attachments.

1.3 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of roof specialty ANSI/SPRI/FM 4435/ES-1 tested.

B. Qualification Statements: For manufacturer.

C. Sample warranties.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roof specialties.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer offering products that are FM Approvals listed for specified class and ANSI/SPRI/FM 4435/ES-1 tested to specified design pressure.

1.6 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.

1.7 FIELD CONDITIONS

A. Field Measurements: Verify profiles and tolerances of roof-specialty substrates by field measurements before fabrication and indicate measurements on Shop Drawings.

1.8 COORDINATION

A. Coordinate roof specialties with roofing system, exterior wall system, air barrier, flashing, trim, and construction of parapets, roof deck, roof and wall panels, and other adjoining work to provide a leakproof, weathertight, secure, and noncorrosive installation.

1. Performance Coordination: Coordinate with the Work of roofing and exterior wall Sections to ensure that roof specialties provided under the Work of this Section meet or exceed specified roofing and exterior wall design performance requirements.

B. Confirm and coordinate compatibility of materials and comply with warranty requirements of roofing system manufacturer.

C. Coordinate roof specialties layout and seams with sizes and locations of joints and seams in adjacent materials.

1.9 WARRANTY

A. Special Warranty on Painted Finishes: Manufacturer agrees to repair finishes 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 Delta E units when tested in accordance with ASTM D2244.
b. Chalking in excess of a No. 8 rating when tested in accordance with 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 SOURCE LIMITATIONS

2.2 PERFORMANCE REQUIREMENTS

A. General Performance: Roof specialties to 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' "Approval Guide" and approved for windstorm classification, Class 1-90. Identify materials with FM Approvals' markings.

C. SPRI Wind Design Standard: Manufacture and install copings tested in accordance with ANSI/SPRI/FM 4435/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: 120 deg F, ambient; 180 deg F, material surfaces.

2.3 COPINGS

A. Metal Copings: Manufactured coping system consisting of metal coping cap in section lengths not exceeding 12 ft., concealed anchorage; with corner units, end cap units, and concealed splice plates with finish matching coping caps.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Architectural Products Company.
b. ATAS International, Inc.
c. Castle Metal Products.
d. Cheney Flashing Company.
e. Hickman Company, W. P.
f. Merchant & Evans, Inc.
g. Metal-Era, Inc.
h. Metal-Fab Manufacturing, LLC.
i. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.
j. Petersen Aluminum Corporation.

2. Extruded-Aluminum Coping Caps: Extruded aluminum, 0.080 inch thick.

a. Finish: Two-coat fluoropolymer.
b. Color: As selected by Architect from manufacturer's full range .

3. Corners: Factory mitered and continuously welded.
4. Coping-Cap Attachment Method: Snap-on, fabricated from coping-cap material.

a. Snap-on Coping Anchor Plates: Concealed, galvanized-steel sheet, 12 inches wide, with integral cleats.

2.4 ROOF-EDGE DRAINAGE SYSTEMS

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Architectural Products Company.
b. ATAS International, Inc.
c. Castle Metal Products.
d. Cheney Flashing Company.
e. Hickman Company, W. P.
f. Merchant & Evans, Inc.
g. Metal-Era, Inc.
h. Metal-Fab Manufacturing, LLC.
i. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.

B. Gutters: Manufactured in uniform section lengths not exceeding 12 ft., with matching corner units, ends, outlet tubes, and other accessories. Elevate back edge at least 1 inch above front

edge. Furnish flat-stock gutter straps, gutter brackets, expansion joints, and expansion-joint covers fabricated from the same metal as gutters.

1. Formed Aluminum Sheet: 0.040 inch thick.
2. Gutter Profile: As indicated in accordance with SMACNA's "Architectural Sheet Metal Manual."
3. Corners: Factory mitered and mechanically clinched and sealed watertight.
4. Gutter Supports: Manufacturer's standard supports as selected by Architect with finish matching the gutters.

C. Downspouts: Plain circular Polyvinyl Chloride (PVC).

1. 4” Schedule 40 PVC downspouts
2. Location: As indicated on Drawings.

2.5 REGLETS AND COUNTERFLASHINGS

A. Manufacturers: Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Castle Metal Products.
2. Cheney Flashing Company.
3. Fry Reglet Corporation.
4. Heckmann Building Products Inc.
5. Hickman Company, W. P.
6. Keystone Flashing Company, Inc.
7. Metal-Era, Inc.
8. Metal-Fab Manufacturing, LLC.

B. Reglets: Manufactured units formed to provide secure interlocking of separate reglet and counterflashing pieces, from the following exposed metal:

1. Formed Aluminum Sheet: 0.024 inch thick.
2. Corners: Factory mitered and mechanically clinched and sealed watertight.
3. 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.

C. Counterflashings: Manufactured units of heights to overlap top edges of base flashings by 4 inches and in lengths not exceeding 12 ft. designed to snap into reglets or through-wall-flashing receiver and compress against base flashings with joints lapped, from the following exposed metal:

1. Formed Aluminum Sheet: 0.032 inch thick.

D. 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.

E. Finishes:

1. Aluminum: Two-coat fluoropolymer.

a. Color: As selected by Architect from manufacturer's full range.

2.6 SHEET METAL MATERIALS

A. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with minimum ASTM A653/A653M, G90 coating designation, or aluminum-zinc alloy-coated steel sheet complying with minimum ASTM A792/A792M, Class AZ50 coating designation; structural quality.

1. Mill-Phosphatized Finish: Manufacturer's standard for field painting.

B. Aluminum Sheet: ASTM B209/B209M, manufacturer's standard alloy for finish required, with temper to suit forming operations and performance required.

1. Mill Finish: As manufactured.

C. Aluminum Extrusions and Tubes: ASTM B221, manufacturer's standard alloy and temper for type of use, finished to match assembly where used; otherwise, mill finished.

D. Stainless Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304.

2.7 UNDERLAYMENT

A. Self-Adhering, High-Temperature Sheet Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum 30 mils thick, specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 240 deg F; ASTM D1970/D1970M.
2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F or lower; ASTM D1970/D1970M.

3. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Carlisle Coatings & Waterproofing; CCW WIP 300HT.
b. Grace Construction Products, a unit of W. R. Grace & Co.; Grace Ice and Water Shield HT.
c. Henry Company; Blueskin PE200 HT.

d. Metal-Fab Manufacturing, LLC; MetShield.
e. Owens Corning; WeatherLock Metal High Temperature Underlayment.

