

Liberty Public Schools

Project Manual

ROOF REPAIRS

Liberty High School & Manor Hill Elementary

2023 Summer Project

June 13, 2023

Steve Aldrich

Director of Facilities

1138 Southview Drive

Liberty, Missouri 64068



INVITATION TO BID “ITB”

Notice is hereby given that the **LIBERTY PUBLIC SCHOOL DISTRICT, LIBERTY, MISSOURI**, requests written, sealed bids on the items specified on the attached sheet(s).

DATE: JUNE 22, 2023

BID NUMBER: ITB 019-023

BID TITLE: ROOF REPAIRS

BIDS MUST: be received on **JULY 18, 2023 at 1:00 PM CST**

BIDS MUST BE DELIVERED TO: Jason Breit, Director of Purchasing
Liberty Public School District 53
Support Service Center
Purchasing Department
801 Kent St.
Liberty, MO 64068

All questions, requests for information or clarification pertaining to this bid must be submitted in writing to Jason Breit at jason.breit@lps53.org

The District reserves the right to accept or reject all or any part of any quote/proposal/bid, to waive technicalities, and to accept the offer that the District considers to be the most advantageous.

All supporting bid documents such as addenda, tabulation sheets, notices of action and/or notices of award will be posted on the website the District’s website at <https://www.lps53.org/Page/1563>. It is the responsibility of the bidder to monitor the website for all information regarding this bid or any upcoming bids/proposals.

BIDDER ACKNOWLEDGEMENT

The undersigned further states that he is a duly licensed Contractor, for the type of work proposed, in the State of Missouri, and that all fees, permits, etc., pursuant to the submission of this proposal have been paid in full.

Company Name _____

Address _____ City _____ State _____ Zip Code _____

Telephone _____ E-mail Address _____ Web Address _____

Name (Typed or Printed) _____

Signature of Authorized Representative: _____

Date _____ Company Type: (i.e. Corporation, LLC. or Other) _____

BID IDENTIFICATION LABEL

NOTICE TO ALL RESPONDENTS

For your convenience, the label below has been provided to properly identify your proposal submittal. Place your bid in a sealed envelope, type or print company name and address in area provided below and affix the label on the outer surface of the envelope or package.

PLEASE FILL OUT THE LABEL BELOW AND ATTACH IT TO THE OUTSIDE OF YOUR REPLY ENVELOPE.

DO NOT OPEN - SEALED BID - DO NOT OPEN

BID #: ITB 019-023, TITLE: ROOF REPAIRS

BID PROPOSAL DUE ON: JULY 18, 2023 at 1:00 PM CST

FROM:

DELIVER TO:

LIBERTY PUBLIC SCHOOL DISTRICT
PURCHASING DEPARTMENT
ATTN: JASON BREIT
801 KENT ST.
LIBERTY, MO 64068

BID INSTRUCTIONS

PURPOSE

The purpose of this ITB is to establish an agreement for the restoration of roofs to be performed at Liberty High School, and Manor Hill Elementary within the Liberty Public School District, as described herein. It is the intent of the District to award a service contract to a single vendor.

CALENDAR OF EVENTS

Thursday, June 22, 2023	Bid Release Date
Thursday, July 6, 2023	Pre-Bid Meeting – 10:00 AM CST
Friday, July 14, 2023	Question Deadline – 11:00 AM CST
Tuesday, July 18, 2023	Submittal of Bid Deadline - 1:00 PM CST
Thursday, July 27, 2023	BOE Recommendation for Award
Wednesday, August 2, 2023	Vendor Award Notification

PRE-BID MEETING

A pre-bid meeting will be held at Liberty High School on Thursday, July 6, 2023 at 10:00 PM CST. Liberty High School is located at 200 Blue Jay Drive, Liberty, MO. 64068. We will meet inside the main front doors by the admin offices to start the meeting. See map below. The point of contact for the meeting is Justin Presson, Project Manager, who can be reached at 816-736-5448. It is highly recommended that all perspective vendors attend the pre-bid meeting in order to fully understand the scope of service being requested. Following the pre-bid meeting at Liberty High School, contractors will be allowed to walk the roofs at LHS, and MHE.

Liberty High School



Pre-Bid Meeting.
Enter through Main
front doors.

CLARIFICATION DEADLINE

The Vendor is presumed to completely accept the Bid requirements as stated herein. Bidders having questions concerning ITB terminology, general or specific conditions should submit them in writing to the Director of Purchasing at jason.breit@lps53.org.

The Vendor must raise any questions regarding the Bid requirements no later than July 14, 2023 at 11:00 AM CST so that appropriate information may be researched and made available prior to the bid opening.

By submitting a bid, the bidder warrants that he/she is fully satisfied that these specifications, as amended if applicable, accurately describe or indicate that all conditions, site or otherwise, have been taken into account in determining the bid price(s). There will be no increase in the contract price based upon a bidder's misunderstanding or lack of knowledge about the intent of the solicitation. In addition, the vendor must list and outline, in their bid response, any exceptions to the Bid requirements. The timeliness, nature and number of the exceptions taken by the Vendor are among the factors that the District will consider in selecting the successful Vendor.

BONDING

A **Payment Bond** will be required from any vendor that submits a total bid proposal in excess of \$50,000. The undersigned Bidder agrees to furnish a Payment Bond in the amount of 100% of the total contract value prior to execution of the formal service contract, agreement or issuance of an official district purchase order.

A Bid Bond and/or Performance Bond is NOT required to be submitted on this project.

SPECIAL REQUIREMENTS

One original proposal clearly marked "**Original**", and two (2) copies, clearly marked "**Copy**", must be submitted. Please also include a digital/electronic copy on a flash drive within your proposal packet. The complete Bid Response should be sealed in an envelope or box for delivery to the Purchasing Office of Liberty Public Schools. "Copy" documents must be identical to Original Response submitted. The Liberty School District will not be held responsible for pricing sheets or materials left out of "Copy" or "Original" submittals.

The District may occasionally submit more than one separately numbered proposal packet to you in a single envelope. Please be aware that you must return separately numbered proposals to the District in separate envelopes. Multiple options within the same proposal may, however, be submitted together.

ADDENDA

All changes, additions, and/or clarifications in connection with this Bid will be issued by the Purchasing Office in the form of a written addendum. Signed acknowledgement of receipt of each addendum must be submitted with the Bid (see "Bid Response Form"). Verbal responses and/or representations shall not be binding.

BID CONTENTS AND SUBMISSION

Bids shall include the following information:

- A. Name, address, and telephone number of Bidder(s). See page 2.
- B. Full price for providing the Product, Equipment and/or Service in accordance with this Bid.
- C. A completed Bid Form attached to this Invitation for Bid.
- D. Name, address and telephone number of not less than two (2) references for whom the Vendor has provided similar Supplies, Equipment, and/or Services to within the last 2 years.
- E. Detailed description of material and services to be provided.

Vendors must use the forms provided for the purpose of submitting quotes and must give the unit price, extend totals, and sign the quote as required in each specific instance. If the vendor does not care to quote, we request that forms be returned and the reason noted. Provide all specifications and descriptive literature.

EVALUATION

In evaluating any aspect of the Response, the District may consider previous dealings with the Vendor, references from the Vendor's customers, inspections of other Supplies, Equipment or Services provided by the Vendor, and any other information the District obtains regarding the Vendor, or that the District deems relevant.

1. Responsive responses from Vendors will be evaluated on the basis of criteria that include the following:
 - a. Overall cost to the District, whether direct or indirect.
 - b. Delivery and/or lead-time required for receipt of goods/services.
 - c. Completed required forms and ability to meet the requirements of the attached service contract.
2. The timeliness, nature and number of any exceptions taken by the Vendor to the Bid will be considered by the District in evaluating a Response. Any one of these criteria alone, or in combination, may provide a basis for not accepting the Vendor's Response.
3. A responsible vendor is one who, in the opinion of the District, possesses the skill, experience, ability, integrity, financial and other resources necessary for providing the supplies, equipment, and/or services. In evaluating a Vendor's responsibility, or in evaluating any other aspect of the Response, the District may consider previous dealing with the District, references from the Vendor's customers, inspections of other supplies, equipment, and/or services supplied by the vendor, and may other information the District obtains regarding the Vendor or that the District deems relevant.

SUPPLEMENTAL MATERIALS

Vendors are responsible for including all pertinent product data in the returned proposal package. Literature, brochures, data sheets, specification information, completed forms requested as part of the proposal package and any other facts which may affect the evaluation and subsequent contract award should be included.

Materials such as legal documents and contractual agreements, which the vendor wishes to include as a condition of the proposal, must also be in the returned bid package. Failure to include all necessary and proper supplemental materials may be cause to reject the entire proposal.

TIME OF COMPLETION

Work shall begin on or about August 14, 2023. Work shall be substantially complete, excluding additional projects added to the original scope of work, by October 15, 2023.

LIQUIDATED DAMAGES

If work cannot be completed by October 15, 2023, contractor shall pay as liquidated damages the sum of \$1,000.00 for each consecutive working day that the work is not completed thereafter.

BID EXPIRATION

All bids shall be considered as firm for a period of sixty (60) calendar days, commencing the date and time of the bid closing and expiring at 3:00 PM CST of the last day. **Please note on the any deviations to this requirement.**

DISTRICT OPTION

- A. Select more than one successful Bidder based on price break(s).
- B. During the term of this Bid, the District reserves the right to purchase, from the accepted Bidder, additional products, equipment or services at the herein proposed Bid price.
- C. The District does not guarantee that any minimum quantity will be purchased from the successful Bidder during the term of this Bid.

BID OPENING

The proposal/bid contents and any modifications shall be returned in a sealed envelope addressed to the Purchasing Department, Support Services Center, 801 Kent St, Liberty, MO, 64068. **The Bid number and Bid Opening date shall be shown on the face of the envelope, and must be labeled with the vendor's name.** Bids may be modified if sent in a sealed envelope, marked "Revised Bid", and be in the possession of the Purchasing Director by the Bid opening date and time. All prospective Bidders will utilize the attached Bid Form. Bids will be publicly opened and read aloud on the date and time specified herein at the Support Services Center, 801 Kent Street, Liberty, MO 64068.

Any bid proposal(s) delivered prior to the bid proposal due date must be delivered between the operational hours of 8:00 AM and 3:00 PM CST, Monday through Friday. This excludes major holidays. This is to ensure that Purchasing Department staff is on hand and available to accept bid proposal prior to the official due date and time.

BID REJECTION

The District reserves the right to accept or reject all or any part of any quote, to waive technicalities, and to accept the offer that the District considers to be the most advantageous.

ACCEPTANCE OF BIDS:

The District reserves the right to accept the Bid that, in its judgment, is the lowest and/or best Bid. The delivery date(s) or dates when work will start shall be stated in definite terms, as they will be taken into consideration when making the award.

LATE BIDS

Bids received after the date and time of the Bid opening stated herein shall not be considered and will be returned unopened.

MISTAKE IN BIDS

If the respondent discovers a mistake in Bid prior to the date and time specified for the Bid opening, he or she may correct the mistake by modifying or withdrawing the Bid. If the apparent low and best Bidder discovers a mistake in Bid of a serious and significant nature which is unfavorable to him or her prior to the issuance of a purchase order or a contract, he or she may request consideration be given to modifying the Bid if he or she remains the lowest Bidder or to withdrawing the Bid if the result of the correction of the mistake makes another Bidder lowest and best Bidder. The mistake must be evident and provable. A mistake in Bid cannot be considered once a purchase order or contract is issued.

NEGOTIATION

- A. The District reserves the right to award a contract based on the initial Responses received, without engaging in discussions or negotiations. Accordingly, a Vendor should submit its initial Bid on the most favorable terms possible to the District. However, should only one Bid be received by the District, the District may, but is not obligated to, conduct negotiations with this vendor whose Response, in the opinion of the District, is competitive or may best meet the needs of the District.
- B. The District may, but is not obligated to, seek clarification of a Response submitted by a Vendor.
- C. If the District chooses to negotiate, negotiation may involve any issue bearing on the Response and may take place after submission of Response and before an award is made. The District reserves the right to follow negotiations with a request for submission of a best and final Response.

AWARD OF THE CONTRACT

After the Bids have been opened and duly considered, the lowest, most responsive and, responsible bid will be submitted to the Liberty Public School District 53 Board of Education for formal approval. After approval by the District Board of Education, the Purchasing Director will notify, in writing, the successful Bidder. An approved Bid award by the Board of Education shall constitute the District's official award of the Bid. A written contract, or purchase order, noting the terms and conditions of this bid will be executed before "Notice to Proceed" is given. **Vendors with standardized contracts should submit them with the Bid Response.**

PREVAILING WAGE PROJECT

This is a prevailing wage solicitation. Not less than the prevailing hourly rate of wages, as set out in the wage order attached to and made part of the specification for work under the contract, shall be paid to all workers performing under this contract. (Section 290.250, RSMo).

The contractor will be held responsible for paying the prevailing wages and it is imperative that all contractors familiarize themselves with the current wage rates before submitting bids based on these specifications herein. The contractor will forfeit a penalty to the contracting public body of \$100 per day (or a portion of a day) for each worker that is paid less than the prevailing rate for any work done under the contract by the contractor or any subcontractors (Section 290.250, RSMo). The Contractor and all subcontractors to the contract must require all on-site employees to complete the ten-hour safety training program required under Section 292.675, RSMo, unless they have previously completed the program and have documentation of having done so.

The contractor will forfeit a penalty to the contracting public body of \$2500 plus an additional \$100 for each employee employed by the contractor or subcontractor, for each calendar day, or portion thereof, such employee is employed without the required training (Section 292.675, RSMo).

A legible list of all prevailing wage rates must remain posted in a prominent and easily accessible place at the worksite by each contractor and subcontractor on the project. The notice must be posted during the full time that any worker is employed on the job (Section 290.265, RSMo).

During periods of excessive employment (any month immediately following two consecutive calendar months during which the level of unemployment in the state has exceeded five percent as measured by the United States Bureau of Labor Statistics) only Missouri laborers (persons who have resided in Missouri for at least thirty days and intend to become or remain Missouri residents) and laborers from non-restrictive states persons who are residents of a state which has not enacted state laws restricting Missouri laborers from working on public works projects in that state, (as determined by the Labor and industrial Relations Commission) may be employed under the contract, except that other laborers may be used when Missouri laborers or laborers from nonrestrictive states are not available, or are incapable of performing the particular type of work involved, if so certified by the contractor and approved by the contracting officer.

Every transient employer, as defined in section 285.230 RSMo, enclosed in the laws section, must post in a prominent and easily accessible place at work site a clearly legible copy of the following: (1) The notice of registration for employer withholding issued to such transient employer by the director of revenue; (2) Proof of coverage for workers' compensation insurance or self-insurance signed by the transient employer and verified by the department of revenue through records of the division of workers' compensation; and (3) The notice of registration for unemployment insurance issued to such transient employer by the division of employment security. Any transient employer failing to comply with these requirements shall, under section 285.234 RSMo, enclosed in the laws section, be liable for a penalty of five hundred dollars per day until the notices required by this section are posted as required by that statute.

The awarded contractor must provide certified payroll for themselves and any sub-contractors throughout the duration of work and prior to final payment being made (290.290, RSMo).

At the completion of this project and prior to a final payment being made, the contractor must submit an "Affidavit of Compliance" for PW-4 with the Liberty Public School District. The affidavit must state the party has fully complied with Missouri Prevailing Wage Law, and the public body must verify that the correct wages were paid. No payment can be legally made by the public body to the contractor(s) until the affidavit is filed in proper form and order with the public body (Section 290.290 and 290.325, RSMo).

All contractors must report to the Liberty Public School District if a wage subsidy, bid supplement, or rebate was provided, and if so, if it was provided lawfully. The amount and date of each subsidy, supplement or rebate must be reported to the Liberty Public School District within 30 days of receipt of payment (Section 290.095, RSMo).

Missouri Prevailing Wage Order for this Project – Wage Order No. 29 (See Enclosed)

REFERENCES

Please provide references of entities that your company has provided services to and that the district may contact for reference.

Reference # 1

Organization Name: _____ Telephone #: _____

Contact Name: _____ Email: _____

Scope of Work Provided: _____

Project Dollar Value: _____ Contract Dates: _____

Reference # 2

Organization Name: _____ Telephone #: _____

Contact Name: _____ Email: _____

Scope of Work Provided: _____

Project Dollar Value: _____ Contract Dates: _____

Reference # 3

Organization Name: _____ Telephone #: _____

Contact Name: _____ Email: _____

Scope of Work Provided: _____

Project Dollar Value: _____ Contract Dates: _____

SERVICE CONTRACT

Below is the formal service contract, which includes all governing terms and conditions, that shall be dually executed between the District and awarded Vendor upon formal award of service by the District Board of Education. All materials such as legal documents and contractual agreements, which the vendor wishes to include as a condition of the proposal, must also be included within the returned proposal package for review by District.



