Saline Area Schools

Request for Proposal

November 20, 2023

The Saline Area Schools (also referred to as the District or SAS in these documents) will accept sealed bids for:

Saline Middle School Roofing Project

as described in the attached specifications. **Electronic bids are due no later than 11:00 AM Local Time Tuesday, December 5, 2023. A non-mandatory but strongly recommended pre-bid meeting is scheduled for Monday, November 27, 2023, at 10:30 AM Local Time at Saline Middle School located at 7190 North Maple Road, Saline, MI 48176. Please go to the main office to replace a visitor's badge and be taken to the meeting location. Bidders shall not visit the site without an appointment.** Bid documents are available online by going to the District's web site, www.salineschools.org and clicking on Departments/Finance Department/Bids and Proposal. Bid documents will be placed on Buildingconnected.com with the following link: https://app.buildingconnected.com/public/5cc9d7f637c1a90018cb55dc .Bidders are encouraged to visit the site. The following link is for instructions for Buildingconnected.com: https://buildingconnected.zendesk.com/hc/en-us/categories/360001889773-Getting-started-for-subcontractors

Sealed bids should be submitted through Buildingconnect.com with the following link: https://app.buildingconnected.com/public/5cc9d7f637c1a90018cb55dc . No physical bids will be accepted in person or via delivery service. Bids are to be submitted no later than **11:00 AM Local Tine Tuesday, December 5, 2023.** The District will not consider or accept a bid received after the date and time specified for bid submission. Bids will be publicly opened immediately following the close of receiving bids with the following virtual meeting link: **meet.google.com/khq-kifi-dby** or phone number (413) 561-4340 PIN: 623 846 175#. No oral, email, telephonic or telegraphic proposals shall be considered.

The Board of Education reserves the right to accept or reject any or all bids in whole or in part; or, for reasons of establishing uniformity, delivery time or preference, to award the contract to other than the low bidder.

The contents of RFP and Bidder's (also referred to as Contractor in these documents) Proposal will become contractual obligations if a contract ensues. Failure of the Bidder to accept these obligations will result in cancellation of the award. Award of a contract by the District is subject to the Contractor executing a Contract, which shall incorporate the contents of this RFP and the Contractor's Proposal and final approval if the same by the District's legal counsel.

In compliance with MCL 380.1267, the bid shall be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the owner or any employee of the bidder and any member of the board, or the superintendent of the school district. The bid shall also be accompanied by a sworn and notarized statement disclosing whether the bidder is an Iran Linked Business in compliance with PA 517 of 2012. The Board shall not accept a bid that does not include these sworn and notarized disclosure statements.

Certified check, money order or Bid Bond by an approved surety company must accompany each proposal in an amount not less than 5% of the bid amount. Price proposal shall be good for a period of no less than 60 days from the bid date, unless otherwise noted. Bid Bond can be included with the bid through Buildingconnected.com. Certified check and money order must be received prior to the bid due date and time at 7265 North Ann Arbor Road, Saline, MI 48176.

Bids are to be submitted on our Bid Proposal Form through Buildingconnect.com with the following link: https://app.buildingconnected.com/public/5cc9d7f637c1a90018cb55dc

Any questions should be referred to Mark Paulus, Owner's Representative, 248-880-6791.

INSTRUCTIONS TO BIDDERS

GENERAL CONDITIONS:

1. Proposal/Intent
   Furnish materials and labor for roofing at Saline Middle School per drawings and specifications.

   Use of Manufacturers' products and other requirements set forth in Specifications are not intended to preclude use of any other approved manufacturer's products or procedures which may be equivalent, solely as determined by the Owner, but are given for the purpose of establishing standards for design, function and quality of materials, construction and workmanship.

   Due to the unknown cost increase in roof insulation, this bid shall include the current cost of insulation. This information shall be noted on the proposal form under "Unit Pricing". If there is a price increase of when the material is received, the District will pay the difference via the allowance included in your base bid.

2. Types of Proposals
   See bid proposal form.

3. Receipt of Bids
   Bids should be submitted through Buildingconnect.com with the following link: https://app.buildingconnected.com/public/5cc9d7f637c1a90018cb55dc . No physical bids will be accepted in person or via delivery service. Bids are to be submitted no later than **11:00 AM Local Time, Tuesday, December 5, 2023.** The District will not consider or accept a bid received after the date and time specified for bid submission. Bids will be publicly opened immediately following the close of receiving bids with the following virtual meeting link: **meet.google.com/khq-kifi-dby** or phone number (413) 561-4340 PIN: 623 846 175#. No oral, email, telephonic, or telegraphic proposals shall be considered.