B. Slip Sheet: Rosin-sized building paper, 3-lb/100 sq. ft. minimum.

2.8 MISCELLANEOUS MATERIALS

A. Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.

B. Fasteners: Roof specialty manufacturer's recommended fasteners, designed to meet performance requirements, 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:

1. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
2. Fasteners for Stainless Steel Sheet: Series 300 stainless steel.
3. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.

C. 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.

D. Elastomeric Sealant: ASTM C920, elastomeric silicone polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.

E. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type joints with limited movement.

F. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.

G. Asphalt Roofing Cement: ASTM D4586, asbestos free, of consistency required for application.

2.9 GENERAL FINISH REQUIREMENTS

A. Comply with NAAMM/NOMMA AMP 500, "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.

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 INSTALLATION OF UNDERLAYMENT

A. Synthetic Underlayment: Install synthetic underlayment, wrinkle free, in accordance with manufacturers' written instructions, and using adhesive where possible to minimize use of mechanical fasteners under sheet metal.

1. Lap horizontal joints not less than 4 inches.

B. Self-Adhering, High-Temperature Sheet Underlayment:

1. Install self-adhering, high-temperature sheet underlayment; wrinkle free.
2. Prime substrate if recommended by underlayment manufacturer.
3. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures.
4. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses.
5. Overlap side edges not less than 3-1/2 inches. Roll laps and edges with roller.
6. Roll laps and edges with roller.
7. Cover underlayment within 14 days.

C. Slip Sheet: Install slip sheet, wrinkle free, over underlayment before installing sheet metal flashing and trim.

1. Install in shingle fashion to shed water.
2. Lapp joints not less than 4 inches.

3.3 INSTALLATION, GENERAL

A. Install roof specialties in accordance with 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's written installation instructions.

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 ft. with no joints within 18 inches of corners or intersections unless otherwise indicated on Drawings.
2. When ambient temperature at time of installation is between 40 and 70 deg F, 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 in writing by fastener manufacturer to achieve maximum pull-out resistance

E. Seal concealed joints with butyl sealant as required by roof 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.

3.4 INSTALLATION OF COPINGS

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 30-inch centers.

3.5 INSTALLATION OF ROOF-EDGE DRAINAGE SYSTEMS

A. Install components to produce a complete roof-edge drainage system in accordance with manufacturer's written instructions. Coordinate installation of roof perimeter flashing with installation of roof-edge drainage system.

B. Gutters: Join and seal gutter lengths. Allow for thermal expansion. Attach gutters to firmly anchored gutter supports spaced not more than 30 inches apart. Attach ends with rivets and seal with sealant to make watertight. Slope to downspouts.

1. Install gutter with expansion joints at locations indicated but not exceeding 50 ft. apart. Install expansion-joint caps.

C. Downspouts: Join sections with manufacturer's standard telescoping joints. Provide hangers with fasteners designed to hold downspouts securely to walls and 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c.

1. Connect downspouts to underground drainage system indicated.

3.6 INSTALLATION OF REGLETS AND COUNTERFLASHINGS

A. Coordinate installation of reglets and counterflashings with installation of base flashings.

B. 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 over top edge of base flashings.

C. Counterflashings: Insert counterflashings into reglets or other indicated receivers; ensure that counterflashings overlap 4 inches over top edge of base flashings. Lap counterflashing joints a minimum of 4 inches and bed with butyl sealant. Fit counterflashings tightly to base flashings.

3.7 CLEANING AND PROTECTION

A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing in accordance with ASTM A780/A780M.

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, as determined by Architect.

END OF SECTION 077100

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SECTION 077200 - ROOF ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Manufactured units for the following applications:

1. Equipment supports.

B. Related Requirements:

1. Section 061053 "Miscellaneous Rough Carpentry" for roof cants, nailers, blocking, and other pressure-preservative-treated wood.
2. Section 077100 "Roof Specialties" for manufactured copings, roof-edge specialties, roof-edge drainage systems, reglets, and counterflashing.
3. Section 079200 "Joint Sealants" for field-applied sealants between roof accessories and adjacent materials.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of roof accessory.

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. Delegated Design Submittals: For 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.

D. Samples for Verification: Include Samples of each type of roof accessory to verify finish and color selection, in manufacturer's standard sizes.

1.3 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. Qualification Statements: For Installer.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For roof accessories.

1.5 QUALITY ASSURANCE

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not store roof accessories in contact with other materials that might cause staining, denting, or other surface damage. Store roof accessories in accordance with manufacturer's instructions.

B. Store materials off ground in dry location and in accordance with manufacturer's instructions in well-ventilated area.

C. Store and protect roof accessories from nicks, scratches, and blemishes.

1.7 FIELD CONDITIONS

A. Field Measurements: Verify profiles and tolerances of roof-accessory substrates by field measurements before fabrication, and indicate measurements on Shop Drawings.

1.8 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.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General Performance: Roof accessories to 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. Wind-Restraint Performance: As indicated on Drawings.

2.2 EQUIPMENT SUPPORTS

A. 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, integral metal cant, and integrally formed structure-mounting flange at bottom.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. AES Industries, Inc.
    b. Curbs Plus, Inc.
    c. Custom Solution Roof and Metal Products.
    d. Greenheck Fan Corporation.
    e. LM Curbs.
    f. Milcor Inc.; Commercial Products Group of Hart & Cooley, Inc.
    g. Pate Company (The).
    h. Roof Products, Inc.
    i. Thybar Corporation.
    j. Vent Products Co., Inc.

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. Steel: Zinc-coated (galvanized) steel sheet, 0.079 inch thick.

1. Finish: Mill phosphatized.

E. Construction:

1. Curb Profile: Profile as indicated on Drawings compatible with roofing system.
2. Insulation: Factory insulated with 1-1/2-inch- 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 wide on top flange of equipment supports, continuous around support perimeter.
5. Platform Cap: Where portion of equipment support is not covered by equipment, provide weathertight platform cap formed from 3/4-inch- thick plywood covered with metal sheet of same type, thickness, and finish as required for curb.
6. Metal Counterflashing: Manufacturer's standard, removable, fabricated of same metal and finish as equipment support.
7. Fabricate equipment supports to minimum height of 12 inches above roofing surface unless otherwise indicated.
8. Sloping Roofs: Where roof slope exceeds 1/4 inch per 12 inches, 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.