SERVICES CONTRACT

Between

LIBERTY PUBLIC SCHOOL DISTRICT #53

and

CONTRACTOR

Contract No. _____

THIS CONTRACT SHALL BE BINDING ON THE DISTRICT ONLY IF IT IS APPROVED BY THE BOARD OF EDUCATION AND SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE DISTRICT

This Services Contract ("Contract") is made by and between the Liberty Public School District #53, Liberty, MO 64068 ("LPS" or "Liberty Schools") and CONTRACTOR ("Contractor"). The parties agree as follows:

CONTRACTOR DATA

Contractor Name: _____

Contact Name: _____

Address: _____

City, State, ZIP: _____

Telephone: _____ Email: _____

Contractor must submit a completed "Request for Taxpayer Identification Number and Certification" (Form W-9) with this signed contract. Payment information will be reported to the Internal Revenue Services under the name and TIN or SSN, whichever is applicable, provided by Contractor. Contractor certifies under penalty of perjury that Contractor is a

☐ Sole Proprietor ☐ Corporation ☐ Limited Liability Company

☐ Partnership ☐ Nonprofit Corporation ☐ Other (describe: _____)

District Point of Contact: _____

Name of Building or Department: _____

Address: _____

***All information in this contract is subject to public records law. Please contact the District Point of Contact listed above if you have any questions.**

TERMS AND CONDITIONS

1. **Purpose.** This contract is for services other than (a) personal services or (b) architecture, engineering, or related services.
2. **Term and Termination.** This contract becomes effective on _____ or the date on which the Contract is fully executed by both parties, **whichever is later. No party shall perform work under this Contract before the effective date.** An email notification with a copy of the fully executed contract will be sent to the Contractor email listed above upon execution. At that time, work under the contract may begin.

Unless earlier terminated as provided below, this Contract shall continue through

Check if applicable:

___ As provided for in _____ (enter RFP/ITB/QUOTES solicitation number, e.g. RFP 010-018), this Contract may be renewed for up to _____ (e.g. four additional one-year terms) by amendment signed by both parties.

3. **Cooperative Purchasing Option.** At the discretion of the Contractor and pursuant to District policy, purchasing procedures, other public agencies may purchase the awarded goods and services from the awarded Contractor(s), under terms and conditions of this contract.

Any such purchases will be between the Contractor and the participating public agency under separate contract and will not impact the Contractor's obligations to the District. Any estimated purchase volumes listed in this Contract do not include other public agencies and the District makes no guarantee as to their participation.

4. **Detailed Description of Services/Statement of Work.** Contractor shall provide the services described in Exhibit A (Statement of Work).

5. **Contract Documents.** This Contract consists of these Terms and Conditions and the documents listed below in descending order of precedence. A conflict in these documents shall be resolved in the priority listed below with these Terms and Conditions taking precedence over all other documents. The Exhibits to this Contract include the following documents.

- Exhibit A (Statement of Work)
- Exhibit B (Felony Conviction Notification Form)
- Exhibit C (Federal Work Authorization Program Affidavit Form)
- Exhibit D (Federal Work Authorization Program ("E-Verify) Addendum Form)

6. **Maximum Total Payment; Invoicing.** The maximum total payment under this Contract is \$_____; This is a not-to-exceed amount, and the District will not pay more than this amount unless specifically agreed to in an amendment executed by the parties. Contractor shall invoice District, and District shall pay Contractor as described in Exhibit A. In all cases, District reserves the right to withhold payments to Contractor for amounts

reasonable and sufficient to (a) cover District's costs in processing invoices more than 60 days late and (b) protect the District from any loss, damage, or claim which may result from Contractor's failure to perform in accordance with the terms of the Contract or failure to make proper payment to suppliers or subcontractors.

7. Other Payment Issues.

- a. Method of Payment: Unless otherwise specified in Exhibit A, District shall pay Contractor net 30 days upon invoice approval and work acceptance.
- b. Payment on Early Termination: Upon termination pursuant to Section 15 (Early Termination), District shall pay Contractor as follows:
 - i. If District terminates this Contract for its convenience under Section 15 (a) or 15 (b), then District must pay Contractor for work performed before the termination date if and only if Contractor performed in accordance with this Contract. District shall not be liable for any direct, indirect, or consequential damages. Termination by District shall not constitute a waiver of any other claim District may have against Contractor.
 - ii. If Contractor terminates this Contract under Section 15 (c) or 15 (d) due to Contractor's breach, then District must pay Contractor for work performed before the termination date if and only if Contractor performed in accordance with this Contract.
 - iii. If District terminates this Contract under Sections 15 (c) or 15 (d) due to Contractor's breach, then District must pay Contractor for work performed before the termination date less any setoff to which District is entitled and if and only if Contractor performed such work in accordance with this Contract.
- c. Non-Appropriation; Adequate Funding: District is prohibited from contracting for services for which it has not received appropriated funds. If payment for work under this Contract extends into District's next fiscal year, District's obligation to pay for such work shall be subject to approval for future School Board appropriations to fund this Contract. Moreover, continuation of this Contract at specified levels is specifically conditioned on adequate funding under the District's budget adopted in June of each year. District reserves the right to adjust the level of services provided for in this Contract in accordance with the funding levels adopted by its Board of Education.

8. Cost Adjustments. Both parties agree that contracted prices shall be fixed for the first 12 months of this Contract. Contractor must submit to District any proposed cost adjustments at least 60 days before the proposed effective date of such increases with a detailed explanation for each adjustment. District reserves the right to reject any changes to this Contract it deems unacceptable.

9. Independent Contractor Status: By its signature on this contract, Contractor certifies that the service or services to be performed under this Contract are those of an independent contractor. And that Contractor is solely responsible for the work performed under this Contract. Contractor represents and warrants that Contractor, its subcontractors, employees, and agents are not "officers, agents, or employees" of the District.

10. Subcontracts and Assignment. Contractor shall not subcontract, assign, delegate, or transfer any of its duties, rights, or interests under this Contract without the prior written consent of District. District may withhold such consent for any or no reason. If District consents to an assignment or subcontract, then in addition to any other provisions of this Contract, Contractor shall require any permitted subcontractor to be bound by all the terms and

conditions of this Contract that would otherwise bind Contractor. The parties agree that any such subcontracts shall be construed as matters solely between Contractor and its subcontractor and shall not have any binding effect on District.

11. **Successors in Interest.** This Contract shall bind and insure to the benefit of the parties, their successors, and approved assigns, if any.
12. **No Third Party Beneficiaries.** District and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives or provides any benefit or right, directly or indirectly, to third parties unless they are individually identified by name in this Contract and expressly described as intended beneficiaries of this Contract.
13. **Other Contractors.** If this Contract is for “services” and not “services requirements” (see Section 1 (Purpose)) District may enter into other contracts for additional or related work, and Contractor shall fully cooperate and coordinate its performance under the Contract with those other contractors and with relevant District employees. Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by District employees.
14. **Nonperformance; Substituted Services.** As used in this Contract, “failure to perform” means failure (for whatever reason) to deliver the services as specified and/or scheduled in this Contract. If Contractor fails to perform under this Contract and does not cure that failure within seven days’ written notice from District, then District has the right to complete the services itself, to obtain the services from other sources, or to a combination thereof as necessary to accomplish the purpose of this Contract. Both parties agree that Contractor shall bear any reasonable cost difference for these substituted services.
15. **Early Termination.** This Contract may be terminated as follows unless specified herein:
 - a. Mutual: District and Contractor may terminate this Contract at any time by their written agreement.
 - b. District’s Sole Discretion: District in its sole discretion may terminate this Contract for any reason on 30 days’ written notice to Contractor.
 - c. Breach: Either party may terminate this Contract in the event of a breach by the other party. To be effective, the party seeking termination must give to the other party written notice of the breach and its intent to terminate. If the breaching party does not entirely cure the breach within 15 days of the date of the notice, then the non-breaching party may terminate this Contract at any time thereafter by giving a written notice of termination.
 - d. Contractor Licensing, etc.: Notwithstanding Section 15 (c), District may terminate this Contract immediately by written notice to Contractor upon denial, suspension, revocation, or non-renewal of any license, permit, or certificate that Contractor must hold to provide services under this Contract.
 - e. Furlough: District reserves the right to terminate or otherwise suspend this Contract if District’s Board of Education determines that funding is insufficient to remain fully open and calls for a District-wide furlough or similar temporary District reduction in operations. Any temporary closure shall not affect amounts due Contractors under the Contract, subject to a pro-rated adjustment for reduction in services or need for goods during the furlough.

- 16. Remedies.** In case of Contractor breach and in addition to the provisions of Section 13 and 14 of this Contract, the parties agree that District is entitled to any other available legal and equitable remedies. In case of District breach, the parties agree that Contractor's remedy is limited to Contract termination and receipt of Contract payments to which Contractor is entitled.
- 17. Hazardous Materials.** Contractor shall notify District before using any products containing hazardous materials to which District employees, students, or the general public may be exposed. Upon District request, Contractor must immediately provide Material Safety Data Sheets to District for all Materials subject to this provision.
- 18. Errors.** Contractor shall perform any additional work necessary to correct Contractor errors in the services it performs. Under this Contract and shall do so without undue delays or additional cost to District.
- 19. Access to Records; Contractor Financial Records.** Contractor agrees that District and its authorized representatives are entitled to review all Contractor books, documents, papers, plans, and records, electronic or otherwise ("Records"), directly pertinent to this Contract for the purpose of making audit, examination, excerpts, and transcripts. Contractor shall maintain all Records, fiscal and otherwise, directly relating to this Contract in accordance with generally accepted accounting principles so as to document clearly Contractor's performance. Following final payment and termination of this Contract, Contractor shall retain and keep accessible all Records for a minimum of three years, or such longer period as may be required by law, or until the conclusion of any audit, controversy, or litigation arising out of or related to this Contract, whichever date is later.
- 20. Ownership of Work Products.** Contractor agrees that all work product created or developed for District by Contractor pursuant to this Contract are intended as "work made for hire" and shall be the exclusive property of the District. If any such work product contains Contractor's intellectual property that is or could be protected by federal copyright, patent, or trademark laws, Contractor hereby grants District a perpetual, royalty-free, fully-paid, non-exclusive, and irrevocable license to copy, reproduce, deliver, publish, perform, dispose of, and use or re-use, in whole or in part, and to authorize others to do so, all such work product. District claims no right to any pre-existing work product of Contractor provided to District by the Contractor in the performance of this Contract, except to copy, use, or re-use any such work product for District use only.
- 21. Work performed on District Property.** Contractor shall comply with the following:
- a. Identification: When performing work on District property, Contractor shall be in appropriate work attire (or uniform, if applicable) at all times. If Contractor does not have a specific uniform, then Contractor shall provide identification tags and/or any other mechanism the District in its sole discretion determines is required to easily identify Contractor.
 - b. Sign-In Required: As required by schools and other District locations, each day Contractor's employee are present on District property, those employees must sign into the location's main office to receive an in-school identification/visitors tag. Contractor's employees must display this tag on their person at all times while on District property.
 - c. No Smoking: All District properties are tobacco-free zones; Contractor is prohibited from using any tobacco product on District property.

- d. No Drugs: All District properties are drug-free zones as enforced by law enforcement.
- e. No Weapons or Firearms: Except as provided by statute and District policy, all District properties are weapons and firearms-free zones; Contractor is prohibited from possessing on its persons or in its vehicles any weapons or firearms while on District property.

22. Security. Any disclosure or removal of any District matter or property by Contractor shall be cause for immediate termination of this Contract. Contractor shall bear sole responsibility for any liability including, but not limited to attorney fees, resulting from any action or suit brought against District because of Contractor's willful or negligent release of information, documents, or property contained in or on District property.

23. Employee Removal. At District's request, Contractor shall immediately remove any Contractor employee from all District properties in cases where the District in its sole discretion determines that removal of that employee is in the District's best interests.

24. Media Contacts. Contractor shall issue no news release, press release, or other statement to members of the news media or any other publication regarding this Contract or the Services provided hereunder within one (1) year of Services completion without District's prior written authorization. Contractor shall not post or publish any textual or visual representations of the Services without approval of District.

30. Compliance with Applicable Law. Contractor shall comply with all federal, state, and local laws applicable to public contracts and the work done under this Contract, and with all regulations and administrative rules established pursuant to those laws.

31. Indemnification. Contractor shall defend and indemnify District, its officers, directors, employees, and agents from and against all liabilities, losses, expenses, claims, actions, or judgements (including attorney fees) recovered or made against District for any damage, injury, or death to persons or damage to property caused by the negligent or intentional acts or omissions of Contractor, its officers, employees, agents, or subcontractors related to Contractor's performance under this Contract. District must promptly notify Contractor in writing of any such claim or demand to indemnify and shall cooperate with Contractor in a reasonable manner to defend such claim.

32. Insurance. At all times while providing services under this Contract, Contractor shall maintain in force at Contractor's expense the following insurance coverage(s), as applicable:

- a. Workers' Compensation. As required by Chapter 287 of the Revised Statutes of Missouri, subject employers shall provide workers' compensation coverage in accordance with this law. Contractors shall submit a certificate of insurance to District showing proof of coverage.
- b. Professional Liability/Errors & Omissions (E&O). If Contractor is providing services that require a state license (including, but not limited to , accounting, architectural, auditing, legal, and medical), then Contractor shall maintain professional liability/E&O insurance coverage of at least 3,000,000 for each claimant, and at least \$3,000,000 coverage for each incident or occurrence.

- c. General Liability. Contractor shall provide general liability insurance coverage to sufficiently cover events adverse to the objectives of this Contract. Contractor shall maintain general liability insurance coverage of at least \$1,000,000 for each claimant and \$3,000,000 for each incident, or occurrence.
- d. Motor Vehicle Liability. If Contractor is providing services that require Contractor to transport District personnel, students, or property, then in addition to any legally required insurance coverage, Contractor shall maintain motor vehicle liability insurance of at least \$1,000,000 for each claimant, and \$3,000,000 for each incident, or occurrence.
- e. Other Insurance. District reserves the right to require other insurance (e.g. Builder's All –Risk Insurance for construction services) as may be reasonably prudent under this Contract.
- f. Additional Requirements. All insurance coverage shall be provided by an insurance company having an A.M. Best rating of at least A- and licensed to do business in Missouri. Contractor alone is responsible for paying all deductibles and retentions. Contractor's coverage shall be primary in the event of loss.
- g. Certificate of Insurance. Upon District request, Contractor shall furnish to District a current certificate of insurance for each of the above coverages within 48 hours of District request. Each certificate must state the relevant deductible or retention level. For general liability coverage, the certificate must state that District, its agents, officers, and employees are additional insureds with respect to Contractor's services provided under this Contract. The certificate must specify an additional insured endorsement, and Contractor shall attached a copy of the endorsement to the certificate. If requested by District, Contractor shall also provide complete copies of insurance policies to District.

33. Waiver; Severability. Waiver of any default or breach under this Contract by District does not constitute a waiver of any subsequent default or a modification of any other provisions of this Contract. If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular term or provision held invalid.

34. Non-discrimination Clause. Both parties agree that no person shall be subject to unlawful discrimination based on race; national or ethnic origin; color; sex; religion; age; sexual orientation; gender expression or identify; pregnancy; marital status; familial status; economic status or source of income; mental or physical disability or perceived disability; or military service in programs, activities, services, benefits, or employment in connection with this Contract. The parties further agree not to discriminate in their employment or personnel policies.

35. Confidentiality. Contractor agrees that all knowledge and information that it may receive from the Liberty Public School District or its employees, agents or consultants or by virtue of the performance of services under and pursuant to this agreement including but not limited to information concerning the students and employees of LPS shall for all time and for all purposes be regarded by Contractor as confidential and held by Contractor in confidence and shall be solely for the benefit and use of LPS and shall not be used by Contractor or directly or indirectly disclosed by Contractor to any person or entity whatsoever excepting LPS or with the written permission of LPS or when required by law.

36. Controlling Law; Venue. The parties agree that Missouri law will govern any dispute related to this Contract and to conduct any litigation arising out of this Contract in courts located in Clay County, Missouri.

37. **Amendments; Renewal.** Any amendments, consents to or waivers of the terms of this Contract must be in writing and signed by both parties. The parties may renew this Contract by their signed, written instrument.
38. **Counterparts.** The parties may execute this Contract in counterparts, each of which constitutes an original and all of which comprise one and the same Contract. Counterparts may be delivered by electronic means.
39. **Entire Agreement.** When signed by both parties, this Contract (and any attached exhibits) is their final and entire agreement. As their final and entire expression, this Contract supersedes all prior and contemporaneous oral or written communications between the parties, their agents, and representatives. There are no representations, promises, terms, conditions, or obligations other than those contained herein.
40. **Notices.** All notices or demands delivered upon depositing the notice or demand in the United States mail, certified or registered, postage prepaid, addressed to the respective party at the addresses herein.