4. Bidders' Qualifications
   Bidders shall be able to demonstrate the following:

   Shall be reputable, recognized organization with at least five (5) years successful experience on work of this type and scope, of equal or better quality than this project.

5. Warranty
   Contractor shall warranty materials and installation of all components for a period of 24 months from date of acceptance by the owner of job completion.

6. Project Meeting
   Pre-job conference to be scheduled within five (5) days after award, to be determined by Mark Paulus, Owner's Representative at (248) 880-6791.

7. Work Schedule
   Proposed schedule will be a factor in evaluating bids. Unit installation to begin as soon as units are available. Contractor to include lead time for units and durations.

8. Clean-up and Disposal
   The Contractor shall be responsible to clean-up all debris and dispose of it off-site. This MUST BE DONE DAILY. If the District has to provide clean up after contractors, there will be a $500 per event fee in addition to disposal costs.

9. Damage Repair
   Survey of the site will be conducted, and documented by the contractor, to determine current site conditions. Survey to be provided to the District prior to the start of construction. Contractor shall be responsible to repair any damage to the site, which occurs during this project.

   Contractors and their Sub Contractors shall park their work vehicles in the area(s) designated for parking. Contractors and their Sub Contractors shall not park or drive on sidewalks or landscape areas. Failure to repair, District will complete, and Contractor will be responsible for all costs. There will also be a $500 fee assessed for any vehicles that are documented to be parking on sidewalks or landscape areas.

10. Submittal of Bid
    Before submitting a bid, bidders shall carefully read all the bid documents in order to avoid omission or duplications. To ensure a complete project, bidders shall visit the premises, verify site conditions and conditions under which work under the contract must be conducted. Submission of a bid signifies that the bidder has visited the project premises, has made examinations and verifications and is fully conversant with all conditions under which the work is to be performed. No claims for additional compensation will be considered or paid to the successful bidder, due to said successful bidder's failure to be so informed.

    Any exceptions to the terms and conditions contained in this RFP or the form Contract attached to this RFP, if there is one attached, or any other special considerations or conditions requested or required by the bidder MUST be specifically enumerated by the bidder and be submitted and accepted prior to the bid due date, together with an explanation as to the reason such terms and conditions of this RFP or form of Contact cannot be met by, or in the bidder's opinion should not be applicable to, the bidder. The bidder shall be required and expected to meet the bid documents and the requirements as set forth in this RFP and the form of Contract in their entirety, except to the extent exceptions or special considerations or conditions are expressly set forth in the bidder's Proposal and those exceptions or special considerations or conditions are expressly accepted by the District.

    Bids are to be submitted on our Bid Proposal Form through Buildingconnected.com w/the following link: https://app.buildingconnected.com/public/5cc9d7f637c1a90018cb55dc

11. Familial Relationship
    All bidders must provide familial disclosure in compliance with MCL 380.1267 and attach this information to the bid. The bid shall be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the owner or any employee of the bidder and any member of the board or the superintendent of the school district. The District shall not accept a bid that does not include this sworn and notarized disclosure statement.

12. Iran Economics Sanctions Act
    Each bid must be accompanied by a sworn and notarized statement certifying that the Contractor is not an "Iran linked business" within the meaning of the Iran Economic Sanctions Act, PA 516 of 201.

13. Withdrawal of Bids
Any bidder may withdraw his bid at any time prior to the scheduled time for receipt of bids. No proposals may be withdrawn for at least sixty (60) days after the scheduled closing time of the bid.

14. Firm Prices
Prices and notations must be typed or in ink. No erasures are permitted. Mistakes may be crossed out and corrections entered and initialed, in ink, by the person signing the proposal.

In the event of discrepancy between the unit price and the extension, the UNIT PRICE SHALL GOVERN. The price inserted must be net including all freight, discounts, rebates, and allowances.

15. Permits, Fees, Regulations and Taxes
The Contractor shall obtain and pay for all permits, assessments, fees, bonds, and other charges as necessary to perform and complete the work of this contract, including disconnection charges, capping and unplugging utilities.

The Contractor shall be responsible for obtaining all permits and licenses necessary for the proper completion of project. Permits and licenses are available from the appropriate agencies having jurisdiction. The Contractor shall give all notices, pay all fees and comply with all laws, ordinances, rules and regulations bearing on the work.