2.3 METAL MATERIALS

A. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheer complying with minimum ASTM A653/A653M, G90 coating designation or aluminum-zinc alloy-coated steel sheet complying with minimum ASTM A792/A792M, Class AZ50 coating designation; structural quality.

1. Mill-Phosphatized Finish: Manufacturer's standard for field painting.

B. Steel Shapes: ASTM A36/A36M, hot-dip galvanized in accordance with ASTM A123/A123M unless otherwise indicated.

C. Steel Tube: ASTM A500/A500M, round tube.

D. Galvanized-Steel Tube: ASTM A500/A500M, round tube, hot-dip galvanized in accordance with ASTM A123/A123M.

E. Steel Pipe: ASTM A53/A53M, galvanized.

2.4 UNDERLAYMENT

A. Self-Adhering, High-Temperature Sheet Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 30 mils thick, specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 240 deg F; ASTM D1970/D1970M.
2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F or lower; ASTM D1970/D1970M.

3. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Carlisle Coatings & Waterproofing; CCW WIP 300HT.

b. Grace Construction Products, a unit of W. R. Grace & Co.; Grace Ice and Water Shield HT.
c. Henry Company; Blueskin PE200 HT.
d. Metal-Fab Manufacturing, LLC; MetShield.
e. Owens Corning; WeatherLock Metal High Temperature Underlayment.

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. minimum.

2.5 MISCELLANEOUS MATERIALS

A. Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.

B. Glass-Fiber Board Insulation: ASTM C726, nominal density of 3 lb/cu. ft., thermal resistivity of 4.3 deg F x h x sq. ft./Btu x in. at 75 deg F, thickness as indicated.

C. 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 thick.

D. Fasteners: Roof accessory manufacturer's recommended fasteners, designed to comply with performance requirements, 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:

1. Fasteners for Metallic-Coated Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel in accordance with ASTM A153/A153M or ASTM F2329/F2329M.
2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
3. Fasteners for Stainless Steel Sheet: Series 300 stainless steel.

E. 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.

F. 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.

G. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for expansion joints with limited movement.

H. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.

I. Asphalt Roofing Cement: ASTM D4586/D4586M, asbestos free, of consistency required for application.

2.6 GENERAL FINISH REQUIREMENTS

A. Comply with NAAMM/NOMMA AMP 500, "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 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 OF UNDERLAYMENT

A. Synthetic Underlayment: Install synthetic underlayment, wrinkle free, in accordance with manufacturers' written instructions, and using adhesive where possible to minimize use of mechanical fasteners under sheet metal.

1. Lap horizontal joints not less than 4 inches.

B. Self-Adhering, High-Temperature Sheet Underlayment:

1. Install self-adhering, high-temperature sheet underlayment; wrinkle free.
2. Prime substrate if recommended by underlayment manufacturer.
3. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures.
4. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses.
5. Overlap side edges not less than 3-1/2 inches. Roll laps and edges with roller.
6. Roll laps and edges with roller.
7. Cover underlayment within 14 days.

C. Felt Underlayment: Install felt underlayment, wrinkle free, using adhesive to minimize use of mechanical fasteners under sheet metal flashing and trim.

1. Install in shingle fashion to shed water.
2. Lap joints not less than 2 inches.

D. Slip Sheet: Install slip sheet, wrinkle free, over underlayment before installing sheet metal flashing and trim.

1. Install in shingle fashion to shed water.
2. Lapp joints not less than 4 inches.

3.3 INSTALLATION, GENERAL

A. Install roof accessories in accordance with manufacturer's written instructions.

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 in writing by manufacturer's written installation instructions.

1. Coat concealed side of uncoated aluminum roof accessories 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 accessories for waterproof performance.

3.4 INSTALLATION OF ROOF ACCESSORIES

A. Equipment Support: Install equipment supports so top surfaces are level with each other.

B. Seal joints with elastomeric sealant as required by roof accessory manufacturer.

3.5 CLEANING AND PROTECTION

A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing in accordance with ASTM A780/A780M.

B. On completion of installation, clean exposed surfaces in according with manufacturer's written instructions. Clean off excess sealants.

C. Remove temporary protective coverings and strippable films as roof accessories are installed. On completion of installation, clean finished surfaces, including removing unused fasteners,

metal filings, pop rivet stems, and pieces of flashing. Maintain roof accessories in a clean condition during construction.

D. Replace roof accessories that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures, as determined by Architect.

END OF SECTION 077200

SECTION 078413 - PENETRATION FIRESTOPPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Penetrations in fire-resistance-rated walls.

B. Related Requirements:

1. Section 078443 "Joint Firestopping" for joints in or between fire-resistance-rated construction, at exterior curtainwall/floor intersections, and in smoke barriers.
2. Section 079200 "Joint Sealants" for non-fire-resistance-rated joint sealants.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Unlisted Firestopping Systems: Obtain an Engineering Judgment (EJ) from firestopping manufacturer where no UL, FM Approvals, or other listed assembly is available for particular firestop configuration. Follow International Firestop Council (IFC) recommended guidelines for evaluating firestopping systems in EJs.

C. Product Schedule: For each penetration firestopping system. Include location, illustration of firestopping system, and design designation of qualified testing and inspecting agency.

1. Engineering Judgments: Where Project conditions require modification to a qualified testing and inspecting agency's illustration for a particular penetration firestopping system, submit illustration, with modifications marked, approved by penetration firestopping system manufacturer's fire-protection engineer as an engineering judgment or equivalent fire-resistance-rated assembly developed in accordance with current International Firestop Council (IFC) guidelines. Obtain approval of authorities having jurisdiction prior to submittal.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Listed System Designs: For each penetration firestopping system, for tests performed by a qualified testing agency.

1.4 CLOSEOUT SUBMITTALS

A. Installer Certificates: From Installer indicating that penetration firestopping systems have been installed in compliance with requirements and manufacturer's written instructions.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Entity that has been approved by FM Approvals in accordance with FM Approvals 4991 or been evaluated by UL and found to comply with UL's "UL Solutions Qualified Firestop Contractor Program."