PAYMENT METHOD: The District preferred method of payment is by check. Electronic payment is not available at this time. The district will issue an official purchase order once the Contract has been executed. All invoices should state the applicable purchase order number in order to expedite payment.

I have read this contract and its attached exhibits, if any. I certify that I have the authority to sign and enter into this contract on behalf of the party I represent and agree to be bound by its terms.

CONTRACTOR

DISTRICT

CONTRACTOR

LIBERTY PUBLIC SCHOOL DISTRICT
8 VICTORY LANE
LIBERTY, MO 64068

Signature

Steve Anderson
Chief Operations Officer

Contractor Printed Name and Title

Date

Date

ATTACHMENT (A) – STATEMENT OF WORK

This attachment will be provided by the awarded vendor once the bid award recommendation has been approved.

Either a Statement of Work by Vendor, the Bid Response Form, or a copy of the entire bid proposal submitted by the awarded vendor will be included in the Service Contract as Attachment A.

ATTACHMENT (B) - FELONY CONVICTION NOTIFICATION FORM

The person or business entity that enters into an agreement with this school district must give advance notice to the District if the person or an owner or operator of the business entity has been convicted of a felony. The notice must include a general description of the conduct resulting in the conviction of a felony.

The district may terminate this agreement with a person or business entity if the District determines that the person or business entity failed to give notice by the next preceding subsection, or misrepresented the conduct resulting in the conviction. The District will compensate the person or business entity for services performed before the termination of the agreement”.

By submitting this offer and signing this certificate, this bidder:

- Certifies that the owner/operator has not been convicted of a felony, except as indicated on a separate attachment to this offer, and
- Certifies that no employee who will enter school buildings or potentially have contact with school children has been convicted of any felony or a misdemeanor involving violence or sexual contact or sexual abuse. It shall be the duty of the vendor to conduct the appropriate background checks on its employees and vendor agrees to share this information with the District upon request.

Vendor Name: _____

Vendor Address: _____

Vendor E-mail Address: _____

Vendor Telephone: _____

Authorized Company Official's Name: _____ (Printed)

Signature of Company Official: _____

Date: _____

ATTACHMENT (C) - FEDERAL WORK AUTHORIZATION PROGRAM AFFIDAVIT

I, _____, being of legal age and having been duly sworn upon my oath, state the following facts are true:

1. I am more than twenty-one years of age; and have first-hand knowledge of the matters set forth herein.
2. I am employed by _____ (hereinafter "Company") and have authority to issue this affidavit on its behalf.
3. Company is enrolled in and participating in the United States E-Verify (formerly known as "Basic Pilot") federal work authorization program with respect to Company's employees working in connection with the services Company is providing to, or will provide to, the District, to the extent allowed by E-Verify.
4. Company does not knowingly employ any person who is an unauthorized alien in connection with the services the Company is providing to, or will provide to, the District.

FURTHER AFFIANT SAYETH NOT.

By: _____ (individual signature)

For _____ (company name)

Title: _____

Subscribed and sworn to before me on this _____ day of _____, 202_____.

NOTARY PUBLIC

My commission expires:

ATTACHMENT (D) – FEDERAL WORK AUTHORIZATION PROGRAM (“E-VERIFY”) ADDENDUM

Pursuant to Missouri Revised Statute 285.530, all business entities awarded any contract in excess of five thousand dollars (\$5,000) with a Missouri public school district must, as a condition to the award of any such contract, be enrolled and participate in a federal work authorization program with respect to the employees working in connection with the contracted services being provided, or to be provided, to the District (to the extent allowed by E-Verify). In addition, the business entity must affirm the same through sworn affidavit and provision of documentation. In addition, the business entity must sign an affidavit that it does not knowingly employ any person who is an unauthorized alien in connection with the services being provided, or to be provided, to the District.

Accordingly, your company:

- a) agrees to have an authorized person execute the attached “Federal Work Authorization Program Affidavit” attached hereto as Exhibit A and deliver the same to the District prior to or contemporaneously with the execution of its contract with the District;
- b) affirms it is enrolled in the “E-Verify” (formerly known as “Basic Pilot”) work authorization program of the United States, and are participating in E-Verify with respect to your employees working in connection with the services being provided (to the extent allowed by E-Verify), or to be provided, by your company to the District;
- c) affirms that it is not knowingly employing any person who is an unauthorized alien in connection with the services being provided, or to be provided, by your company to the District;
- d) affirms you will notify the District if you cease participation in E-Verify, or if there is any action, claim or complaint made against you alleging any violation of Missouri Revised Statute 285.530, or any regulations issued thereto;
- e) agrees to provide documentation of your participation in E-Verify to the District prior to or contemporaneously with the execution of its contract with the District (or at any time thereafter upon request by the District), by providing to the District an E-Verify screen print-out (or equivalent documentation) confirming your participation in E-Verify;
- f) agrees to comply with any state or federal regulations or rules that may be issued subsequent to this addendum that relate to Missouri Revised Statute 285.530; and
- g) agrees that any failure by your company to abide by the requirements a) through f) above will be considered a material breach of your contract with the District.

By: _____ (signature)

Printed Name and Title: _____

For and on behalf of: _____ (company name)

BID RESPONSE FORM

ADDENDA ACKNOWLEDGEMENT:

The undersigned acknowledges receipt of the following addenda; list by number and the date appearing on Addenda. If Applicable.

#1 _____ Date: _____ #2 _____ Date: _____ #3 _____ Date: _____

BASE BID, SINGLE-PRIME (ALL TRADES) CONTRACT

The undersigned Bidder, having carefully examined the Bidding and Contract Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, all as issued by the Owner, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material (other than roofing material listed on Attachment A), labor, equipment and services as described in the above documents, without exception, including all scheduled Allowances if any, necessary to complete the specified work.

Liberty Public Schools shall purchase all roofing material supplied by the primary roofing material manufacturer for all projects. The Bidder shall provide Attachment A with their bid, verifying quantities required to complete this project as specified. All materials not listed on Attachment A shall be the responsibility of the Bidder. The cost for the items listed on Attachment A shall not be included in your Base or Alternate Bid price. Failure to provide the mandatory Attachment A with verified quantities will render your bid non-responsive.

Single Prime (All trades) Contract for the above-named Project, in accordance with the requirements of the Bidding Documents, for the sum of:

BASE BIDS

1. Liberty High School
Roof 15 – Roof Repairs \$ _____
2. Manor Hill Elementary
\$ _____

UNIT PRICES

1. Drain Bowl Replacement (Case iron 5”) \$ _____ per drain
2. Drain Clamping Ring Replacement (Cast Iron) \$ _____ per ring

NO BID RESPONSE FORM**(ONLY PROVIDE IF NOT BIDDING THIS PROJECT)**

This form is designed to assist the bidder in providing information necessary to confirm a “No-Bid” response. To remain potentially involved in future opportunities, the bidder should state the reasons for declining such an invitation. Please submit to Procurement after completion and required signature.

BID NUMBER: ROOF REPAIRS; ITB 018-023**Company Name:** _____**Contact Person:** _____**Telephone Number:** _____**E-Mail:** _____**Please Note:**

A no-bid response is a critical factor in remaining on the bidders list, and thus ensures future business opportunities. In addition, a no bid response demonstrates that, while you are not interested in bidding for a particular project, you are still interested in competing for future opportunities and want to stay on the prospective bidders list.

We, the undersigned have declined to submit a bid for the following reason(s):

- ____ Specifications are too rigid (i.e. geared toward one brand/manufacturer/service only (explain below).
- ____ Unable to meet deadline for responding to above bid number (IFB/RFP).
- ____ We do not offer this product or service.
- ____ Our schedule would not permit us to perform.
- ____ Unable to meet specifications.
- ____ Unable to meet Bond/Insurance requirement(s).
- ____ Specifications unclear (explain below).
- ____ Unable to meet insurance requirements.
- ____ Please remove us from your “Bidders List”.
- ____ Other (specify below).

COMMENTS: _____

I certify that the above information is true and correct, and that no other data, fact or consideration offered or given has influenced this response.

Submitted By: _____

Name (Printed)

Title/Department_____
Signature_____
Date

DOCUMENT 00500 – CONTRACTING AND ADMINISTRATIVE FORMS

1.1 FORM OF AGREEMENT

- A. The Districts Standard Form of Agreement shall be utilized for the Project:

1.2 STANDARD ADMINISTRATIVE FORMS

- A. The following standard forms shall be utilized in the administration of the Project:
1. Form of Certificate of Insurance: AIA Document G715 Supplemental Attachment for Acord Certificate of Insurance 25-S, or equivalent acceptable to Owner.
 2. Form of Performance Bond and Labor and Material Bond: AIA Document A312 Performance Bond and Labor and Material Bond.
 3. Form of Affidavit of Release of Liens: AIA Document G706A Contractor's Affidavit of Payment of Release of Liens.
 4. Form of Statement of Sales Tax Paid: Document 00625 Contractor's Statement of Sales Tax Paid.
- B. Copies of AIA standard forms may be obtained from:
1. American Institute of Architects: (800) 365-2724.

END OF DOCUMENT 00500

SECTION 01100 – SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Owner's occupancy requirements.
 - 3. Work restrictions.
 - 4. Specification formats and conventions.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Liberty Public Schools – Liberty High School, and Manor Hill Elementary
- B. Owner: Liberty Public Schools
 - 1. Owner's Representative: Steve Aldrich.
- C. The Work consists of the following:
 - 1. General Conditions and Details for all roof areas:**
 - a. The Contractor shall be responsible to coordinate daily activities with the owner to help minimum noise, smell, and cleanliness disruptions.
 - 1) Contractors shall provide a schedule of activities, drawing of setup and work areas with their submittals, and updates for weekly progress meetings.
 - 2) Contractor shall notify the owner during check-in if they will be using an open flame or have flammable materials requiring a Burn Permit. If so, the owner shall issue a Burn Permit to the foreman during check-in.
 - b. Contractor shall keep complete roofing specification and approved submittal drawing on the roof always during the work.
 - c. It is the responsibility of the contractor to report in writing to the Owner, any areas of cracks or deterioration to the masonry walls above the roofline.
 - d. It is the responsibility of the contractor to examine the job site and document any damages or issues with pictures and/or video. Any damages found after start of work will be the responsibility of the contractor.
 - e. It is the responsibility of the contractor to clean roofs, drains, gutters, and scuppers of all debris and trash at the end of the project.
 - 2. Liberty High School – Roof 15**
 - a. On Roof 15, the district will have the loose gravel vacuumed from the roof around all four (4) wet areas prior to August 1, 2023.

- 1) Remove and reinstall lightning protection as needed to complete roofing repairs.
- 2) There are four (4) wet areas along the southeast area as shown on the attached Roof Diagnostic Survey.
 - a) The wet areas shown at the southwest perimeter and by the solar panels are not included in this work.
- 3) Spud and remove all gravel over and around the four wet areas, 115' x 35', from the roof membrane by hand.
 - a) All removed gravel shall be evenly dispersed onto existing roof outside area where loose gravel was vacuumed off the roof.
- 4) Clean roof membrane of all dirt, dust, and debris and then prime the roof membrane with TremPrime QD.
- 5) Adhere 1-ply Burmastic Composite Ply HT and 1-ply of PowerPly Plus HT FR with PowerPly Standard Cold Adhesive.
 - a) Extend new roofing to cover fully cover the 115' x 35' area.
- 6) Strip in outside perimeter of new membrane with 3-course reinforcement of ELS and Burmesh.
- 7) At drains, remove clamping rings and extend new 2-ply membrane into drains and reinstall clamping rings.
- 8) At projection base flashings, extend 2-ply membrane up onto base flashing and install 3-cours reinforcement.
- 9) After repairs are complete, inspect area outside work area for damages and insulation fasteners that have broken through the existing membrane.
 - a) Repair all damages with new 2-ply membrane as specified above.
- b. Clean work areas of all debris and trash.

3. Manor Hill Elementary – Roof A

- a. There are three (3) wet insulation area on Roof A, shown on the attached Diagnostic Survey.
 - 1) Spud all gravel from the roof membrane.
 - a) Extend gravel removal a minimum of two feet outside the wet areas.
 - b) All removed gravel shall be evenly dispersed outside repair areas.
 - 2) Clean and then prime the roof membrane with TremPrime QD.
 - 3) Adhere 1-ply Burmastic Composite Ply HT and 1-ply of PowerPly Plus HT FR with PowerPly Standard Cold Adhesive.
 - a) Extend new roofing outside wet areas a minimum of twelve (12) inches.
 - 4) Strip in outside perimeter of new membrane with 3-course reinforcement of ELS and Burmesh.
 - 5) At drains, remove clamping rings and extend new 2-ply membrane into drains and reinstall clamping rings.
 - 6) At projection base flashings, extend 2-ply membrane up onto base flashing and install 3-cours reinforcement.
- b. Repair 100 lineal feet of loose metal edge flashing.
 - 1) Spud gravel back from outside edge a minimum of twelve (12) inches.
 - 2) Cut and remove loose flashing.
 - 3) Prime repair areas with TremPrime QD.
 - 4) Strip-in outside edge with 5-course reinforcement of ELS and Burmesh with widths of 4" and 6".
 - 5) Feather repair onto roof membrane.
- c. Clean work areas of all debris and trash.

4. Manor Hill Elementary – Roof D

- a. There are two (2) wet insulation area on Roof D, shown on the attached Diagnostic Survey.
 - 1) Spud all gravel from the roof membrane.
 - a) Extend gravel removal a minimum of two feet outside the wet areas.
 - b) All removed gravel shall be evenly dispersed outside repair areas.
 - 2) Clean and then prime the roof membrane with TremPrime QD.
 - 3) Adhere 1-ply Burmastic Composite Ply HT and 1-ply of PowerPly Plus HT FR with PowerPly Standard Cold Adhesive.
 - a) Extend new roofing outside wet areas a minimum of twelve (12) inches.
 - 4) Strip in outside perimeter of new membrane with 3-course reinforcement of ELS and Burmesh.
 - 5) At drains, remove clamping rings and extend new 2-ply membrane into drains and reinstall clamping rings.
 - 6) At projection base flashings, extend 2-ply membrane up onto base flashing and install 3-cours reinforcement.
- b. Repair 100 lineal feet of loose metal edge flashing.
 - 1) Spud gravel back from outside edge a minimum of twelve (12) inches.
 - 2) Cut and remove loose flashing.
 - 3) Prime repair areas with TremPrime QD.
 - 4) Strip-in outside edge with 5-course reinforcement of ELS and Burmesh with widths of 4" and 6".
 - 5) Feather repair onto roof membrane.
- c. Clean work areas of all debris and trash.

1.4 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of project site beyond areas in which the Work is indicated.
 1. Driveways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.
- C. Security: Comply with Hospitals requirements related to security.
- D. Safety: Comply with all OSHA regulations and guidelines that apply to project.

1.5 OWNER'S OCCUPANCY REQUIREMENTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner

usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits, unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

B. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.

1. Before partial Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of building.

1.6 WORK RESTRICTIONS

A. On-Site Work Hours: Work shall be generally performed outside the existing building during normal business working hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, except otherwise indicated.

1. Weekend Hours: As approved by Owner.
2. Early Morning Hours: As approved by Owner.
3. Hours for Utility Shutdowns: Coordinated with and approved by Owner.

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Owner not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Owners written permission.

1.7 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC's "Master Format" numbering system.

B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred, as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for

clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

- a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01100

SECTION 01270 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1.3 DEFINITIONS

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

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF UNIT PRICES

- A. Unit Price No. 1: Drain Bowl Replacement:

1. Description: Remove existing drain bowl and replace with new five-inch cast iron drain bowl and connections according to local building codes.
- B. Unit Price No. 2: Drain Clamping Ring Replacement:
 1. Description: Remove existing drain clamping ring and replace with new cast iron drain clamping ring per local building codes.
- C. Unit Price No. 3: Labor Rate:
 1. Description: Provide hourly labor rate for additional roofing work within the district and responding within 48-hours.

END OF SECTION 01270

SECTION 01330 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Owner's responsive action.
- B. Informational Submittals: Written information that does not require Owner's responsive action. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Owner for Contractor's use in preparing submittals.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Submit complete submittal package.
- C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Owner's receipt of submittal.
 - 1. 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.
 - 2. Initial Review: Allow 10 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Owner will advise Contractor when a submittal being processed must be delayed for coordination.
 - 3. Resubmittal Review: Allow 10 days for review of each resubmittal.
 - 4. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Owner and to Owner's consultants, allow 10 days for review of each submittal. Submittal will be returned to Owner before being returned to Contractor.
- D. Identification: Place a permanent label or title block on each submittal for identification.
 - 1. Indicate name of firm or entity that prepared each submittal on label or title block.