At the completion of the project, the contract will provide to the District all paperwork related to the full execution of the permits(s), including all payments and inspections. If any of the work of the Contractor is done contrary to such laws, ordinance rules and regulations without such notice, he shall bear all costs arising therefrom. The Contractor shall include all cost and taxes in its bid and make proper provisions for payment of all other State and Federal applicable taxes, fees or other costs.

The bid amount shall INCLUDE sales tax.

16. Delivery/Installation
Time of delivery is part of the consideration. It is understood that the bidder agrees to deliver prepaid to the schools, specified from the resulting contract, all items. All cost of delivery, drayage, freight, packing, unpacking, and setup are to be included in the prices bid.

The Contractor is responsible for removing from the project all waste materials and rubbish resulting from his operations and installation including all packing cartons and debris. Removal is to occur on a daily basis. Failure to do so will result in the Owner doing so and the cost thereof shall be charged to the Contractor as a deduction in his contract price.

The Contractor shall provide an adequate number of qualified, experienced installers, in harmony with other works at the site.

17. Bonds
Bid Bond, certified check, or money order for an amount not less than five (5%) percent of the amount of the bid, must accompany each bid. The check or bond of each unsuccessful bidder will be returned within ten (10) days after the bid is awarded. Failure of any accepted bidder to enter into a contract to complete the specified work may forfeiture of his bid security. Failure to submit proper bid security shall constitute rejection of bid. Bid Bond can be included with the bid through Buildingconnected.com.

Certified check and money order must be received prior to the bid due date and time at 7265 North Ann Arbor Street, Saline, MI 48176.

Performance Bond/Payment Bond

Within fourteen (14) days after date of issuance of written notice of selection for the award of a contract, which shall be considered as the notice to proceed, the successful bidder shall enter into a contract with the Owner and shall execute and file with the Owner, the following in the amount 100% equal to full contract sum.

The Performance Bond must insure the faithful performance of all provisions of the contract and satisfactory completion of the specified work, within the time agreed upon.

The **Payment Bond** must insure the payment and protection of claimants supplying labor or materials to the principal contractor or his subcontractors in the prosecution of the work provided for in the contract. The successful contractor's bond company must be listed by the State of Michigan as a licensed carrier and have an excellent or superior rating from AM Best Company.

18. Safety

Under the "General Conditions of the Contract for Construction" of the contract to be awarded, the Contractor;

a. shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures;
b. shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the contract;
c. shall take reasonable precautions for safety of all persons who may be affected, including employees of the Contractor and Subcontractor; and
d. shall have an accident prevention representative at the site.
e. Shall have and follow their Corporate Safety Plan/Program

The general conditions of the contract for construction and the agreement also require that the Contractor indemnify the Owner, its officers, agents, servants, volunteers and employees in the event of certain claims arising out of the performance of the work.

19. Insurance Requirements

The Contractor shall protect, defend and indemnify the Owner, its officers, agents, servants, volunteers, and employees from any and all liabilities, claims, liens, demands, and costs of whatsoever kind and nature which may result in injury or death to any persons, and for any result in injury or death to any person, and for loss or damage to any property, including property owned or in the care, custody, or control of the Owner in connection with or in any way incident to or arising out of the occupancy, use, with this Agreement resulting in whole or in part from negligent acts or omissions of the Contractor, any Subcontractor, or any employee, agent or representative of the Contractor or any Subcontractor.

The Contractor shall maintain, at its expense, during the term of this contract the following insurance:

a. Worker's Compensation Insurance with statutory limits and Employer's Liability Insurance with a minimum limit of $1,000,000 each occurrence.

b. Comprehensive General Liability Insurance with a minimum combined single limit of $1,000,000 per occurrence, $1,000,000 aggregate, in the same amount made for bodily injury and property damage. The policy is to include products and completed operations, cross liability, broad form property damage, independent contractors, and contractual liability coverage. The policy shall be endorsed to provide sixty (60) days written notice to the District of any material change of coverage, cancellation, or non-renewal of coverage.

c. If Subcontractors are likely to be used, the Comprehensive General Liability policy shall include coverage for independent Contractors.

d. Owner's Contractor's Protective Policy-comprehensive in the name of the Owner, with a minimum combined single limit of $1,000,000 per occurrence in the same amount for bodily injury or property damage.

e. Automobile Liability insurance covering all owned, hired, and non-owned vehicles with personal protection insurance and property insurance to comply with the provisions of the Michigan no-fault Insurance Law, including residual liability insurance with a minimum combined single limit of $1,000,000 each occurrence of bodily injury and property damage.

f. All insurance policies shall be issued by companies licensed to do business in the State of Michigan. The companies issuing the policies must be domestic (onshore) companies and have an A rating by AM Best.

g. The Contractor shall be responsible for payment of all deductibles contained in any insurance policy required in this contract.