B. Manufacturer Qualifications: Entity that has received UL's "Firestop Movement Certification," which demonstrates that manufacturer's firestopping products designated with M-Ratings are based on exposure to cyclic movement and UL 1479 fire test evaluation when tested in accordance with ASTM E3037.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Do not install penetration firestopping systems when ambient or substrate temperatures are outside limits permitted by penetration firestopping system manufacturers or when substrates are wet because of rain, frost, condensation, or other causes.

B. Install and cure penetration firestopping system materials in accordance with manufacturer's written instructions using natural means of ventilations or, where this is inadequate, forced-air circulation.

1.7 COORDINATION

A. Coordinate construction of openings and penetrating items to ensure that penetration firestopping systems can be accessed and installed in accordance with specified firestopping system design.

B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate penetration firestopping systems.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain penetration firestopping systems for each type of opening indicated from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics:

1. A qualified testing agency, acceptable to authorities having jurisdiction, will perform penetration firestopping system tests.
2. Test in accordance with testing standards referenced in "Penetration Firestopping Systems" Article. Provide rated systems complying with the following requirements:

    a. Penetration firestopping systems installed with products bearing the classification marking of a qualified testing agency.

        1) UL in its online directory "Product iQ."

B. Provide components for each penetration firestopping system that, upon curing, do not re-emulsify, dissolve, leach, break down, or otherwise deteriorate over time from exposure to atmospheric moisture, sweating pipes, ponding water, or other forms of moisture characteristic during and after construction.

C. Provide components for each penetration firestopping system that do not contain ethylene glycol.

D. Provide components for each penetration firestopping system that are sufficiently flexible to accommodate movement, such as pipe vibration, water hammer, thermal expansion, and other normal building movement without damage.

E. Provide components for each penetration firestopping system that are appropriately tested for the thickness and type of insulation utilized.

2.3 PENETRATION FIRESTOPPING SYSTEMS

A. Penetration Firestopping Systems: Systems that resist spread of fire, passage of smoke and other gases, and maintain original fire-resistance rating of construction penetrated. Penetration firestopping systems must be compatible with one another, with the substrates forming openings, and with penetrating items if any.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. A/D Fire Protection Systems Inc.
2. Grace Construction Products.
3. Hilti, Inc.
4. Johns Manville.
5. Nelson Firestop Products.
6. NUCO Inc.
7. Passive Fire Protection Partners.
8. RectorSeal Corporation.
9. Specified Technologies Inc.
10. 3M Fire Protection Products.
11. Tremco, Inc.; Tremco Fire Protection Systems Group.
12. USG Corporation.

C. Penetrations in Fire-Resistance-Rated Walls: Penetration firestopping systems with ratings determined in accordance with ASTM E814 or UL 1479.

1. F-Rating: Not less than the fire-resistance rating of the wall penetrated.
2. Membrane Penetrations: Install recessed fixtures such that the required fire resistance will not be reduced.
3. M-Rating: Provide penetration firestopping systems meeting specified F-Rating after being tested in accordance with ASTM E3037.

D. Penetrations in Horizontal Assemblies: Penetration firestopping systems with ratings determined in accordance with ASTM E814 or UL 1479.

1. F-Rating: At least one hour, but not less than the fire-resistance rating of the floor penetrated.
2. T-Rating: At least one hour, but not less than the fire-resistance rating of the floor. The following floor penetrations do not require a T-rating:

    a. Those within the cavity of a wall.
    b. Floor, tub, or shower drains within a concealed space.
    c. 4-inch or smaller metal conduit penetrating directly into metal-enclosed electrical switchgear.

3. W-Rating: Provide penetration firestopping systems with a Class 1 W-rating in accordance with UL 1479.
4. M-Rating: Provide penetration firestopping systems meeting specified F-Rating, T-Rating, and W-Rating after being tested in accordance with ASTM E3037.

E. Penetrations in Smoke Barriers: Penetration firestopping systems with ratings determined in accordance with UL 1479.

1. L-Rating: Not exceeding 5.0 cfm/sq. ft. of penetration opening and no more than 50-cfm cumulative total for any 100 sq. ft. at both ambient and elevated temperatures.
2. M-Rating: Provide penetration firestopping systems meeting specified L-Rating after being tested in accordance with ASTM E3037.

F. Exposed Penetration Firestopping Systems: Flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested in accordance with ASTM E84 or UL 723.

1. Sealants: 250 g/L.
2. Sealant Primers for Nonporous Substrates: 250 g/L.
3. Sealant Primers for Porous Substrates: 775 g/L.

2.4 ACCESSORIES

A. Provide components for each penetration firestopping system that are needed to install fill materials and to maintain the required ratings. Use only those components specified by penetration firestopping system manufacturer and approved by qualified testing and inspecting agency for conditions indicated, including but not limited to:

1. Permanent forming/damming/backing materials.
2. Substrate primers.
3. Collars.
4. Steel sleeves.

2.5 FILL MATERIALS

A. Cast-in-Place Firestopping Devices: Factory-assembled devices for use in cast-in-place concrete floors and consisting of an outer sleeve lined with an intumescent strip, a flange attached to one end of the sleeve for fastening to concrete formwork, and a neoprene gasket.

B. Firestopping Devices: Factory-assembled collars formed from galvanized steel and lined with intumescent material sized to fit specific diameter of penetrant.

C. Intumescent Composite Sheets: Rigid panels consisting of aluminum-foil-faced intumescent elastomeric sheet bonded to galvanized-steel sheet.

D. Intumescent Putties: Nonhardening, water-resistant, intumescent putties containing no solvents or inorganic fibers.

E. Intumescent Wrap Strips: Single-component intumescent elastomeric strips for use around combustible penetrants.

F. Mortars: Prepackaged dry mixes consisting of a blend of inorganic binders, hydraulic cement, fillers and lightweight aggregate formulated for mixing with water at Project site to form a nonshrinking, homogeneous mortar.

G. Pillows/Bags: Compressible, removable, and reusable intumescent pillows encased in fire-retardant polyester or glass-fiber cloth. Where exposed, and when required by a listed system, cover openings with steel-reinforcing wire mesh to protect pillows/bags from being easily removed or dislodged.

H. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.

I. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants.