2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Owner.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Owner.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. 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., 06100.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).
- E. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- F. Additional Copies: Unless additional copies are required for final submittal, and unless Owner observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Owner.
 2. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.
- G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Owner will discard submittals received from sources other than Contractor.
1. Transmittal Form: Use AIA Document G810, CSI Form 12.1A, or similar form acceptable to Owner.
 2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Owner on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
- H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.

3. Resubmit submittals until they are marked "Approved" or "Approved as Noted."
- I. 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.
- J. Use for Construction: Use only final submittals with mark indicating ""Approved" or "Approved as Noted."

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- 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 printed 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 written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Standard color charts.
 - e. Standard product operation and maintenance manuals.
 - f. Compliance with specified referenced standards.
 - g. Testing by recognized testing agency.
 - h. Notation of coordination requirements.
 4. Submit Product Data before or concurrent with Samples.
 5. Number of Copies: Submit three copies of Product Data, unless otherwise indicated. Owner will return one copy. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Schedules.
 - e. Compliance with specified standards.
 - f. Notation of coordination requirements.

- g. Notation of dimensions established by field measurement.
 - h. Relationship to adjoining construction clearly indicated.
 - i. 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 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).
 - 3. Number of Copies: Submit two opaque (bond) copies of each submittal. Owner 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 appropriate 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 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. Owner will return submittal with options selected.
- E. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - 1. Type of product. Include unique identifier for each product.
 - 2. Location.
 - 3. Number of Copies: Submit three copies of product schedule or list, unless otherwise indicated. Owner will return one copy.
 - a. Mark up and retain one returned copy as a Project Record Document.
- F. Application for Payment: Comply with requirements specified in Division 1 Section "Payment Procedures."

- G. Schedule of Values: Comply with requirements specified in Division 1 Section "Payment Procedures."

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 - 1. Number of Copies: Submit three copies of each submittal, unless otherwise indicated. Owner will not return copies.
 - 2. Certificates and Certifications: Provide a notarized 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.
 - 3. Test and Inspection Reports: Comply with requirements specified in Division 1 Section "Quality Requirements."
- B. Coordination Drawings: Comply with requirements specified in Division 1 Section "Project Management and Coordination."
- C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Owners and owners, and other information specified.
- D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- E. Installer Certificates: Prepare 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.
- F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- G. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- I. Material Test Reports: Prepare 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.
- J. Product Test Reports: Prepare 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.

- K. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
1. Name of evaluation organization.
 2. Date of evaluation.
 3. Time period when report is in effect.
 4. Product and manufacturers' names.
 5. Description of product.
 6. Test procedures and results.
 7. Limitations of use.
- L. Schedule of Tests and Inspections: Comply with requirements specified in Division 1 Section "Quality Requirements."
- M. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- N. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- O. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, 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.
- P. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 1 Section "Operation and Maintenance Data."
- Q. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
1. Preparation of substrates.
 2. Required substrate tolerances.
 3. Sequence of installation or erection.
 4. Required installation tolerances.
 5. Required adjustments.
 6. Recommendations for cleaning and protection.
- R. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.

3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- S. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- T. Construction Photographs: Comply with requirements specified in Division 1 Section "Photographic Documentation."
- U. Material Safety Data Sheets (MSDSs): Submit information directly to Owner.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. 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 Owner.
- B. 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 OWNER'S ACTION

- A. General: Owner will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Owner will review each submittal, make marks to indicate corrections or modifications required, and return it. Owner will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.
- C. Informational Submittals: Owner will review each submittal and will not return it, or will return it if it does not comply with requirements. Owner will forward each submittal to appropriate party.
- D. Partial 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 01330

SECTION 01700 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. General installation of products.
 - 2. Progress cleaning.
 - 3. Protection of installed construction.
 - 4. Correction of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
- 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 the best possible results. 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.
- E. Tools and Equipment: Do not use tools or equipment that produces harmful noise levels.
- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Allow for building movement, including thermal expansion and contraction.
- G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.2 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- 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. Concealed Work: Remove debris from concealed work prior to concealing with subsequent construction.
- E. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- F. 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.
- G. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period.
- H. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.3 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.

3.4 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 1 Section "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.

- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

END OF SECTION 01700

SECTION 01731 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. 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.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related 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.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces 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.

1.5 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials 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 match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. 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.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

- 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. 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.
- C. 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 possible. Provide materials and comply with installation requirements specified in other Sections.
 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate 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.
 - c. Provide an even surface of uniform finish, color, texture, and appearance.
 - d. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 3. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 01731

SECTION 01732 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of selected portions of building or structure.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 SUBMITTALS

- A. Predemolition Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations. Comply with Division 1 Section "Photographic Documentation." Submit before Work begins.
- B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.
 - 1. Comply with submittal requirements in Division 1 Section "Construction Waste Management."

1.5 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.
- D. Predemolition Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 PROJECT 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.
 - 1. Comply with requirements specified in Division 1 Section "Summary."
- B. Notify Owner of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
 - 1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Owner.
- C. Storage or sale of removed items or materials on-site is not permitted.
- D. 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities affected by the Work have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Owner.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
 - 1. Comply with requirements for existing services/systems interruptions specified in Division 1 Section "Summary."
- B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Contractor shall arrange to shut off indicated services/systems when requested by Contractor.
 - 2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.
 - a. Where entire wall is to be removed, existing services/systems may be removed with removal of the wall.

3.3 PREPARATION

- A. 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.
 - 1. Comply with requirements for access and protection specified in Division 1 Section "Temporary Facilities and Controls."
- B. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.

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. 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, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.

2. 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 fire watch and portable fire-suppression devices during flame-cutting operations.
3. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
5. Dispose of demolished items and materials promptly.

B. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Protect items from damage during transport and storage.
3. 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.

C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. .

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

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.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING

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

END OF SECTION 01732

SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Final completion procedures.
 - 2. Final cleaning.

1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
 - 1. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 2. Prepare and submit Project Record Documents, operation and maintenance manuals, and similar final record information.
 - 3. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 4. Complete final cleaning requirements.
 - 5. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
 - 6. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
 - 7. Instruct Owner's personnel in maintenance of products and systems.
 - 8. Inspection: Submit a written report of final inspection as specified in Division 7 roofing section(s).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
1. Complete the following cleaning operations before Final Completion:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - g. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - h. Leave Project clean and ready for occupancy.
- B. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01770

SECTION 075216 - MODIFIED BITUMINOUS MEMBRANE ROOFING REPAIR

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. Hybrid roofing system that combines built-up ply sheets with modified bituminous cap sheet.
 - 2. Roof insulation.
 - 3. Cover board.

1.3 DEFINITIONS

- A. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to Work of this Section.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
 - 1. Meet with Owner, Architect, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - 3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 - 5. Review structural loading limitations of roof deck during and after roofing.
 - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that 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. Shop Drawings: Include plans, sections, details, and attachments to other work, including the following:
 - 1. Layout and thickness of insulation.
 - 2. Base flashings and membrane terminations.
 - 3. Flashing details at penetrations.
 - 4. Insulation fastening patterns.
 - 5. Tie-in with adjoining roof system.
- C. Samples for Verification: For the following products:
 - 1. Cap Sheet.
 - 2. Inter-ply sheet.
 - 3. Flashing Sheet.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and manufacturer.
- 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 complying 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. Product Test Reports: For roof membrane and insulation, tests performed by a qualified testing agency, indicating compliance with specified requirements.
- D. Field quality-control reports.
- E. Sample Warranties: For manufacturer's special warranties.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.
- B. Certified statement from existing roof membrane manufacturer stating that existing roof warranty has not been affected by Work performed under this Section.

1.8 QUALITY ASSURANCE

- A. 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.
 - 1. Protect stored liquid material from direct sunlight.
 - 2. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources.
 - 1. Store in a dry location.
 - 2. 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 roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

- A. Manufacturer's Warranty: Manufacturer's standard warranty in which manufacturer agrees to repair or replace materials found to be defective within warranty period.
 - 1. Form of Warranty: Manufacturer's standard materials warranty form.
 - 2. Scope of Warranty: Work of this Section.
 - 3. Warranty Period: One year from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, signed by Installer, covering the Work of this Section, including all components of roofing system such as roof membrane and base flashing for the following warranty period:
 - 1. Warranty Period: One year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. 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.

2.2 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by a manufacturer meeting qualification requirements in Quality Assurance Article.
- B. Basis-of-Design Manufacturer/Product: The roof system specified in this Section is based upon products of Tremco, Inc., Beachwood, OH, (800) 562-2728, www.tremcoroofing.com that are named in other Part 2 articles. Provide specified products.
- C. Source Limitations: Obtain components for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

2.3 INTERPLY SHEETS

- A. Polyester, and glass scrim, glass mat trillaminate reinforced sheet with the following properties:
 - 1. Weight, ASTM D 5147: 38 lb / 100 sq. ft.
 - 2. Thickness, ASTM D 5147: 60 mils.
 - 3. Tensile strength @ 77 deg. F, ASTM D 5147: 165 lbf/in MD, 150 lbf/in XD.
 - 4. Tensile strength @ 0 deg. F, ASTM D 5147: 190 lbf/in MD, 180 lbf/in XD.
 - 5. Tear Strength @ 77 deg. F, ASTM D 5147: 260 lbf /MD, 230 XD.
 - 6. Pliability, ½ in., ASTM D 146-90: No Failures.
 - 7. Mass of desaturated mat, min. ASTM D 228-90a: 3.0 lb / 100 sq. ft.
 - 8. Surfacing stabilizer, max. ASTM D 4601-91: 65%
 - 9. Asphalt, Minimum, ASTM D 228-90a: 10 lb/100 sq. ft.

2.4 STYRENE-BUTADIENE-STYRENE (SBS) MODIFIED BITUMINOUS CAP SHEET

- A. Fire rated granule surfaced modified bilaminate reinforced bitumen membrane with the following properties:
 - 1. Thickness, ASTM D 5147: 3.7 mm.
 - 2. Tensile strength @ 77 deg. F, ASTM D 5147: 345 lbf/in MD, 340 lbf/in XD.
 - 3. Tensile strength @ 0 deg. F, ASTM D 5147: 410 lbf/in MD, 370 lbf/in XD.
 - 4. Tear Strength @ 77 deg. F, ASTM D 5147: 600 lbf /MD, 580 XD.
 - 5. Elongation @ 0 deg. F, ASTM D 5147: 8.0% MD, 6.0% XD.
 - 6. Elongation @ 77 deg. F, ASTM D 5147: 12.0% MD, 8.0% XD.
 - 7. Low Temp Flex, ASTM D 5147: - 40 deg. F.
 - 8. Granule Loss, ASTM D 5147: 0.10 g.
 - 9. Granule Color: White.

2.5 BASE FLASHING SHEET MATERIALS

- A. Backer Sheet: Polyester, and glass scrim, glass mat trilaminate reinforced sheet with the following properties:
 - 1. Weight, ASTM D 5147: 38 lb / 100 sq. ft.
 - 2. Thickness, ASTM D 5147: 60 mils.
 - 3. Tensile strength @ 77 deg. F, ASTM D 5147: 165 lbf/in MD, 150 lbf/in XD.
 - 4. Tensile strength @ 0 deg. F, ASTM D 5147: 190 lbf/in MD, 180 lbf/in XD.
 - 5. Tear Strength @ 77 deg. F, ASTM D 5147: 260 lbf /MD, 230 XD.
 - 6. Pliability, ½ in., ASTM D 146-90: No Failures.
 - 7. Mass of desaturated mat, min. ASTM D 228-90a: 3.0 lb / 100 sq. ft.
 - 8. Surfacing stabilizer, max. ASTM D 4601-91: 65%
 - 9. Asphalt, Minimum, ASTM D 228-90a: 10 lb/100 sq. ft.
- B. Fire rated granule surfaced modified bilaminate reinforced bitumen membrane with the following properties:
 - 1. Thickness, ASTM D 5147: 3.7 mm.
 - 2. Tensile strength @ 77 deg. F, ASTM D 5147: 345 lbf/in MD, 340 lbf/in XD.
 - 3. Tensile strength @ 0 deg. F, ASTM D 5147: 410 lbf/in MD, 370 lbf/in XD.
 - 4. Tear Strength @ 77 deg. F, ASTM D 5147: 600 lbf /MD, 580 XD.
 - 5. Elongation @ 0 deg. F, ASTM D 5147: 8.0% MD, 6.0% XD.
 - 6. Elongation @ 77 deg. F, ASTM D 5147: 12.0% MD, 8.0% XD.
 - 7. Low Temp Flex, ASTM D 5147: - 40 deg. F.
 - 8. Granule Loss, ASTM D 5147: 0.10 g.
 - 9. Granule Color: White.

2.6 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with other roofing components.
 - 1. Adhesives and Sealants: Comply with VOC limits of authorities having jurisdiction.
- B. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- C. Roof Vents: As recommended by roof membrane manufacturer.
 - 1. Size: Not less than 4-inch (100-mm) diameter.
- D. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.
- E. Ply Sheet Adhesive: One-part, fibrated cold process asphalt adhesive with the following properties:
 - 1. Viscosity @ 77 deg. F, ASTM D 2196: 25,000-75,000 cP.
 - 2. Density ASTM D 6511: 7.2-7.6 lbs/gal.
 - 3. Volatile Organic content, ASTM D 6511: <250 g/L.
 - 4. Nonvolatile Content, ASTM D 6511: 72% min.
 - 5. Asphalt content, min., ASTM D 6511: 50%
 - 6. Flash Point, ASTM D 93: >100 Deg. F

7. Lap Strength at 24 hrs., ASTM D 3019, Type III: 17 lbf/in.
- F. Asphalt Roofing Cement: ASTM D4586/D4586M, asbestos free, of consistency required by roofing system manufacturer for application.
- G. Mastic Sealant: Polyisobutylene, plain or modified bitumen; nonhardening, nonmigrating, nonskinning, and nondrying.
- 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; tested by manufacturer for required pullout strength, and acceptable to roofing system manufacturer.
- I. Roofing Granules: No. 11 screen size with 100 percent passing No. 8 (2.36-mm) sieve and 98 percent of mass retained on No. 40 (0.425-mm) sieve; color to match roof membrane.
- J. Miscellaneous Accessories: Provide those recommended by roofing system manufacturer.
- K. Base Sheet: Polyester, and glass scrim, glass mat trilaminate reinforced sheet with the following properties:
 1. Weight, ASTM D 5147: 38 lb / 100 sq. ft.
 2. Thickness, ASTM D 5147: 60 mils.
 3. Tensile strength @ 77 deg. F, ASTM D 5147: 165 lbf/in MD, 150 lbf/in XD.
 4. Tensile strength @ 0 deg. F, ASTM D 5147: 190 lbf/in MD, 180 lbf/in XD.
 5. Tear Strength @ 77 deg. F, ASTM D 5147: 260 lbf /MD, 230 XD.
 6. Pliability, ½ in., ASTM D 146-90: No Failures.
 7. Mass of desaturated mat, min. ASTM D 228-90a: 3.0 lb / 100 sq. ft.
 8. Surfacing stabilizer, max. ASTM D 4601-91: 65%
 9. Asphalt, Minimum, ASTM D 228-90a: 10 lb/100 sq. ft.

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 cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 3. Verify that concrete substrate is visibly dry and free of moisture.
 4. Verify that minimum curing period recommended by roofing system manufacturer for lightweight insulating concrete has passed.
 5. Verify that any damaged sections of cementitious wood-fiber decks have been repaired or replaced.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction.
 - 1. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. At metal deck and lightweight insulating concrete deck perform fastener-pullout tests according to roof system manufacturer's recommendations.
 - 1. Submit test result within 24 hours of performing tests.
 - a. Include manufacturer's requirements for any revision to previously submitted fastener patterns required to achieve specified wind uplift requirements.
- D. Partial roof tear-off
 - 1. Where indicated, remove existing penetration detail, roofing membrane and insulation and other roofing components to the structural deck.
- E. Infill patch installation
 - 1. Install insulation to match thickness and slope of existing
 - a. At metal deck fasten first layer and set subsequent layers in low rise low foam adhesive per manufacturer.
 - b. At concrete deck all layers in low rise low foam adhesive per manufacturer.
 - 2. Set cover board insulation in low rise foam adhesive per manufacturer.
 - 3. Set (2) plies of inter-ply sheet in bio based polyurethane adhesive per manufacturer.
 - a. Extend inter-ply sheets onto cleaned and primed existing membrane 4”.
 - 4. Set modified bitumen membrane in bio based polyurethane adhesive per manufacturer.
 - a. Extend modified bitumen membrane onto cleaned and primed existing membrane 12”.

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 the end of the workday or when rain is forecast.
 - 1. Remove and discard temporary seals before beginning work on adjoining roofing.
- C. Install roof membrane and auxiliary materials to tie into existing roofing to maintain weathertightness of transition.