20. Compliance with School Safety Initiative Legislation

Meeting the requirements of the School Safety Initiative Legislation, being MCL 380.1230, 380.1230a, 380.1230c, 380.1230d and 380.1230g.

The Bidder acknowledges and agrees that the Bidder will have any and all its installation personnel (including sub-contractors) subjected to criminal history and background checks. **Personnel that fall into this group will be working on the District premises for more than one continuous week.** Criminal history and background checks will be done within a year of the beginning of the project and should be completed before worked begins on this project.

The Bidder is required to provide written documentation for all on site personnel. The documentation will also verify that none of the personnel have a "listed offense" as indicated below. This documentation is to be provided before the beginning of the project and updated as necessary for any additions or subtractions from the list as long as the project lasts.

The Bidder shall indemnify, defend and hold the District, its employees, Board of Education, and each member thereof, agents and consultants, harmless from and against any and all claims, counter-claims, suits, debts, demands, actions, judgments, liens, liabilities, costs, expenses, including actual attorney's fees and actual expert witness fees, arising out of or in connection with any violation of, or the Bidder's failure to comply with the above paragraphs.

The Bidder shall be responsible for all costs and expenses associated with the above-required criminal history and background checks.

LISTED OFFENSES

a. MCL 750.145a - Accosting, enticing or soliciting child (less than 16 years of age) for immoral purposes.
b. MCL 750.145b - Accosting, enticing or soliciting child (less than 16 years of age) immoral purposes – second or subsequent offenses.
c. MCL 750.145c - Involvement in child sexually abusive activity or material, including possession of child sexually abusive material ("child" is a person less than 18 years of age who has not been legally emancipated.)
d. MCL 750.158 - Crime against nature (i.e., sodomy and beastiality) if the victim is an individual less than 18 years of age.
e. A third of subsequent violation of any combination of the following:
    i. MCL 750.167(1)(f) - indecent or obscene conduct in a public place;
    ii. MCL 750.335a - indecent exposure;
    iii. A local ordinance of a municipality substantially corresponding to a section described in (a) or (b), *supra.*
f. Except for juvenile disposition or adjudication, a violation of:
    i. MCL 750.338 - gross indecency between males; fellatio or masturbation;
    ii. MCL 750.338a - gross indecency between females; oral sex;
    iii. MCL 750.338b - gross indecency between male and female persons;
    iv. if the victim is an individual less than 18 years of age.
g. MCL 750.349 - Kidnapping, if victim is an individual less than 18 years of age.
h. MCL 750.350 - Kidnapping; child under 14 years of age with intent to detain or conceal from child's parent or legal guardian.
i. MCL 750.448 - Soliciting or accosting by a person 16 years of age or older, if victim is an individual less than 18 years of age.
j. MCL 750.455 - Pandering
k. MCL 750.520b - First degree criminal sexual conduct.
l. MCL 750.520c - Second degree criminal sexual conduct.
m. MCL 750.520d - Third degree criminal sexual conduct.
n. MCL 750.520e - Fourth degree criminal sexual conduct.
o. MCL 750.520g - Assault with intent to commit criminal sexual conduct.
p. Any other violation of a law of the state or a local ordinance of municipality that by its nature constitutes a sexual offense against an individual who is less than 18 years of age.
q. MCL 750.10a - Offense by sexually delinquent person (i.e., "any person whose sexual behavior is characterized by repetitive or compulsive acts which indicate a disregard of consequences or the recognized rights of others, or by the use of force upon another person in attempting sexual relations of either a heterosexual or homosexual nature, or by the commission of sexual aggressions against children under the age of 16").
r. An attempt or conspiracy to commit an offense described in (1) through (17).
s. An offense substantially similar to an offense described in (1) through (17) under a law of the United States, any state, or any country or any tribal or military law.

21. Termination by the District for Convenience

The District may, at any time, terminate the Contract for the District's convenience and without cause.