J. Thermal and Endothermic Wraps: Flexible, insulating, and fire-resistant protective wraps tested and listed for up to 2-hour fire ratings in accordance with ASTM E814 or UL 1479; for protecting membrane penetrations of utility boxes, critical electrical circuits, communications lines, and fuel lines, and for thermal barrier and circuit integrity protection in accordance with ASTM E1725 or UL 1724.

K. Fire-Rated Cable Sleeve Kits: Complete kits designed for new or existing cable penetrations through walls which accept standard accessories.

L. Fire-Rated Cable Pathways: Single or gangable device modules composed of a steel raceway with integral intumescent material and requiring no additional action in the form of plugs, twisting closure, putty, pillows, sealant, or otherwise to achieve fire and air-leakage ratings.

1. Fire-rated cable pathway devices are the preferred product for data, video, and communications cable penetrations. Install these devices in locations where frequent cable moves, add-ons, and changes will occur. Such devices must be:

    a. Capable of retrofit around existing cables.
    b. Designed so that two or more devices can be ganged together.
    c. Maintenance-free so no action is required to activate the smoke- and fire-sealing mechanism.

2. Where fire-rated cable pathway devices are not practical, openings within walls and floors designed to accommodate data, video, and communications cabling must be provided with re-enterable products specifically designed for retrofit, such as retrofit devices for cable bundles, firestopping putty, plugs, or pillows.

M. Retrofit Device for Cable Bundles: Factory-made, intumescent, collar-like device for firestopping existing over-filled cable sleeves and capable of being installed around projecting sleeves and cable bundles.

N. Wall-Opening Protective Materials: Intumescent, non-curing putty pads or self-adhesive inserts for protection of electrical switch and receptacle boxes.

O. Fire-Rated HVAC Retaining Angles: Steel angle system with integral intumescent firestopping gasket for use around rectangular steel HVAC ducts without fire dampers.

P. Firestopping Plugs: Flexible, re-enterable, intumescent, foam-rubber plug for use in blank round openings and cable sleeves.

Q. Fire-Rated Cable Grommet: Molded two-piece grommet made of plenum-grade polymer and foam inner core for sealing small cable penetrations in gypsum walls up to 1/2 inch in diameter.

R. Closet Flange Gasket: Molded, single-component, flexible, intumescent gasket for use beneath a water closet (toilet) flange in floor applications.

2.6 MIXING

A. Penetration Firestopping Materials: For those products requiring mixing before application, comply with penetration firestopping system manufacturer's written instructions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, 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: Before installing penetration firestopping systems, clean out openings in accordance with manufacturer's written instructions and with the following requirements:

1. Remove foreign materials from substrate surfaces that could interfere with adhesion of penetration firestopping materials.
2. Clean opening substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with penetration firestopping materials. Remove loose particles remaining from cleaning operation.
3. Remove laitance and form-release agents from concrete.

B. Prime substrates in accordance with penetration firestopping system manufacturer's written installation instructions, using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

3.3 INSTALLATION

A. General: Install penetration firestopping systems in accordance with manufacturer's written installation instructions and published drawings for products and applications.

B. Install forming materials and other accessories of types required to support fill materials during their application and in the position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.

1. After installing fill materials and allowing them to fully cure, remove combustible forming materials and other accessories not forming permanent components of firestopping.

C. Install fill materials by proven techniques to produce the following results:

1. Fill voids and cavities formed by openings, forming materials, accessories, and penetrating items to achieve required fire-resistance ratings.
2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
3. For fill materials that will remain exposed after completing the Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

3.4 IDENTIFICATION

A. Wall Identification: Permanently label walls containing penetration firestopping systems with the words "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS," using lettering not less than 3 inches high and with minimum 0.375-inch strokes.

1. Locate in accessible concealed floor, floor-ceiling, or attic space at 15 ft. from end of wall and at intervals not exceeding 30 ft..

B. Penetration Identification: Identify each penetration firestopping system with legible metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches of penetration firestopping system edge so labels are visible to anyone seeking to remove penetrating items or firestopping systems. Use mechanical fasteners or self-adhering-type labels with adhesives capable of permanently bonding labels to surfaces on which labels are placed. Include the following information on labels:

1. The words "Warning - Penetration Firestopping - Do Not Disturb. Notify Building Management of Any Damage."
2. Contractor's name, address, and phone number.
3. Designation of applicable testing and inspecting agency.
4. Date of installation.
5. Manufacturer's name.
6. Installer's name.

3.5 FIELD QUALITY CONTROL

A. Owner will engage a qualified inspection agency to conduct and report on inspections in accordance with ASTM E2174.

B. Where deficiencies are found or penetration firestopping system is damaged or removed because of testing, repair or replace penetration firestopping system to comply with requirements.

C. Proceed with enclosing penetration firestopping systems with other construction only after inspection reports are issued and installations comply with requirements.

3.6 CLEANING AND PROTECTION

A. Clean off excess fill materials adjacent to openings as the Work progresses by methods and with cleaning materials that are approved in writing by penetration firestopping system manufacturers and that do not damage materials in which openings occur.

B. Provide final protection and maintain conditions during and after installation that ensure that penetration firestopping systems are without damage or deterioration at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, immediately cut out and remove damaged or deteriorated penetration firestopping material and install new materials to produce systems complying with specified requirements.

3.7 PENETRATION FIRESTOPPING SYSTEM SCHEDULE

A. Where UL-classified systems are indicated, they refer to system numbers in UL's "Fire Resistance Directory" under product Category XHEZ.

B. Penetration Firestopping Systems with No Penetrating Items:

1. UL-Classified Systems: F-A-, F-C-, W-J-, W-L-, 0001-0999.
2. F-Rating: 2 hours.
3. T-Rating: 2 hours.
4. Type of Fill Materials: As required to achieve rating.

C. Penetration Firestopping Systems for Metallic Pipes, Conduit, or Tubing:

1. UL-Classified Systems: F-A-, F-C-, W-J-, W-L-, 1001-1999.
2. F-Rating: 2 hours.
3. T-Rating: 2 hours.
4. Type of Fill Materials: As required to achieve rating.

D. Penetration Firestopping Systems for Nonmetallic Pipe, Conduit, or Tubing:

1. UL-Classified Systems: F-A-, F-C-, W-J-, W-L-, 2001-2999.
2. F-Rating: 2 hours.
3. T-Rating: 2 hours.
4. Type of Fill Materials: As required to achieve rating.