3.4 INSTALLATION OF ROOFING MEMBRANE, GENERAL

- A. Install roofing system according to roofing system manufacturer's written instructions and applicable recommendations in ARMA/NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing."
- B. Start installation of roofing in presence of roofing system manufacturer's technical personnel.
- C. Coordinate installation of roofing system so insulation and other components of the roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
 - 1. Provide tie-offs at end of each day's work to cover exposed roofing sheets and insulation with a course of coated felt set in roofing cement or hot roofing asphalt, with joints and edges sealed.
 - 2. Complete terminations and base flashings, and provide temporary seals to prevent water from entering completed sections of roofing system.
 - 3. Remove and discard temporary seals before beginning work on adjoining roofing.

3.5 INSTALLATION OF INTERPLY SHEETS

- A. Install one base sheet, starting at low point of roofing.
 - 1. Align ply sheets without stretching.
 - 2. Shingle side laps of ply sheets uniformly to achieve required number of plies throughout thickness of roofing membrane.
 - a. Shingle in direction to shed water.
 - 3. Extend inter ply sheets over and terminate above cants.
 - 4. Extend inter ply sheets onto cleaned and primed existing membrane 4".
 - 5. Set interplay sheets in adhesive per manufacturer.

3.6 INSTALLATION OF MODIFIED BITUMINOUS CAP SHEET

- A. Before installing, unroll cap sheet, cut into workable lengths, and allow to lie flat for a time period recommended by manufacturer for the ambient temperature at which cap sheet will be installed.
- B. Install modified bituminous roofing cap sheet according to roofing manufacturer's written instructions, starting at low point of roofing system.
 - 1. Extend cap sheet over and terminate above cants.
 - 2. Extend cap sheet onto cleaned and primed existing membrane 8" beyond inter ply sheets.
 - 3. Set cap sheet in cold adhesive per manufacturer.
 - 4. Install cap sheet without wrinkles or tears, and free from air pockets.
 - 5. Install cap sheet, so side and end laps shed water.
 - 6. Adhere cap sheet into cold adhesive with 70-lbs. steel roller.

3.7 INSTALLATION OF FLASHING AND STRIPPING

- A. Install base flashing over cant strips and other sloped and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrates according to roofing system manufacturer's written instructions and as follows:
 - 1. Prime substrates with asphalt primer if required by roofing system manufacturer.
 - 2. Backer Sheet Application:
 - a. Mechanically fasten backer sheet to walls or parapets.
 - b. Adhere backer sheet over roofing membrane at cants in cold-applied adhesive.
 - c. Seal all laps.
- B. Extend base flashing up walls or parapets a minimum of 8 inches (200 mm) above roofing membrane and 4 inches (100 mm) onto field of roofing membrane.
- C. Roof Drains: Set 30-by-30-inch (760-by-760-mm) 4-pound (1.8 kg) lead flashing in bed of asphaltic adhesive on completed roofing membrane.
 - 1. Cover lead flashing with roofing cap-sheet stripping, and extend a minimum of 6 inches (150 mm) beyond edge of metal flashing onto field of roofing membrane.
 - 2. Clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring.
 - 3. Install stripping according to roofing system manufacturer's written instructions.
 - a. Between each roof access ladder and each rooftop unit location or path connecting rooftop unit locations.
 - b. Locations indicated on Drawings.
 - c. As required by roof membrane manufacturer's warranty requirements.
 - 4. Provide 3-inch (76 mm) clearance between adjoining strips.

3.8 FIELD QUALITY CONTROL

- A. 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.
- B. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.

3.9 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period.
 - 1. When remaining construction does not affect or endanger roofing, 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 spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075216

SECTION 07620 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following sheet metal flashing and trim:
 - 1. Manufactured reglets.
 - 2. Formed low-slope roof flashing and trim.
 - 3. Formed wall flashing and trim.
 - 4. Formed equipment support flashing.
- B. Related Sections include the following:
 - 1. Division 1 Section "Summary"
 - 2. Division 6 Section "Miscellaneous Carpentry" for wood nailers, curbs, and blocking.

1.3 PERFORMANCE REQUIREMENTS

- A. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

1.4 SUBMITTALS

- A. Shop Drawings: Show layouts of sheet metal flashing and trim, including plans and elevations. Distinguish between shop- and field-assembled work. Include the following:
 - 1. Identify material, thickness, weight, and finish for each item and location in Project.
 - 2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
 - 3. Details for fastening, joining, supporting, and anchoring sheet metal flashing and trim, including fasteners, clips, cleats, and attachments to adjoining work.
 - 4. Details of expansion-joint covers, including showing direction of expansion and contraction.
- B. Samples for Initial Selection: For each type of sheet metal flashing and trim indicated with factory-applied color finishes.
 - 1. Include similar Samples of trim and accessories involving color selection.

1.5 QUALITY ASSURANCE

- A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual." Conform to dimensions and profiles shown unless more stringent requirements are indicated.
- B. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."
 - 1. Meet with Owner, Manufacturer, Owner's insurer if applicable, Installer, and installers whose work interfaces with or affects sheet metal flashing and trim including installers of roofing materials, roof accessories, unit skylights, and roof-mounted equipment.
 - 2. Review methods and procedures related to sheet metal flashing and trim.
 - 3. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
 - 4. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sheet metal flashing materials and fabrications undamaged. Protect sheet metal flashing and trim materials and fabrications during transportation and handling.
- B. Unload, store, and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack materials on platforms or pallets, covered with suitable weathertight and ventilated covering. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.

1.7 COORDINATION

- A. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and noncorrosive installation.
- B. Coordinate all sheet metal flashing and trim with roofing material manufacturer who will be warranting roof system, which will include sheet metal flashing and trim.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
 - 2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2.2 SHEET METALS

1. Fluoropolymer 2-Coat System: Manufacturer's standard 2-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2604.
 - a. Color: As indicated by Districts designations.

2.3 UNDERLAYMENT MATERIALS

- A. Felts: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, nonperforated.

2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.
 1. Exposed Fasteners: Heads matching color of sheet metal by means of plastic caps or factory-applied coating.
 2. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws, gasketed, with hex washer head.
 3. Blind Fasteners: High-strength aluminum or stainless-steel rivets.
- C. Solder for Lead: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead.
- D. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant, polyisobutylene plasticized, heavy bodied for hooked-type expansion joints with limited movement.
- E. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.5 MANUFACTURED SHEET METAL FLASHING AND TRIM

- A. Through-Wall Ribbed Sheet Metal Flashing: Manufacture through-wall sheet metal flashing for embedment in masonry with ribs at 3-inch (75-mm) intervals along length of flashing to provide an integral mortar bond. Manufacture through-wall flashing with snaplock receiver on exterior face to receive counterflashing.
- B. Reglets: Units of type, material, and profile indicated, formed to provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashing indicated with factory-mitered and -welded corners and junctions.
 1. Masonry Type: Provide with offset top flange for embedment in masonry mortar joint.

2.6 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication.
- B. 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.
- C. Fabricate sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
 - 1. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
- D. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA recommendations.
- E. Expansion Provisions: Where lapped or bayonet-type expansion provisions in the Work cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with elastomeric sealant concealed within joints.
- F. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.
- G. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
 - 1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual" for application but not less than thickness of metal being secured.

2.7 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Roof Edge Flashing, Gravel Stop, and Fascia Caps: Fabricate in minimum 96-inch long, but not exceeding 10-foot long, sections. Furnish with 6-inch wide joint cover plates.
 - 1. Joint Style: Lap, 4 inches (100 mm) wide.
 - a. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.7 mm) thick.
- B. Copings: Fabricate in minimum 96-inch long, but not exceeding 10-foot long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and drill elongated holes for fasteners on interior leg. Miter corners, seal, and solder or weld watertight.
 - 1. Joint Style: Butt, with 12-inch- (300-mm-) wide concealed backup plate and 6-inch- (150-mm-) wide exposed cover plates.
 - 2. Fabricate copings from the following material:
 - a. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.70 mm) thick.
- C. Roof to Wall Transition, Roof to Sheet Metal, Roof Edging Transition, Expansion-Joint Cover: Fabricate from the following material:
 - 1. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.70 mm) thick.

- D. Counterflashing: Fabricate from the following material:
 - 1. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.70 mm) thick.
- E. Flashing Receivers: Fabricate from the following material:
 - 1. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.70 mm) thick.
- F. Roof-Penetration Flashing: Fabricate from the following material:
 - 1. Galvanized Steel: 0.0276 inch (0.70 mm) thick.
- G. Roof-Drain Flashing: Fabricate from the following material:
 - 1. Lead: 4.0-lb/sq. ft. (1.6 mm thick), hard tempered.

2.8 WALL SHEET METAL FABRICATIONS

- A. Wall Expansion-Joint Cover: Fabricate from the following material:
 - 1. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.70 mm) thick.

2.9 MISCELLANEOUS SHEET METAL FABRICATIONS

- A. Equipment Support Flashing: Fabricate from the following material:
 - 1. Prepainted, Metallic-Coated Steel: 0.0276 inch (0.70 mm) thick.

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 work.
 - 1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
 - 2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 1. Torch cutting of sheet metal flashing and trim is not permitted.
- B. Install sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
- C. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and butyl sealant.
- D. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

1. Space cleats not more than 12 inches (300 mm) apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.
- E. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (600 mm) of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.
- F. Fasteners: Use fasteners of sizes that will penetrate substrate not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.
 1. Galvanized or Prepainted, Metallic-Coated Steel: Use stainless-steel fasteners.
 2. Aluminum: Use aluminum or stainless-steel fasteners.
 3. Copper Use copper or stainless-steel fasteners.
 4. Stainless Steel: Use stainless-steel fasteners.
- G. Seal joints with butyl sealant as required for watertight construction.
 1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1 inch (25 mm) into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is moderate, between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement either way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F (4 deg C).
 2. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants."
- H. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pretin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm) except where pretinned surface would show in finished Work.
 1. Do not solder prepainted and metallic-coated steel sheet.
 2. Where surfaces to be soldered are lead coated, do not tin edges, but wire brush lead coating before soldering.
 3. Lead-Coated Copper Soldering: Wire brush edges of sheets before soldering.
 4. Do not use open-flame torches for soldering. Heat surfaces to receive solder and flow solder into joints. Fill joints completely. Completely remove flux and spatter from exposed surfaces.

3.3 ROOF DRAINAGE SYSTEM INSTALLATION

- A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA recommendations and as indicated. Coordinate installation of roof perimeter flashing with installation of roof drainage system.

3.4 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal roof flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight.

- B. Copings: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data Sheet 1-49 for specified wind zone and as indicated.
 - 1. Interlock exterior bottom edge of coping with continuous cleats anchored to substrate at 16-inch (400-mm) centers.
 - 2. Anchor interior leg of coping with screw fasteners and washers at 18-inch (450-mm) centers.
- C. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for butyl sealant, extending a minimum of 4 inches (100 mm) over base flashing. Install stainless-steel draw band and tighten.
- D. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches (100 mm) over base flashing. Lap counterflashing joints a minimum of 4 inches (100 mm) and bed with butyl sealant.
 - 1. Secure in a waterproof manner by means of snap-in installation and sealant or lead wedges and sealant.
- E. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Install flashing as follows:
 - 1. Turn lead flashing down inside vent piping, being careful not to block vent piping with flashing.
 - 2. Seal with butyl sealant and clamp flashing to pipes penetrating roof except for lead flashing on vent piping.

3.5 WALL FLASHING INSTALLATION

- A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to SMACNA recommendations and as indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.
- B. Reglets: Installation of reglets into masonry joints as specified and approved by roofing material manufacturer.

3.6 MISCELLANEOUS FLASHING INSTALLATION

- A. Equipment Support Flashing: Coordinate installation of equipment support flashing with installation of roofing and equipment. Weld or seal flashing with butyl sealant to equipment support member.

3.7 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.

- C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a 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.