Upon receipt of written notice from the District of such termination for the District's convenience, the Contractor shall:

a. Cease operations as directed by the District in the notice;
b. Take actions necessary, or that the District may direct, for the protection and preservation of the Work; and
c. Except for Work directed to performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further Subcontracts and purchase orders.

22. Bids, Notifications, Claims and Statements shall be signed as follows:
The person who has signed the proposal form shall have the authority to do so under the structure of the Bidder.

23. Owner Is An Equal Opportunity Employer
The Owner is an Equal Opportunity Employer. Pursuant to the Executive Order 11246 as amended, you are advised that under the provisions of this order, Contractors and Subcontractors are obligated to take affirmative action to provide equal opportunity without regard to race, creed, color, national origin, age or sex.

24. Michigan Right to Know Law
Saline Area Schools will comply with the Michigan Right to Know Law by informing Contractors of hazardous chemicals to which they may be exposed. All Contractors will be required to provide Material Safety Data Sheets for any hazardous chemicals brought to the workplace. The Contractor shall comply with all applicable provisions of the Occupational Safety and Health Act for the duration of the specified work.

25. Asbestos Hazard Emergency Response Act
As required by the Environmental Protection Agency Asbestos Hazard Emergency Response Act, each school district is responsible for providing contractors with information regarding locations of known or assumed asbestos containing material prior to the Contractor entering a building under the school district's jurisdiction. The successful bidder will be required to complete the school district's Contractor Notification forms.

26. Notification of Assumed Lead-Containing Materials
The intent of this section is to formally notify all Contractors and Sub-Contractors applying for or bidding on work covered within this specification that, due to the age of the facilities within this District, there is the presumption that building components do contain lead-based paint pursuant to OSHA definition. The District has not conducted lead-based paint inspections. As a result, all Contractors and Sub-Contractors bidding must assume that building components do contain lead-based paint.

Furthermore, all awarded Contractors and Sub-Contractors shall be responsible to comply with all applicable Federal and Michigan State lead regulations including, but not limited to, 29 CFR Part 1926.62 of the OSHA Lead Construction Standard, (Part 603 of the Michigan State Standards). All costs associated with regulatory compliance shall be borne by the Contractor and/or Sub-Contractor.

27. General Conditions
The District reserves the right to accept or reject any or all proposals, to waive irregularities, and to accept a proposal which, in the District's opinion, is in the District's best interest.

The District reserves the right to declare as non-responsive, and reject, any bid which is incomplete or where material information requested in not furnished, or where indirect or incomplete answers or information is provided.

In the event, the Administration Building is closed due to unforeseen circumstances on the day Proposals are due, Proposals will be due at the same time on the next day that the District and/or the Administration Building is open.

Negligence in preparation, improper preparation, errors in, or omissions from, proposal shall not relieve a bidder from fulfillment of any and all obligations and requirements of the proposed Contract Documents.

The District expects that the awarded bidder will complete the work as outlined in the bid documents for the amount bid by the bidder. Any additional costs above the amount bid and awarded, must be approved by the District in advance of any work.

Voluntary alternates for bids are acceptable but should NOT be put in the space for the Base Bid on the Bid Response Form but on an attached sheet, clearly labeled Voluntary Alternative. Such Alternates should be described in enough detail for the District to understand the Bidder's intent.

Owner may choose to conduct testing to verify correct products and installation. If the materials and installation are found not to be per spec, Owner will require subsequent tests to be performed by Owners testing company at contractors' expense.

Any exceptions to the terms and conditions contained in this RFP or any special considerations or conditions requested or required by the Contractor MUST be specifically enumerated by the Contractor and be submitted as part of its Proposal, together with an explanation as to the reason such terms and conditions of this RFP cannot be met by, or in the Contractor's opinion should not be applicable to, the Contractor. The Contractor shall be required and expected to meet the specifications and the requirements as set forth in this RFP in their entirety, except to the extent exceptions or special considerations or conditions are expressly set forth in the Contractor's Proposal and those exceptions or special considerations or conditions are expressly accepted by the District.

No responsibility shall attach to the District, or the authorized representatives of either one, for the premature opening of any proposal, which is not properly addressed and identified.

Include in your base bid for an allowance of $20,000 for each bid category. This is to be used at the Owner's discretion.

The Contract Documents, as outlined in the executed Agreement, shall imply the inclusion of the entire agreement between the parties thereto, and the Contractor shall not claim any modification thereof resulting from any representation or promise made at any time by an officer, agent or employee of the District or by any other person.