E. Penetration Firestopping Systems for Electrical Cables:

1. UL-Classified Systems: F-A-, F-C-, W-J-, W-L-, 3001-3999.
2. F-Rating: 2 hours.
3. T-Rating: 2 hours.
4. Type of Fill Materials: As required to achieve rating.

F. Penetration Firestopping Systems for Cable Trays with Electric Cables:

1. UL-Classified Systems: W-J-, W-L-, 4001-4999.
2. F-Rating: 2 hours.
3. T-Rating: 2 hours.
4. Type of Fill Materials: As required to achieve rating.

G. Penetration Firestopping Systems for Insulated Pipes:

1. UL-Classified Systems: F-A-, F-C-, W-J-, W-L-, 5001-5999,
2. F-Rating: 2 hours.
3. T-Rating: 2 hours.
4. Type of Fill Materials: As required to achieve rating.

H. Penetration Firestopping Systems for Miscellaneous Electrical Penetrants:

1. UL-Classified Systems: F-A-, W-L-, W-J-, 6001-6999.

2. F-Rating: 2 hours.
3. T-Rating: 2 hours.
4. Type of Fill Materials: As required to achieve rating.

I. Penetration Firestopping Systems for Miscellaneous Mechanical Penetrants:

1. UL-Classified Systems: F-A-, F-C-, W-J-, W-L-, 7001-7999.
2. F-Rating: 2 hours.
3. T-Rating: 2 hours.
4. Type of Fill Materials: As required to achieve rating.

J. Penetration Firestopping Systems for Groupings of Penetrants:

1. UL-Classified Systems: F-A-, F-C-, W-J-, W-L-, 8001-8999.
2. F-Rating: 2 hours.
3. T-Rating: 2 hours.
4. Type of Fill Materials: As required to achieve rating.

END OF SECTION 078413

SECTION 078443 - JOINT FIRESTOPPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Joints in or between fire-resistance-rated construction.

B. Related Requirements:

   1. Section 078413 "Penetration Firestopping" for penetrations in fire-resistance-rated walls, horizontal assemblies, and smoke barriers and for wall identification.

1.2 ACTION SUBMITTALS

A. Product Data:

   1. For each type of product.

B. Unlisted Firestopping Systems: Obtain an Engineering Judgment (EJ) from firestop manufacturer where no UL, FM Approvals, or other listed assembly is available for particular firestop configuration. Follow International Firestop Council (IFC) recommended guidelines for evaluating firestop systems in EJs.

C. Product Schedule: For each joint firestopping system. Include location, illustration of firestopping system, and design designation of qualified testing agency.

   1. Engineering Judgments: Where Project conditions require modification to a qualified testing agency's illustration for a particular joint firestopping system condition, submit illustration, with modifications marked, approved by joint firestopping system manufacturer's fire-protection engineer as an EJ or equivalent fire-resistance-rated assembly developed in accordance with current IFC guidelines.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Listed System Designs: For each joint firestopping system, for tests performed by a qualified testing agency.

1.4 CLOSEOUT SUBMITTALS

A. Installer Certificates: From Installer indicating that joint firestopping systems have been installed in compliance with requirements and manufacturer's written installation instructions.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A firm that has been approved by FM Approvals in accordance with FM Approvals 4991 or been evaluated by UL and found to comply with UL's "UL Solutions Qualified Firestop Contractor Program."

1.6 FIELD CONDITIONS

A. Environmental Limitations: Do not install joint firestopping systems when ambient or substrate temperatures are outside limits permitted by joint firestopping system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.

B. Install and cure joint firestopping systems in accordance with manufacturer's written installation instructions using natural means of ventilation or, where this is inadequate, forced-air circulation.

1.7 COORDINATION

A. Coordinate construction of joints to ensure that joint firestopping systems can be installed in accordance with specified firestopping system design.

B. Coordinate sizing of joints to accommodate joint firestopping systems.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain joint firestop systems for each type of joint opening indicated from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics:

1. A qualified testing agency, acceptable to authorities having jurisdiction, will perform joint firestopping system tests.
2. Test in accordance with testing standards referenced in "Joint Firestopping Systems" Article. Provide rated systems complying with the following requirements:

    a. Joint firestop systems installed with products bearing the classification marking of a qualified product certification agency in accordance with listed system designs published by a qualified testing agency.

        1) UL in its online directory "Product iQ."
        2) Intertek Group in its "Directory of Building Products."

B. Rain/Water Resistance: For perimeter fire-barrier system applications, where inclement weather or greater-than-transient water exposure is expected, use products that dry rapidly and cure in the presence of atmospheric moisture sufficient to pass ASTM D6904 early rain-resistance test (24-hour exposure).

2.3 JOINT FIRESTOPPING SYSTEM TYPES

A. General: Systems that resist spread of fire, passage of smoke and other gases, and maintain original fire-resistance rating of assemblies in or between which joint firestopping systems are installed. Joint firestopping systems must accommodate building movements without impairing their ability to resist the passage of fire and hot gases.

1. Joint firestopping systems that are compatible with one another, with the substrates forming openings, and with penetrating items, if any.
2. Provide products that, upon curing, do not re-emulsify, dissolve, leach, break down, or otherwise deteriorate over time from exposure to atmospheric moisture, sweating pipes, ponding water or other forms of moisture.
3. Provide firestop products that do not contain ethylene glycol.

B. Joints in or between Fire-Resistance-Rated Construction: Provide joint firestopping systems with ratings determined in accordance with ASTM E1966 or UL 2079, with published L-Ratings for ambient and elevated temperatures as evidence of the ability of the fire-resistive joint system to restrict the movement of smoke.
1. manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. A/D Fire Protection Systems Inc.
    b. CEMCO.
    c. Fire Trak Corp.
    d. Grace Construction Products.
    e. Hilti, Inc.
    f. Johns Manville.
    g. Nelson Firestop Products.
    h. NUCO Inc.
    i. Passive Fire Protection Partners.
    j. RectorSeal Corporation.
    k. Specified Technologies Inc.
    l. 3M Fire Protection Products.
    m. Tremco, Inc.; Tremco Fire Protection Systems Group.
    n. USG Corporation.
2. Fire-Resistance Rating: Equal to or exceeding the fire-resistance rating of the wall, floor, or roof in or between which it is installed.