END OF SECTION 07620

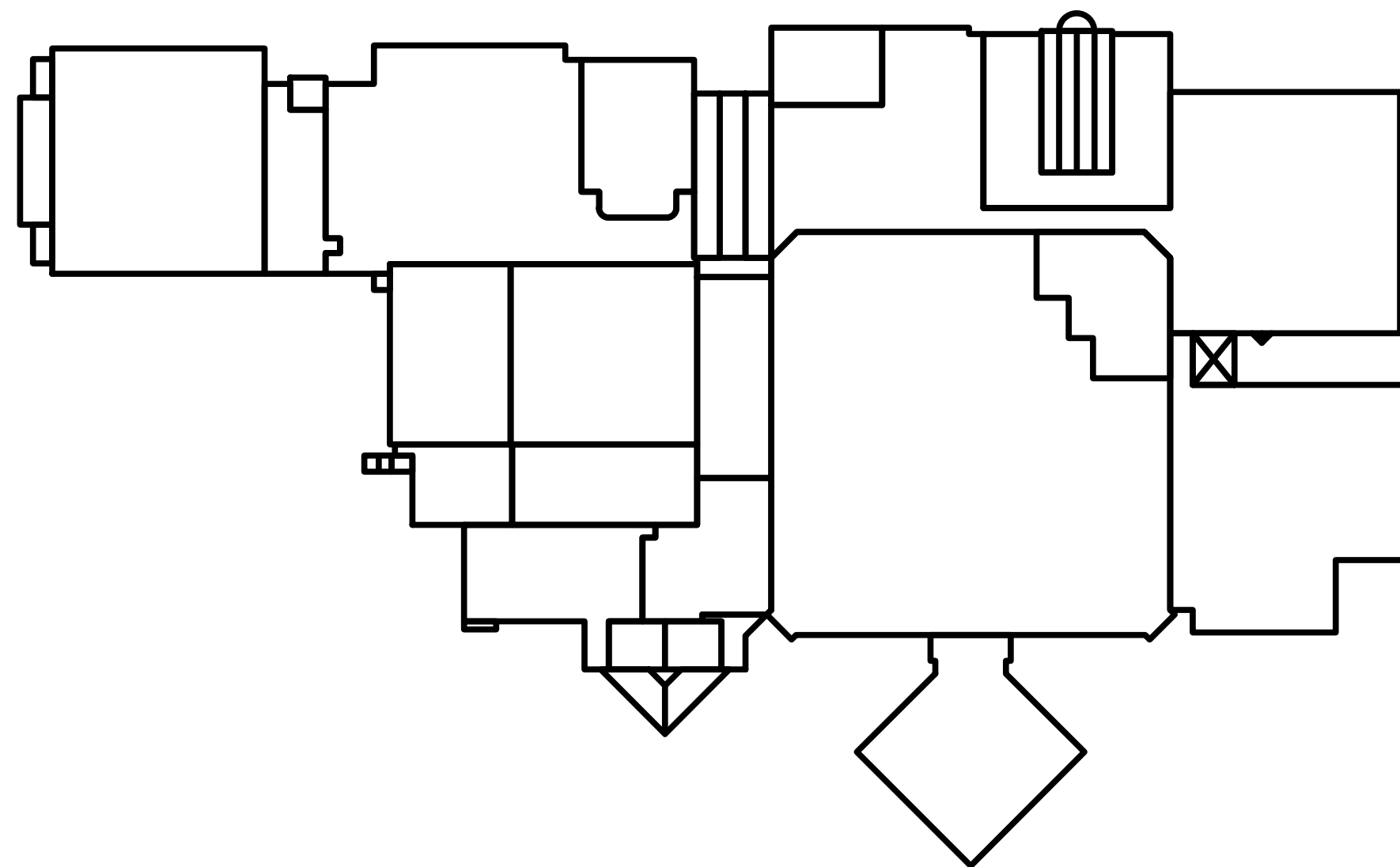
ROOF DIAGNOSTIC SURVEY FOR LIBERTY PUBLIC SCHOOLS

8 VICTORY LANE, LIBERTY, MISSOURI 64068

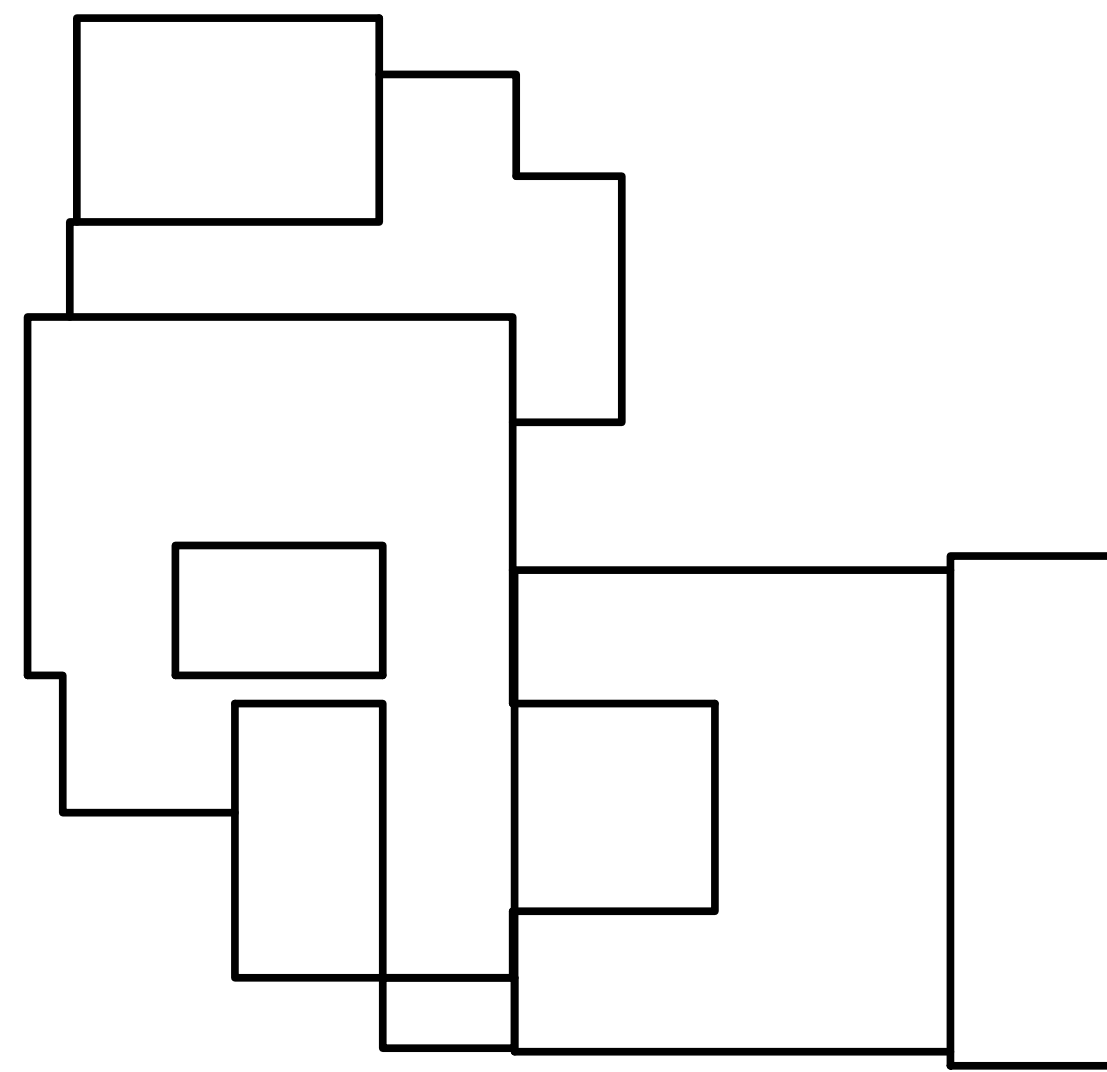
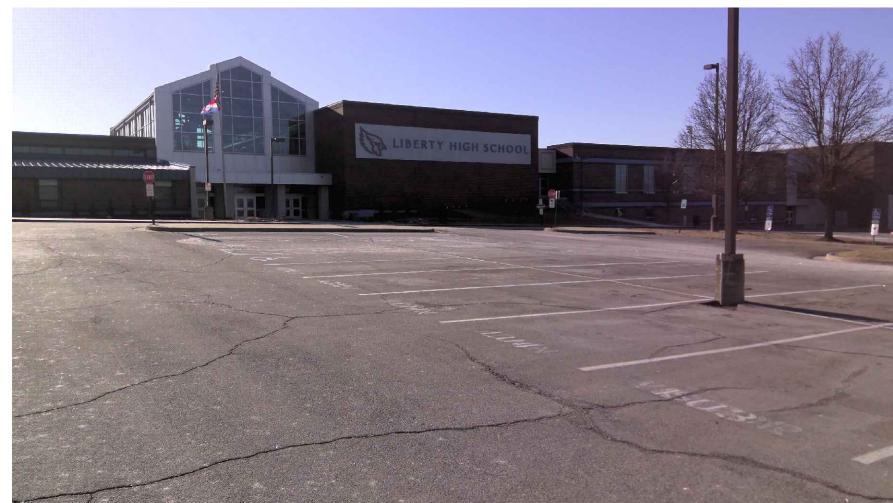
DRAWINGS

TITLE PAGE

SHEET A	MOISTURE SURVEY-LIBERTY SENIOR HIGH SCHOOL
SHEET B	ROOF DATA, THERMOGRAMS & PHOTOS
SHEET C	COMPOSITE MOISTURE SURVEY-MANOR HILL ELEMENTARY SCHOOL
SHEET D	MOISTURE SURVEY
SHEET E	MOISTURE SURVEY
SHEET F	ROOF DATA, THERMOGRAMS & PHOTOS



 ROOF PLAN -LIBERY SENIOR HIGH SCHOOL
SCALE: NO SCALE



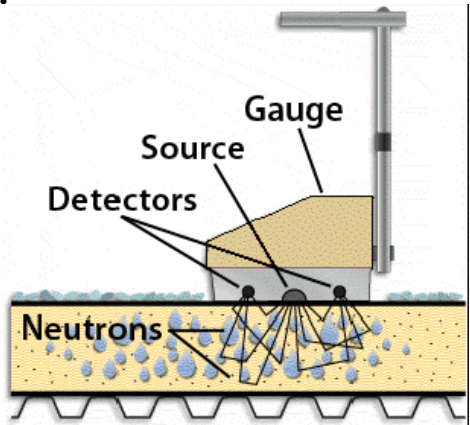
 ROOF PLAN-MANOR HILL ELEMENTARY SCHOOL
SCALE: NO SCALE



How A Moisture Meter Works:

During the daytime, a 10'x10' or 5'x5' grid pattern is marked on the roof surface. Readings are taken and recorded at each grid intersection.

Fast neutrons are emitted from the source in the Roof Moisture Meter into the roof system. The presence of hydrogen in the roof system slows the neutrons. These slowed neutrons as well as the fast neutrons are detected by the Roof Moisture Meter. A reading is displayed in the digital readout and gets recorded.



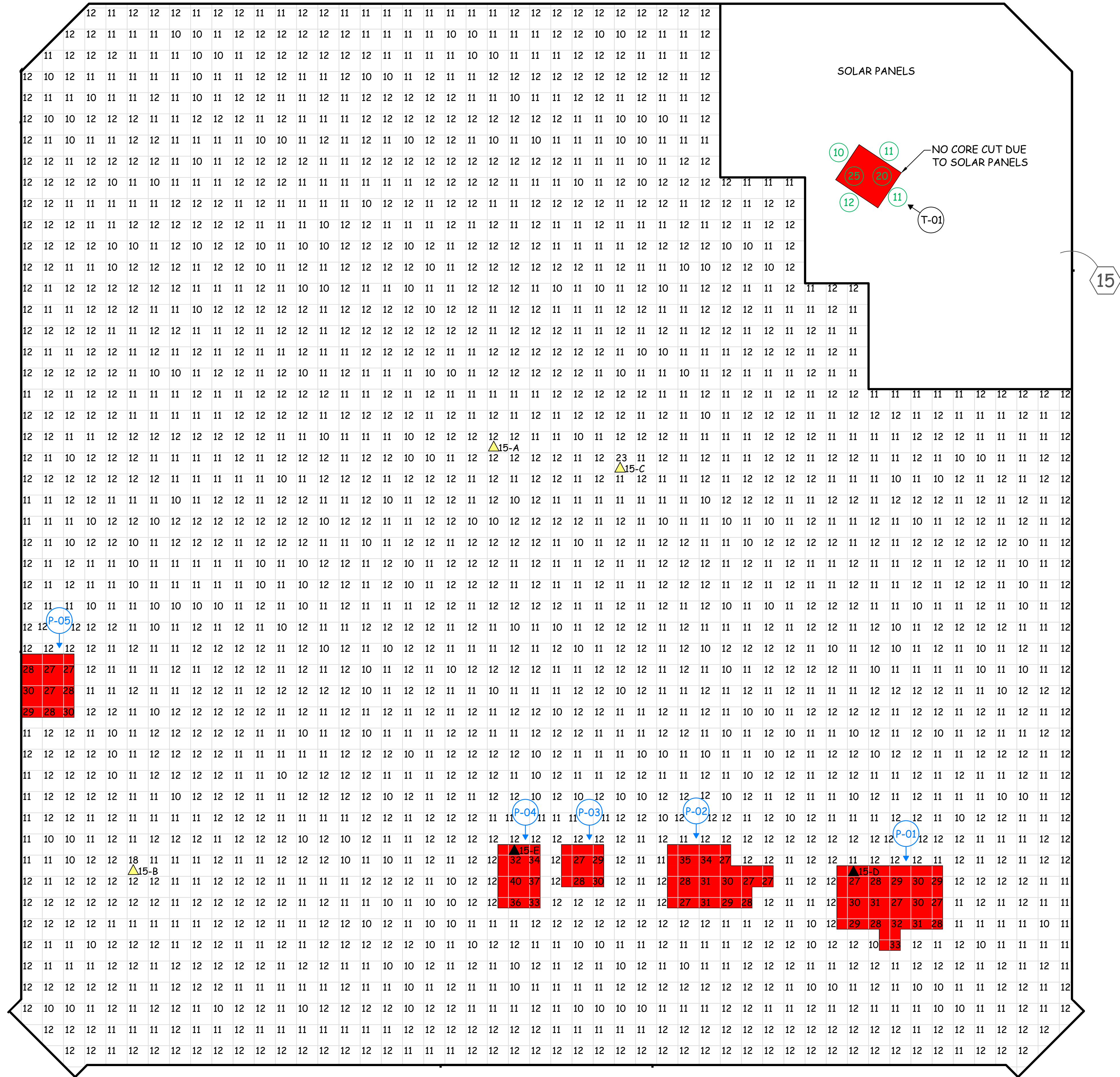
Core cuts are taken to determine a baseline for dry roof materials. Then wet roof areas are marked on the roof surface with visible paint markings.



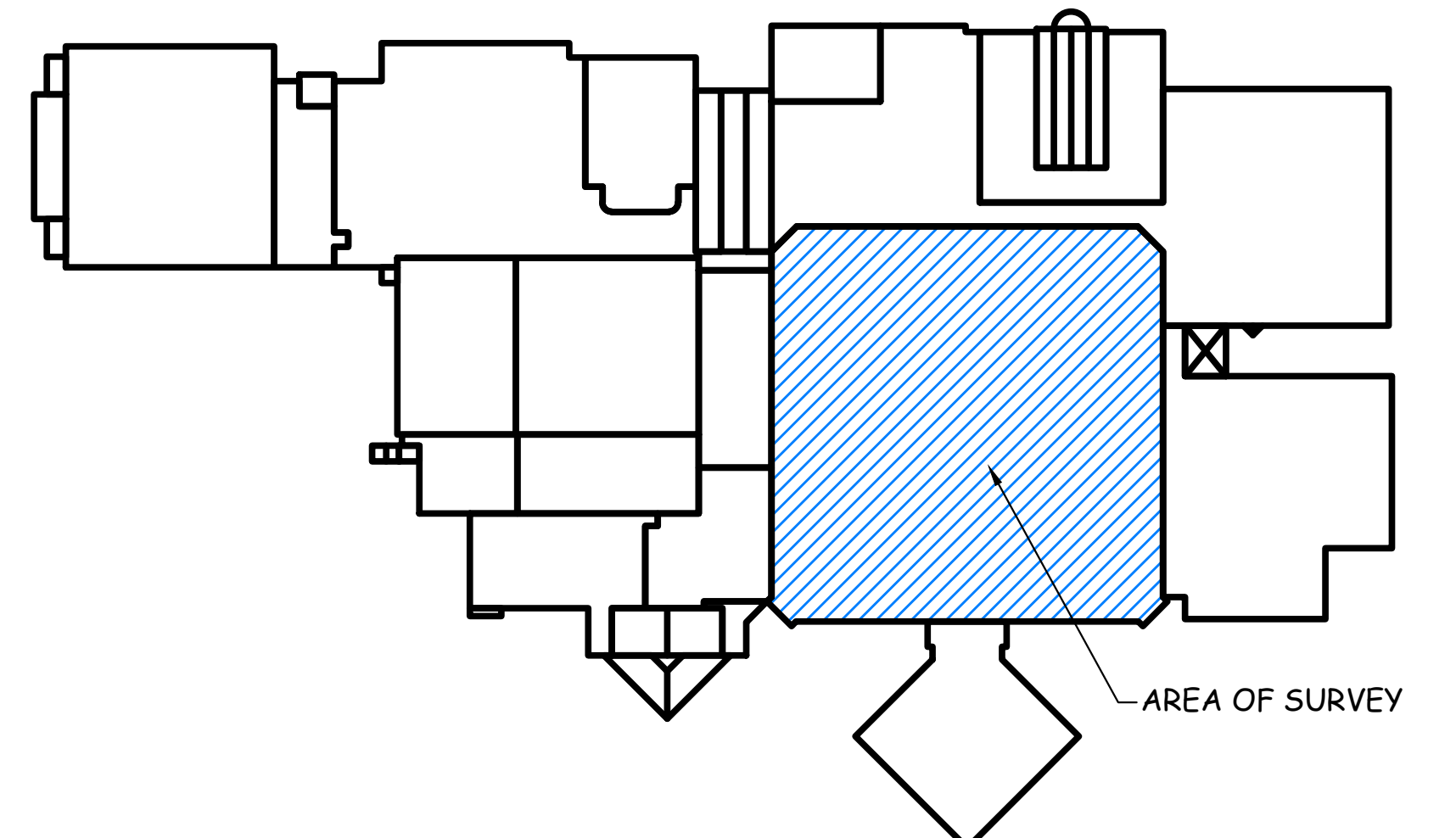
Roofing & Building Maintenance

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TREMCO'S INFRARED INSPECTIONS ARE PERFORMED BY CERTIFIED (EXPERIENCED) INFRARED THERMOGRAPHERS UTILIZING STATE-OF-THE-ART EQUIPMENT. ALL WORK CONFORMS WITH CURRENT INDUSTRY BEST PRACTICES, AND IS PERFORMED IN ACCORDANCE WITH STANDARDS PUBLISHED BY ASTM INTERNATIONAL AND INFRASPECTION INSTITUTE.



ROOF PLAN
SCALE: NO SCALE



KEY PLAN
SCALE: NO SCALE

STANDARD KEY OF SYMBOLS			
# ROOF SECTION	P-# PHOTO	WET INSULATION	N.I.C.
▲ DRY CORE	T-# THERMOGRAM	R.I.M. (RANDOM INTERMITTENT MOISTURE)	MOISTURE GRID
▲ WET CORE	N.A.F. (NO ANOMALIES FOUND)		TRACE CORE
			MOISTURE READING

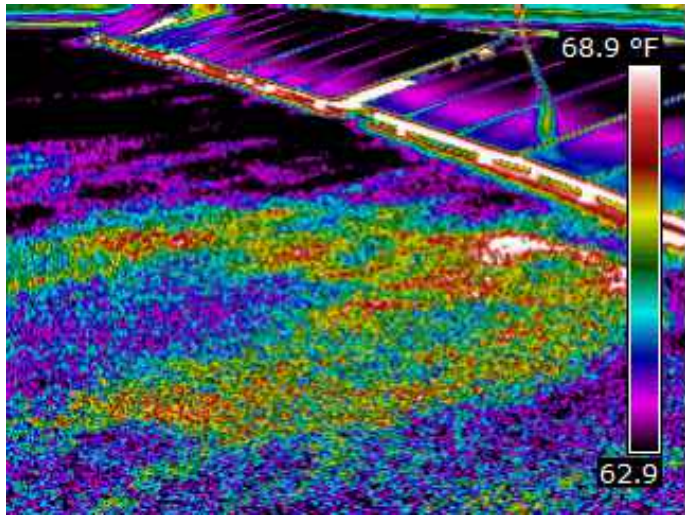


LIBERTY PUBLIC SCHOOLS
LIBERTY SENIOR HIGH SCHOOL
200 BLUE JAY DRIVE
LIBERTY, MISSOURI 64068

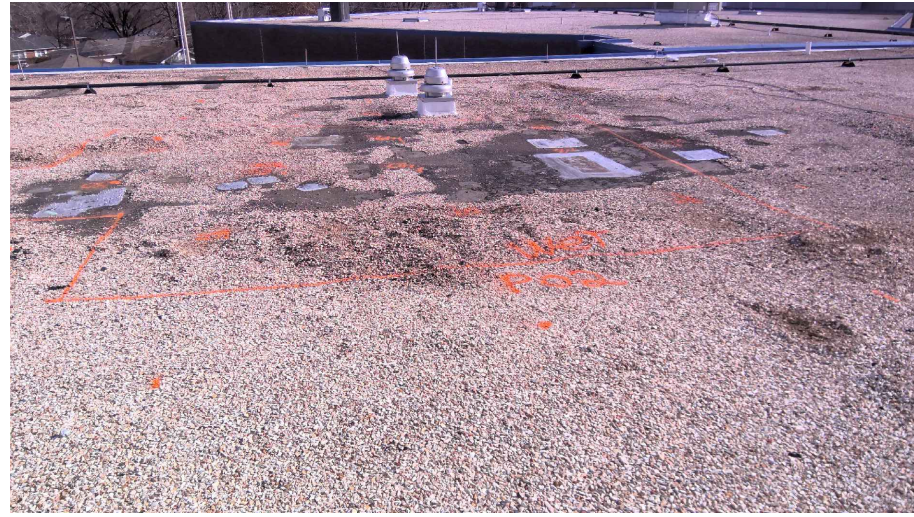
DIAGNOSTIC TECHNICIAN: C. HERNANDEZ	PROJECT NO.: 9745881
DRAWN BY: SR	SHEET NO.: A
DATE: 2/20/2023	