C. Exposed Joint Firestopping Systems: Flame-spread and smoke-developed indexes of less than 25 and 450, respectively, as determined in accordance with ASTM E84.

2.4 ACCESSORIES

A. Provide components of joint firestopping systems, including primers and forming materials, that are needed to install elastomeric fill materials and to maintain ratings required. Use only components specified by joint firestopping system manufacturer and approved by the qualified testing agency for conditions indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for joint configurations, substrates, 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: Before installing joint firestopping systems, clean joints in accordance with fire-resistive joint system manufacturer's written installation instructions and the following requirements:

1. Remove foreign materials from substrate surfaces that could interfere with adhesion of elastomeric fill materials or compromise fire-resistive rating.
2. Clean joint substrates to produce clean, sound surfaces capable of developing optimum bond with elastomeric fill materials. Remove loose particles remaining from cleaning operation.
3. Remove laitance and form-release agents from concrete.

B. Prime substrates in accordance with joint firestopping system manufacturer's written installation instructions, using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

C. Apply a suitable bond breaker to prevent three-sided adhesion in applications where condition occurs.

3.3 INSTALLATION

A. General: Install joint firestopping systems in accordance with manufacturer's written installation instructions and published drawings for products and applications indicated.

B. Install forming materials and other accessories of types required to support elastomeric fill materials during their application and in position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.

1. After installing elastomeric fill materials and allowing them to fully cure, remove combustible forming materials and other accessories not indicated as permanent components of fire-resistive joint system.

C. Install elastomeric fill materials for joint firestopping systems by proven techniques to produce the following results:

1. Apply elastomeric fill in voids and cavities formed by joints and forming materials as required to achieve fire-resistance ratings indicated.
2. Apply elastomeric fill materials so they contact and adhere to substrates formed by joints.
3. For elastomeric fill materials that will remain exposed after completing the Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

3.4 IDENTIFICATION

A. Wall Identification: Permanently label walls containing firestopping systems with the words "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS," using lettering not less than 3 inches high and with minimum 0.375-inch strokes.

1. Locate in accessible concealed floor, floor-ceiling, or attic space at 15 ft. from end of wall and at intervals not exceeding 30 ft..

B. Joint Identification: Identify joint firestopping systems with legible metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches of joint edge, so labels are visible to anyone seeking to remove joint firestopping system. Use mechanical fasteners or self-adhering-type labels with adhesives capable of permanently bonding labels to surfaces on which labels are placed. Include the following information on labels:

1. The words "Warning - Joint Firestopping - Do Not Disturb. Notify Building Management of Any Damage."
2. Contractor's name, address, and phone number.
3. Designation of applicable testing agency.
4. Date of installation.
5. Manufacturer's name.
6. Installer's name.

3.5 FIELD QUALITY CONTROL

A. Owner will engage a qualified testing agency to perform tests and inspections in accordance with ASTM E2393.

B. Where deficiencies are found or joint firestopping systems are damaged or removed due to testing, repair or replace joint firestopping systems so they comply with requirements.

C. Proceed with enclosing joint firestopping systems with other construction only after inspection reports are issued and installations comply with requirements.

3.6 CLEANING AND PROTECTION

A. Clean off excess elastomeric fill materials adjacent to joints as the Work progresses by methods and with cleaning materials that are approved in writing by joint firestopping system manufacturers and that do not damage materials in which joints occur.

B. Provide final protection and maintain conditions during and after installation that ensure joint firestopping systems are without damage or deterioration at time of Substantial Completion. If damage or deterioration occurs despite such protection, cut out and remove damaged or deteriorated joint firestopping systems immediately and install new materials to produce joint firestopping systems complying with specified requirements.

3.7 JOINT FIRESTOPPING SYSTEM SCHEDULE

A. Where UL-classified systems are indicated, they refer to system numbers in UL's online directory "Product iQ" under product Category XHBN or Category XHDG.

B. Floor-to-Floor, Joint Firestopping Systems:

1. UL-Classified Systems: FF- S- 0000-0999.
2. Assembly Rating: As indicated.
3. Nominal Joint Width: As indicated.
4. Movement Capabilities: Class I 12-1/2 percent compression or extension.

C. Wall-to-Wall, Joint Firestopping Systems: .

1. UL-Classified Systems: WW- S- 0000-0999.
2. Assembly Rating: A indicated.
3. Nominal Joint Width: As indicated.
4. Movement Capabilities: Class I - 12-1/2 percent compression or extension.

D. Floor-to-Wall, Joint Firestopping Systems:.

1. UL-Classified Systems: FW-S- 0000-0999.
2. Assembly Rating: As indicated.
3. Nominal Joint Width: As indicated.
4. Movement Capabilities: Class I - 12-1/2 percent compression or extension.

E. Head-of-Wall, Fire-Resistive Joint Firestopping Systems:.

1. UL-Classified Systems: HW-S-0000-0999.
2. Assembly Rating: As indicated.
3. Nominal Joint Width: As indicated.
4. Movement Capabilities: Class I - 12-1/2 percent compression or extension.

F. Bottom-of-Wall, Joint Firestopping Systems:.

1. UL-Classified Systems: BW-S- 0000-0999.
2. Assembly Rating: As indicated.

3. Nominal Joint Width: As indicated.
4. Movement Capabilities: Class I - 12-1/2 percent compression or extension.

G. Wall-to-Wall, Joint Firestopping Systems Intended for Use as Corner Guards:.

1. UL-Classified Systems: CG- S- 0000-0999.
2. Assembly Rating: As indicated.
3. Nominal Joint Width: As indicated.
4. Movement Capabilities: Class I - 12-1/2 percent compression or extension.

END OF SECTION 078443

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SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Nonstaining silicone joint sealants.
2. Mildew-resistant joint sealants.
3. Latex joint sealants.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Nonstaining silicone joint sealants.
2. Mildew-resistant joint sealants.
3. Latex joint sealants.

B. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

C. Joint-Sealant Schedule: Include the following information:

1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant color.

1.3 INFORMATIONAL SUBMITTALS

A. Field Quality-Control Reports: For field-adhesion-test reports, for each sealant application tested.

B. Sample warranties.

1.4 CLOSEOUT SUBMITTALS

A. Manufacturers' special warranties.

B. Installer's special warranties.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Authorized representative who is trained and approved by manufacturer.