Photograph P-01



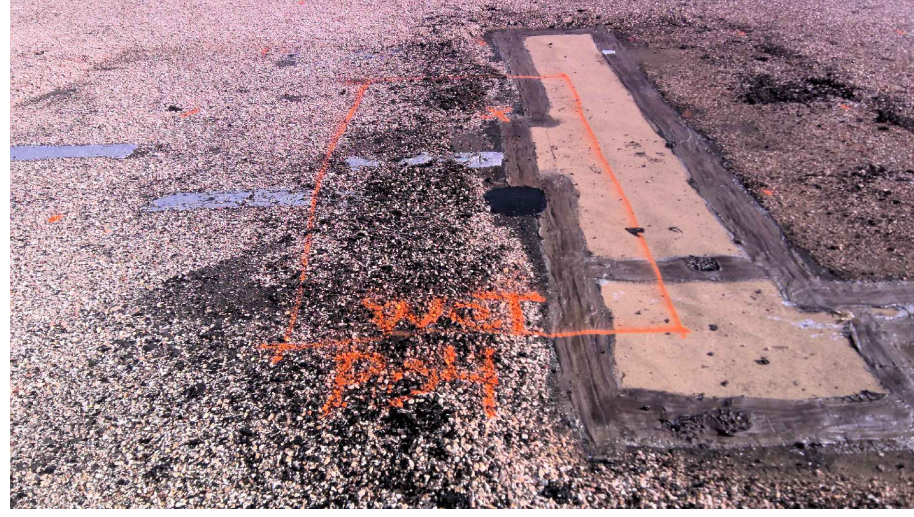
Thermogram T-01



Photograph P-02



Photograph P-03



Photograph P-04



Photograph P-05

CONSTRUCTION DATA				
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
15	15-A	12	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/2" WOODFIBER INSULATION
			0%	2" POLYISOCYANURATE INSULATION
			N/A	LIGHTWEIGHT CONCRETE
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
15	15-B	18	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/2" WOODFIBER INSULATION
			0%	2" POLYISOCYANURATE INSULATION
			N/A	LIGHTWEIGHT CONCRETE
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
15	15-C	23	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/2" WOODFIBER INSULATION
			0%	2" POLYISOCYANURATE INSULATION
			N/A	LIGHTWEIGHT CONCRETE
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
15	15-D	27	N/A	BUILT-UP-ROOF W/ GRAVEL
			100%	1/2" WOODFIBER INSULATION
			100%	2" POLYISOCYANURATE INSULATION
			N/A	LIGHTWEIGHT CONCRETE
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
15	15-E	32	N/A	BUILT-UP-ROOF W/ GRAVEL
			100%	1/2" WOODFIBER INSULATION
			100%	2" POLYISOCYANURATE INSULATION
			N/A	LIGHTWEIGHT CONCRETE

THE MOISTURE PERCENTAGES ARE INTENDED TO BE USED AS A QUALITATIVE MEASUREMENT RATHER THAN AN EXACT READING.

ROOF AREA DATA			
ROOF SECTION	SIZE (S.F.)	WET (S.F.)	% WET
15	61,816	1,258	2.04%
TOTALS	61,816	1,258	2.04%

ROOF SECTION

△ DRY CORE

▲ WET CORE

P-# → PHOTO

T-# → THERMOGRAM

N.A.F. (NO ANOMALIES FOUND)

STANDARD KEY OF SYMBOLS

■ N.I.C.

□ MOISTURE GRID

■ WET INSULATION

⊠ R.I.M. (RANDOM INTERMITTENT MOISTURE)

⊠ TRACE CORE

⊠ MOISTURE READING

TREMCO

Roofing & Building Maintenance

wti

LIBERTY PUBLIC SCHOOLS

LIBERTY SENIOR HIGH SCHOOL

200 BLUE JAY DRIVE

LIBERTY, MISSOURI 64068

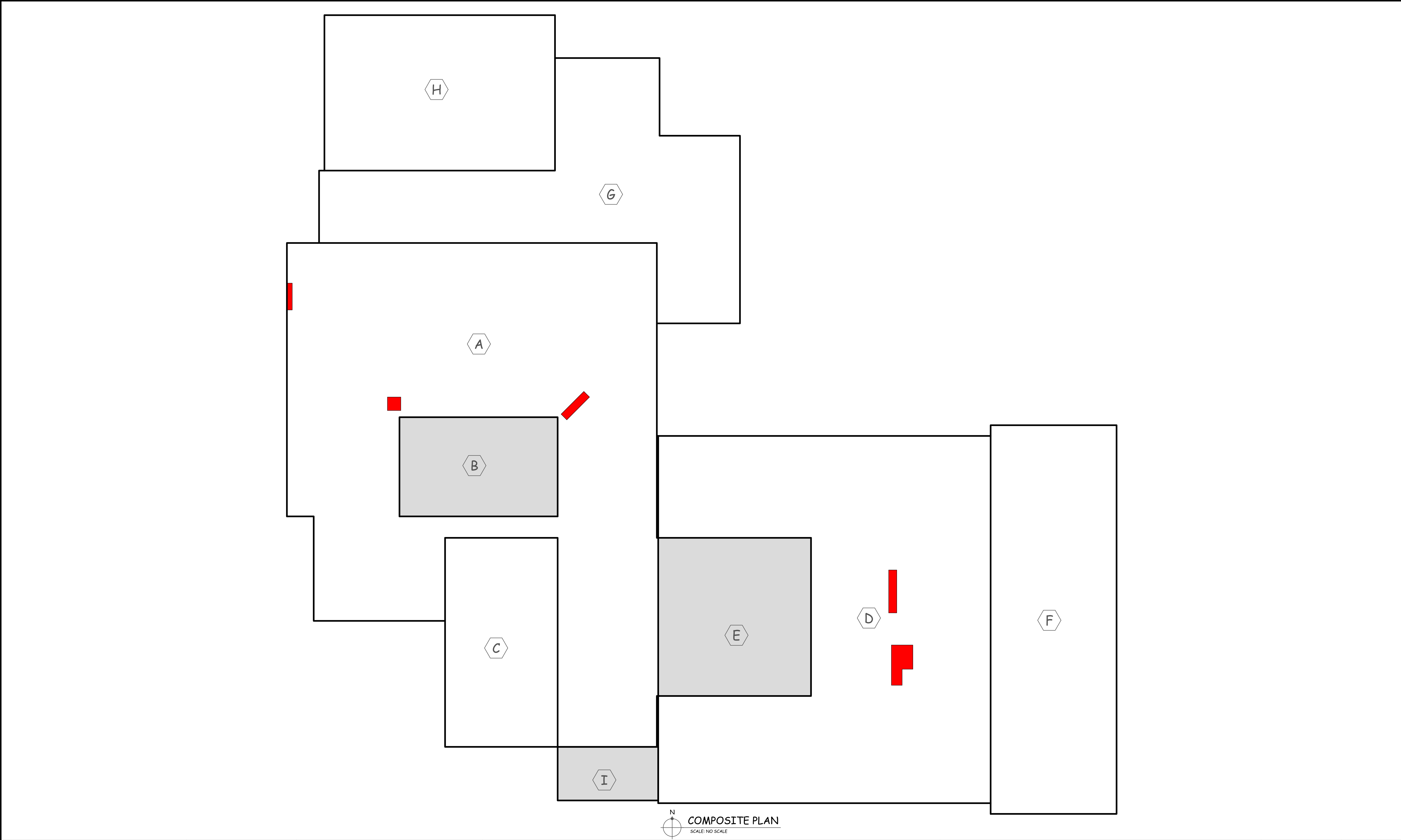
DIAGNOSTIC TECHNICIAN:
C. HERNANDEZ

DRAWN BY:
SR

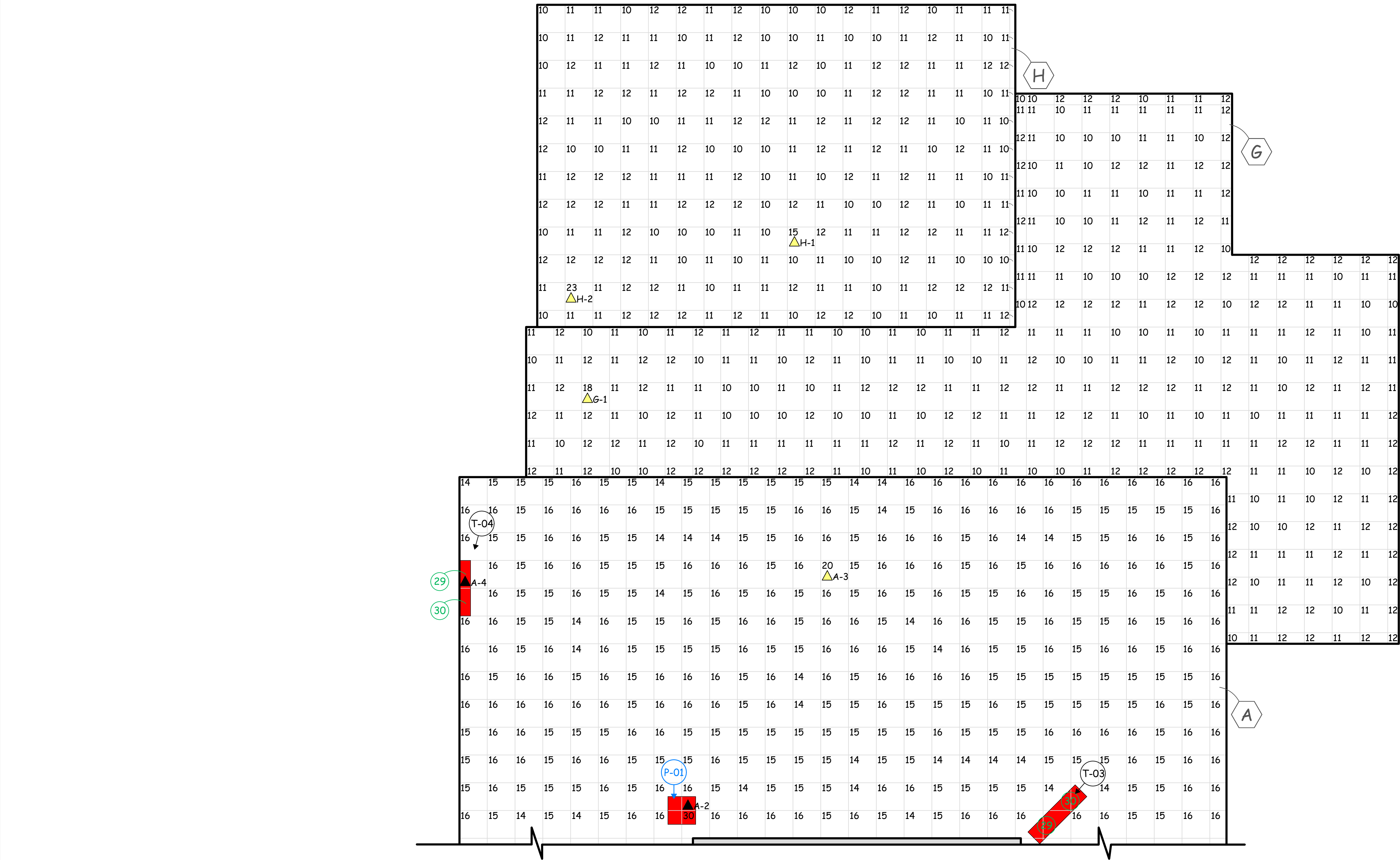
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PROJECT NO.:
9745881

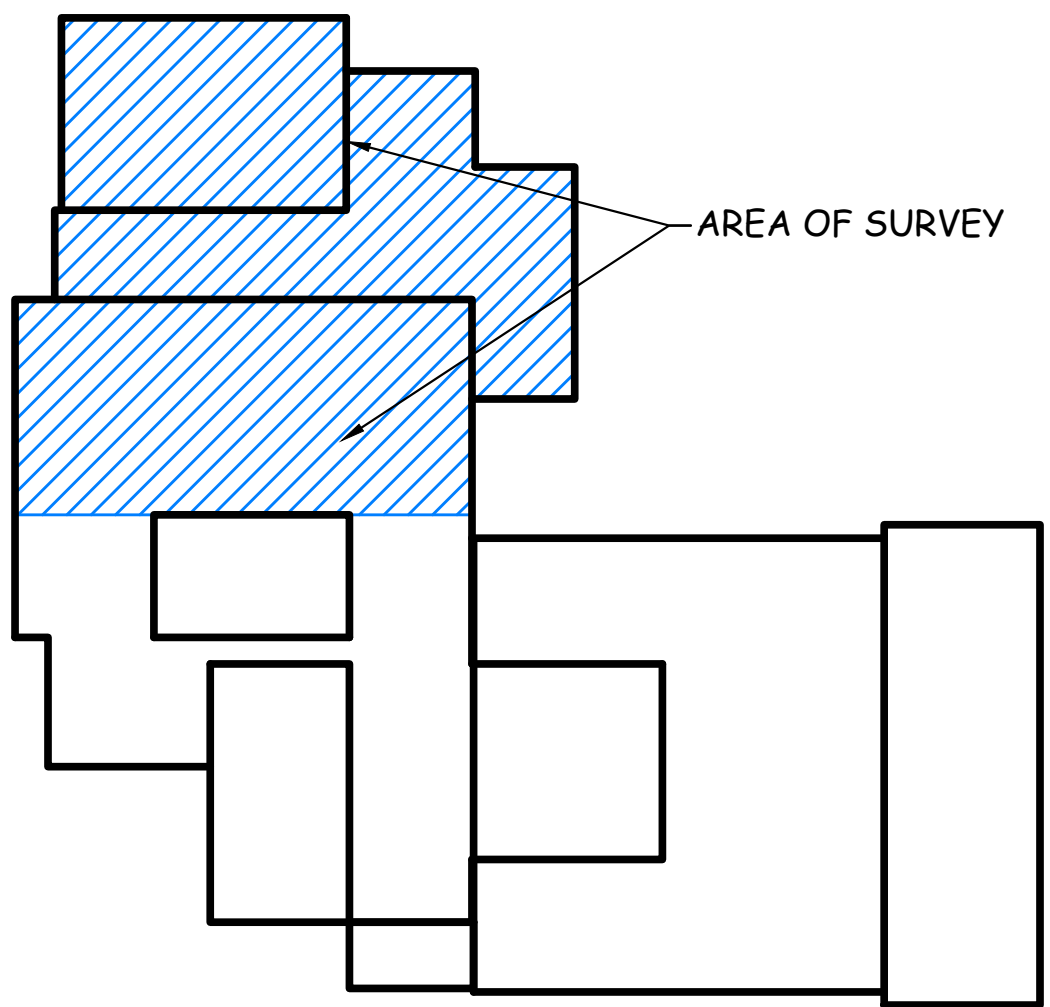
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B



<div><div>#</div> ROOF SECTION</div> <div><div>▲</div> DRY CORE</div> <div><div>▲</div> WET CORE</div>	<div><div>P-#</div> PHOTO</div> <div><div>T-#</div> THERMOGRAM</div> <div>N.A.F. (NO ANOMALIES FOUND)</div>	<div>STANDARD KEY OF SYMBOLS</div> <div><div>■</div> WET INSULATION</div> <div><div>⊠</div> R.I.M. (RANDOM INTERMITTENT MOISTURE)</div>	<div><div>■</div> N.I.C.</div> <div><div>□</div> MOISTURE GRID</div> <div><div>⊠</div> TRACE CORE</div> <div><div>#</div> MOISTURE READING</div>	<div><div> TREMCO</div><div>Roofing & Building Maintenance</div></div>	<div><div> wti</div></div>	<div>LIBERTY PUBLIC SCHOOLS MANOR HILL ELEMENTARY 1400 SKYLINE DRIVE LIBERTY, MISSOURI 64068</div>	<div>DIAGNOSTIC TECHNICIAN: C. HERNANDEZ</div> <div>DRAWN BY: SR</div> <div>DATE: 2/20/2023</div>	<div>PROJECT NO.: 9745881</div> <div>SHEET NO.: C</div>
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ROOF PLAN
SCALE: NO SCALE



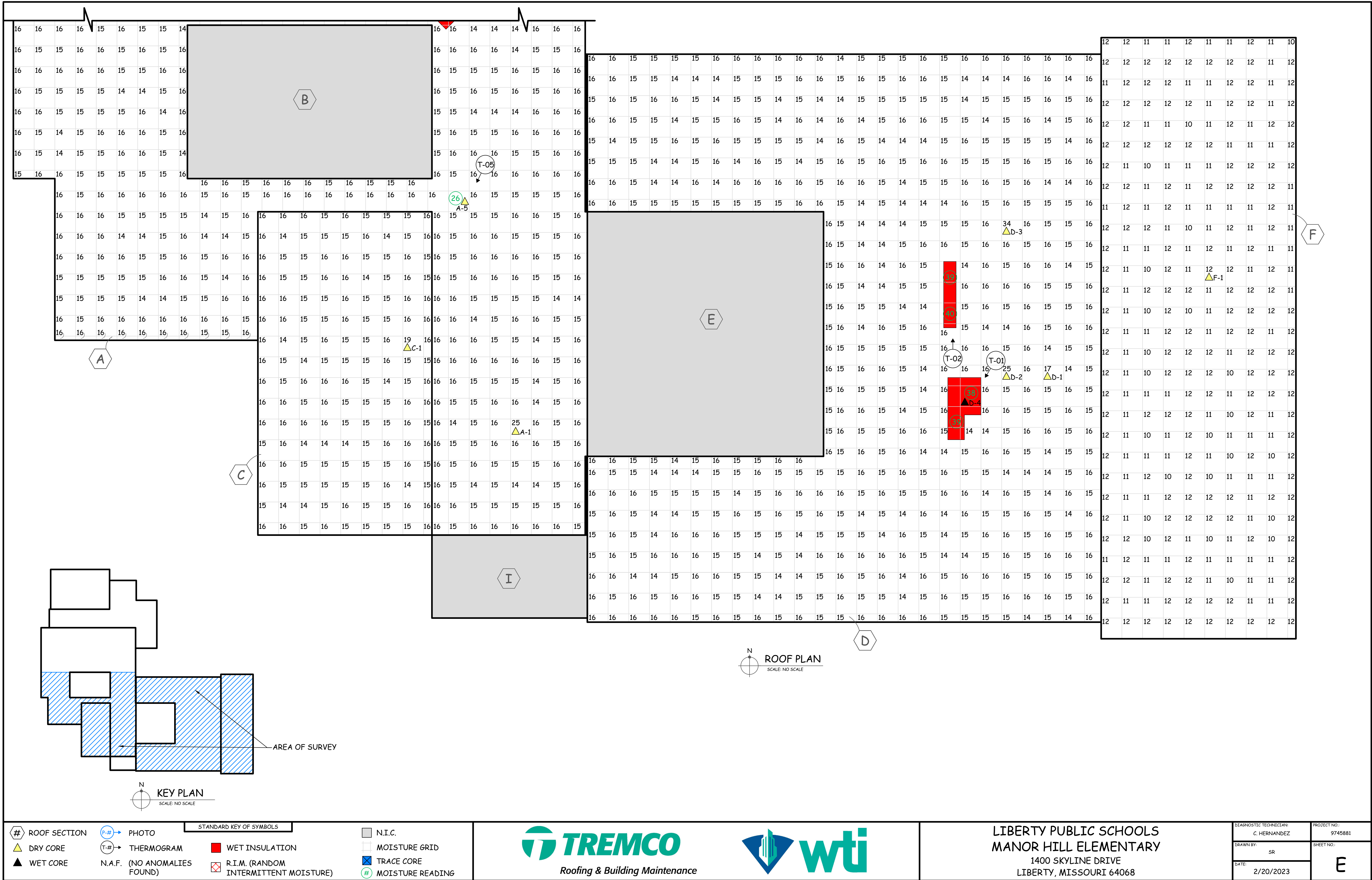
KEY PLAN
SCALE: NO SCALE

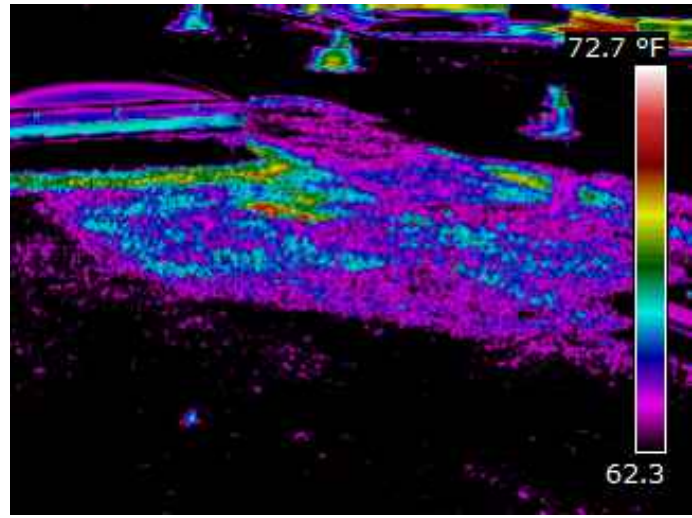
STANDARD KEY OF SYMBOLS			
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▲ DRY CORE	T-# THERMOGRAM	R.I.M. (RANDOM INTERMITTENT MOISTURE)	MOISTURE GRID
▲ WET CORE	N.A.F. (NO ANOMALIES FOUND)		TRACE CORE
			MOISTURE READING



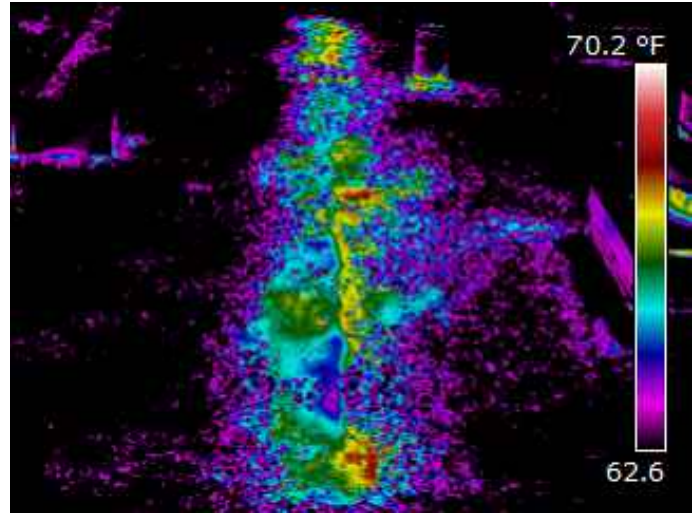
LIBERTY PUBLIC SCHOOLS
MANOR HILL ELEMENTARY
1400 SKYLINE DRIVE
LIBERTY, MISSOURI 64068

DIAGNOSTIC TECHNICIAN: C. HERNANDEZ	PROJECT NO.: 9745881
DRAWN BY: SR	SHEET NO.: D
DATE: 2/20/2023	

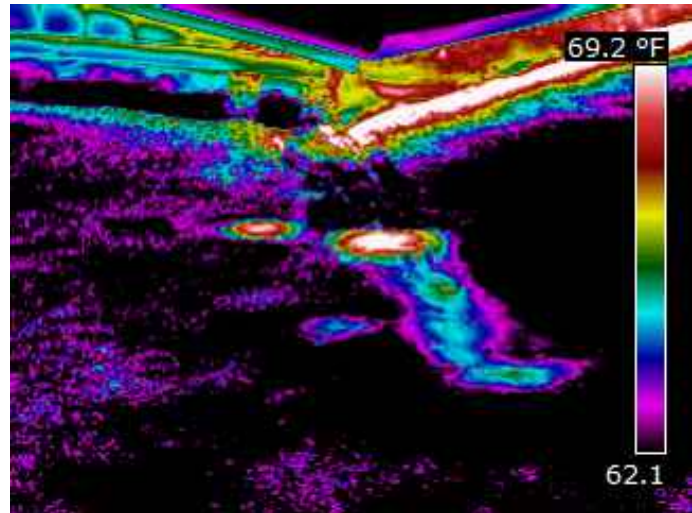




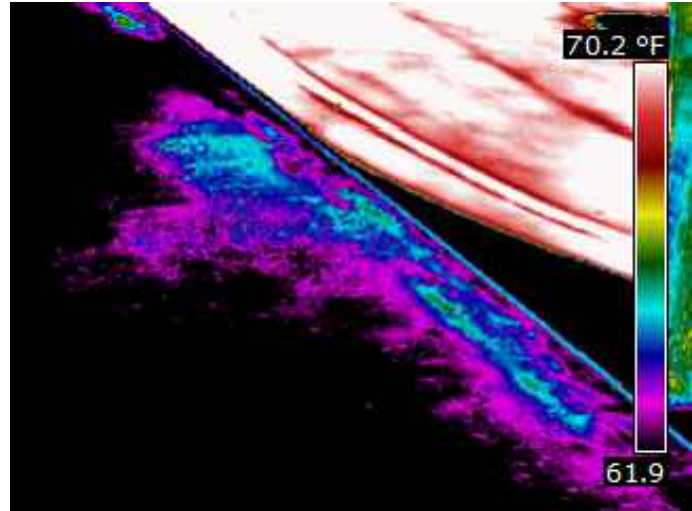
Thermogram T-01



Thermogram T-02



Thermogram T-03



Thermogram T-04



Thermogram T-05



Photograph P-01

CONSTRUCTION DATA				
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
A	A-1	25	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/4" GYPSUM BOARD
			0%	1/2" POLYISOCYANURATE INSULATION
			0%	1" POLYISOCYANURATE INSULATION
			N/A	LIGHTWEIGHT CONCRETE
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
A	A-2	30	N/A	BUILT-UP-ROOF W/ GRAVEL
			100%	1/4" GYPSUM BOARD
			100%	2" POLYISOCYANURATE INSULATION
			30%	2" POLYISOCYANURATE INSULATION
			100%	2" POLYISOCYANURATE INSULATION
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
A	A-3	20	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/4" GYPSUM BOARD
			0%	2" POLYISOCYANURATE INSULATION
			N/A	LIGHTWEIGHT CONCRETE
			N/A	LIGHTWEIGHT CONCRETE
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
A	A-4	29	N/A	BUILT-UP-ROOF W/ GRAVEL
			80%	1/4" GYPSUM BOARD
			40%	1" POLYISOCYANURATE INSULATION
			0%	1" GYPSUM BOARD
			N/A	METAL DECK
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
A	A-5	26	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/4" GYPSUM BOARD
			0%	1-1/4" POLYISOCYANURATE INSULATION
			0%	2" POLYISOCYANURATE INSULATION
			0%	1" GYPSUM BOARD
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
C	C-1	19	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/4" GYPSUM BOARD
			0%	2" POLYISOCYANURATE INSULATION
			N/A	LIGHTWEIGHT CONCRETE
			N/A	LIGHTWEIGHT CONCRETE
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
D	D-1	17	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/2" WOODFIBER INSULATION
			N/A	BUILT-UP-ROOF
			0%	1/2" WOODFIBER INSULATION
			0%	2" POLYISOCYANURATE INSULATION
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
D	D-2	25	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/2" WOODFIBER INSULATION
			N/A	BUILT-UP-ROOF
			0%	1/2" WOODFIBER INSULATION
			0%	2" POLYISOCYANURATE INSULATION
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
D	D-3	34	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/2" WOODFIBER INSULATION
			N/A	BUILT-UP-ROOF
			0%	1/2" WOODFIBER INSULATION
			0%	2" POLYISOCYANURATE INSULATION
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
D	D-4	38	N/A	BUILT-UP-ROOF W/ GRAVEL
			100%	1/2" WOODFIBER INSULATION
			50%	1/2" POLYISOCYANURATE INSULATION
			50%	1/2" POLYISOCYANURATE INSULATION
			0%	2-1/2" POLYISOCYANURATE INSULATION
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
F	F-1	12	N/A	BUILT-UP-ROOF W/ GRAVEL
			0%	1/2" WOODFIBER INSULATION
			0%	3" POLYISOCYANURATE INSULATION
			N/A	LIGHTWEIGHT CONCRETE
			N/A	LIGHTWEIGHT CONCRETE

CONSTRUCTION DATA				
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
G	G-1	18	N/A	BUILT-UP-ROOF W/ GRAVEL
			N/A	LIGHTWEIGHT CONCRETE
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
H	H-1	15	N/A	BUILT-UP-ROOF W/ GRAVEL
			N/A	LIGHTWEIGHT CONCRETE
ROOF SECTION	CORE CUT NUMBER	MOISTURE READING	MOISTURE PERCENTAGE	ROOF CONSTRUCTION
H	H-2	23	N/A	BUILT-UP-ROOF W/ GRAVEL
			N/A	LIGHTWEIGHT CONCRETE

THE MOISTURE PERCENTAGES ARE INTENDED TO BE USED AS A QUALITATIVE MEASUREMENT RATHER THAN AN EXACT READING.

ROOF AREA DATA			
ROOF SECTION	SIZE (S.F.)	WET (S.F.)	% WET
A	17,369	81	0.47%
C	3,276	0	0.00%
D	13,644	144	1.06%
F	6,815	0	0.00%
G	7,197	0	0.00%
H	4,988	0	0.00%
TOTALS	53,289	225	0.42%

STANDARD KEY OF SYMBOLS			
# ROOF SECTION	P-# PHOTO	WET INSULATION	N.I.C.
▲ DRY CORE	T-# THERMOGRAM	R.I.M. (RANDOM INTERMITTENT MOISTURE)	MOISTURE GRID
▲ WET CORE	N.A.F. (NO ANOMALIES FOUND)		TRACE CORE
			# MOISTURE READING



LIBERTY PUBLIC SCHOOLS
MANOR HILL ELEMENTARY
1400 SKYLINE DRIVE
LIBERTY, MISSOURI 64068

DIAGNOSTIC TECHNICIAN: C. HERNANDEZ	PROJECT NO.: 9745881
DRAWN BY: SR	SHEET NO.: F
DATE: 2/20/2023	

Liberty High School

200 Blue Jay Drive, Liberty, Missouri 64068



Manor Hill Elementary

1400 Skyline Drive, Liberty, Missouri 64068



Owner Purchased Roofing Material List

Liberty High School – Roof 15

The following material list must be completed to include the quantities of each material listed. This form must be included with the bid form and signed/dated by the Contractor. Failure to provide this information will render your bid unresponsive. The owner is purchasing the following list of material from EducationPlus through a pre-competed national cooperative purchasing organization. Only these materials, in the quantities listed by the contractor, will be supplied by the owner.

The Contractor is responsible for purchasing any additional material directly from the roofing material manufacturer at the contractor's cost. The contractor is also responsible for ALL other items not on this list necessary for the completion of work specified.

The unloading of material and the storage of said material in a secure area is the sole responsibility of the contractor. Any unused material will become the property of the contractor at the completion of the project.

<u>Material</u>	<u>Quantity</u>	<u>Container Size</u>
Burmastic Composite Ply HT	____ rolls	2-sq/roll (20 rolls per pallet)
Burmesh	____ rolls	6" x 300' rolls
ELS Mastic	____ buckets	5-gallon bucket
PowerPly Plus HT FR	____ rolls	1-sq/roll (20-rolls per pallet)
PowerPly Standard Cold Adhesive	____ buckets	5-gallon bucket
TremPrime QD	____ buckets	5-gallon bucket

Bidding Contractor: _____

Contractor Signature: _____

Date: _____

Owner Purchased Roofing Material List Manor Hill Elementary – Roofs A and D

The following material list must be completed to include the quantities of each material listed. This form must be included with the bid form and signed/dated by the Contractor. Failure to provide this information will render your bid unresponsive. The owner is purchasing the following list of material from EducationPlus through a pre-competed national cooperative purchasing organization. Only these materials, in the quantities listed by the contractor, will be supplied by the owner.

The Contractor is responsible for purchasing any additional material directly from the roofing material manufacturer at the contractor's cost. The contractor is also responsible for ALL other items not on this list necessary for the completion of work specified.

The unloading of material and the storage of said material in a secure area is the sole responsibility of the contractor. Any unused material will become the property of the contractor at the completion of the project.

<u>Material</u>	<u>Quantity</u>	<u>Container Size</u>
Burmastic Composite Ply HT	____ rolls	2-sq/roll (20 rolls per pallet)
Burmesh	____ rolls	6" x 300' rolls
ELS Mastic	____ buckets	5-gallon bucket
PowerPly Plus HT FR	____ rolls	1-sq/roll (20-rolls per pallet)
PowerPly Standard Cold Adhesive	____ buckets	5-gallon bucket
TremPrime QD	____ buckets	5-gallon bucket

Bidding Contractor: _____

Contractor Signature: _____

Date: _____