1.6 FIELD CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
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.

1.7 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 SOURCE LIMITATIONS

A. Obtain joint sealants from single manufacturer for each sealant type.

2.2 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. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.3 NONSTAINING SILICONE JOINT SEALANTS

A. Nonstaining Joint Sealants: No staining of substrates when tested in accordance with 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 T.

1. Manufacturers: Subject to compliance with requirements, provide one of the following:

    a. Dow Corning Corporation; 790.
    b. May National Associates, Inc., a subsidiary of Sika Corporation U.S.; Bondaflex Sil 290 NB.
    c. Pecora Corporation; 890 NST.
    d. Tremco Incorporated; Spectrem 1.

2.4 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.

1. Manufacturers: Subject to compliance with requirements, provide one of the following:

    a. Dow Corning Corporation; 786-M White.
    b. GE Construction Sealants; SCS1700 Sanitary.
    c. May National Associates, Inc., a subsidiary of Sika Corporation U.S.; Bondaflex Sil 100 WF.
    d. Soudal USA; RTV GP.
    e. Tremco Incorporated; Tremsil 200.

2.5 LATEX JOINT SEALANTS

A. Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C834, Type OP, Grade NF.

1. Manufacturers: Subject to compliance with requirements, provide one of the following:

a. BASF Construction Chemicals, LLC, Building Systems; Sonolac.
b. May National Associates, Inc., a subsidiary of Sika Corporation U.S.; Bondaflex 600.
c. Pecora Corporation; AC-20.
d. Sherwin-Williams Company (The); 850A.
e. Tremco Incorporated; Tremflex 834.

2.6 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.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. BASF Construction Chemicals, LLC, Building Systems.
b. Construction Foam Products, a division of Nomaco, Inc.
c. Tremco Incorporated.

B. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin), Type O (open-cell material), Type B (bicellular material with a surface skin), or any of the preceding types, 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.

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.

2.7 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.

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 type 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 in accordance with 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 in accordance with Figure 8A in ASTM C1193 unless otherwise indicated.

3.4 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Locations:

a. Joints between plant-precast architectural concrete units.

b. Control and expansion joints in unit masonry.

c. Joints in unit masonry assemblies.

d. Joints between different materials listed above.

e. Perimeter joints between materials listed above and frames of doors, windows, and louvers.

f. Other joints as indicated on Drawings.

2. Joint Sealant: Silicone, nonstaining, S, NS, 100/50, NT.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

B. Joint-Sealant Application: Interior joints in vertical 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 and windows.

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.

C. 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.

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.

END OF SECTION 079200

SECTION 099113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Finish coatings.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each type of topcoat product.

1.3 QUALITY ASSURANCE

A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: The Sherwin Williams Company (S-W)

2.2 PAINT PRODUCTS, 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 topcoat manufacturer for use in paint system and on substrate indicated.

B. Colors: As selected by Architect from manufacturer's full range

2.3 EXAMINATION

A. Verify suitability of substrates, including surface conditions and compatibility, with finishes and primers.

B. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

2.4 PREPARATION

A. Comply with manufacturer's written instructions applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and 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.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems specified in this Section.

2.5 INSTALLATION

A. Apply paints in accordance with manufacturer's written instructions.

B. 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.

2.6 CLEANING AND PROTECTION

A. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

B. 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.

C. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

2.7 EXTERIOR PAINTING SCHEDULE

A. Aluminum Substrates:

Shop-Applied, Liquid Fluoropolymer Aluminum Extrusion Coatings, AAMA 2605-17: Minimum 70 percent PVDF resin by weight, in color coat and clear topcoat.

1. Fluropon 70% PVDF Coil Coatings from Sherwin-Williams:
2. Primer Coat: 0.20 to 0.50 mil.
3. Color Coat: 1.00 to 1.50 mils.
4. Total Thickness: 1.20 to 2.00 mils.

B. PVC Substrates (Downspouts):

1. Basis of Design: Sherwin-Willams
   Preparation: Clean PVC completely and lightly scuff sand all surfaces.
   a. Primer: Pro Industrial Pro-Cryl Universal Acrylic primer
   b. Finish Coat: Pro Industrial DTM Acrylic Semigloss B66-1151 series or Pro Industrial DTM Acrylic Gloss B66-1050 series

2. Alternative manufacturer: Pittsburgh Paints Company (PITT)
   Preparation: Clean PVC completely and lightly scuff sand all surfaces.
   a. Primer: Sealgrip Universal Latex Primer 17-921XI series
   b. Finish Coat: Pitt-tech Plus EP DTM Acrylic Semigloss 90-1610 series or Pitt-tech Plus EP DTM Acrylic Gloss 90-1510 series

3. Color selection: Black. Verify color with Architect

END OF SECTION 099113

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Architects Field Report – Existing Conditions

Date: 10/15/2024-1/3/2025
Project: LCS Godby Building 04 Roof Replacement
Project No: FC - 240208

Present at Site:

Tristan Williams, Fitzgerald Collaborative
Travis Smith, LCS
David Norton, LCS
Nate, Southern Earth Sciences

Observations

1. Level 1 – View of existing painted PVC downspouts.

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2. Level 1 – Views above ceiling showing ceiling, structure and roof deck formboard.

3. Level 1 – Stains on existing formboard – some at existing roof drain locations.

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Architects Field Report – Existing Conditions

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4. Roof Level – Overall views of roof. Ponding water on the roof. Multiple instances of patches and repairs.

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Architects Field Report – Existing Conditions

Date: 10/15/2024-1/3/2025
Project: LCS Godby Building 04 Roof Replacement
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5. Roof Level – South edge conditions. Canopy attachment to the south wall. Similar condition at the north wall.

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Architects Field Report – Existing Conditions

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6. Roof Level – Images of concrete column parapet measurements.

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7. Roof Level – Core for hazardous materials test by roof edge. ~4.5” to the top of the existing concrete deck.

8. Roof Level – Core for hazardous materials test by existing exhaust fans. ~4.5” to the top of the existing formboard. Core includes the concrete deck.

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Architects Field Report – Existing Conditions

Date: 10/15/2024-1/3/2025
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9. Roof Level – View of existing vent fan and pipe vent.

10. Roof Level – Corner parapet condition. Existing roof drain.

Report by:
Tristan Williams, Fitzgerald Collaborative
END OF REPORT