If there is an issue with subcontractor and contractor which results in a legal preceding which is not tied to the performance of SAS or its staff, contractor to pay any time spent by SAS.

The bidders can choose to bid either bid category or both bid categories. The District reserves the right to award two contractors even if one contractor is low on both categories if it is in the District best interests.

28. Opening and Awarding of Bids

No oral, e-mail, telephonic or telegraphic proposals shall be considered. Bids will be publicly opened at **11:00 AM Local Time Tuesday, December 5, 2023.** The District will not consider or accept a bid received after the date and time specified for bid submission. Bids will be publicly opened immediately following the close of receiving bids with the following virtual meeting link: **meet.google.com/khq-kifi-dby** or phone number (413) 561-4340 PIN: 623 846 175#.

The recommendation for award will be submitted to the Board of Education at the regular Board of Education Meeting to be held on Tuesday, December 12, 2023, at 6:30 PM.

TECHNICAL SPECIFICATIONS:

Drawings and Specifications

Drawings

#	Description	Date
N/A	Appendix	Undated
Plate No. 1	Roof Plan Saline Middle School (Areas 1 -14)	Nov 2023
Plate No. 2	Roof Plan Saline Middle School (Areas 15 -22)	Nov 2023
Detail No. 1	Perimeter Edge	Nov 2023
Detail No. 2	Expansion Joint	Nov 2023
Detail No. 3	Coping	Nov 2023
Detail No. 4	Perimeter Edge	Nov 2023
Detail No. 5	Coping	Nov 2023
Detail No. 6	Area 15 Perimeter Edge	Nov 2023
Detail No. 7	Area 18 Perimeter Edge	Nov 2023
Detail No. 8	Expansion Joint	Nov 2023
Detail No. 9	Wall Flashing	Nov 2023
Detail No. 10	Surface Mounted Counterflashing	Nov 2023
Detail No. 11	Slip Counterflashing	Nov 2023
Detail No. 12	Perimeter Edge	Nov 2023

Architectural Sheet Metal Manual – Sheet Metal and Air Conditioning Contractors National Association, (SMACNA), Seventh Edition, 2012

Description

	Figure #
Formed Metal Coping	3-1
Counterflashing Systems – Installation	4-5
Roof Penetration Flashing	8-9
Equipment Support Flashing	8-11

Specifications

#	Description	Pages
01 2100	Allowances	1
01 2200	Unit Prices	2
01 5000	Temporary Facilities and Controls	2
07 5400	Thermoplastic Membrane Roofing	10
07 6200	Sheet Metal Flashing And Trim	4

Work Schedule

The contractor will note on their bid form if they will be planning on completing this project over 1 summer or 2 summers. If the project is 2 summers and after August 16, 2024, a roof area/section must be completed including all sheet metal, no temporary tie-in locations will be allowed and all materials, equipment, and other items must be removed from the site.

- 2024 Start Date: June 10, 2024
- 2024 Substantial Completion Date: August 16, 2024
- 2025 Start Date: June 9, 2025
- 2025 Substantial Completion Date: August 15, 2025
- Final Completion/Closeout Date: 45 Days after Substantial Completion

My signature certifies that the Proposal as submitted complies with all of the terms and conditions set forth in the Request for Proposal unless specifically enumerated as an exception as part of our Proposal.

COMPANY NAME: _____

ADDRESS: _____

AUTHORIZED SIGNATURE: _____

AUTHORIZED NAME (please print): _____

TITLE: _____ DATE: _____

CELL PHONE #: _____ FAX #: _____

E-MAIL: _____

The undersigned certifies that the bid contained meets or exceeds the attached specifications. Include the bond and allowances amount in price(s).

BID CATEGORY A SALINE MIDDLE SCHOOL: ROOF AREAS 1-14

Base Bid Amount: $ _____

3,000 Square Feet Allowance: Full Removal and Replacement including 3" ISO Insulation in Lieu of Removal of Existing Membrane & Providing Dens Deck & Membrane: $ _____

Allowance Amount: $ 20,000.00

Bond Amount: $ _____

Grand Total - $ _____

Schedule. Project completed in 1 or 2 Summers _____

BID CATEGORY B SALINE MIDDLE SCHOOL: ROOF AREAS 15-22

Base Bid Amount: $ _____

3,000 Square Feet Allowance: Full Removal and Replacement including 3" ISO Insulation in Lieu of Removal of Existing Membrane & Providing Dens Deck & Membrane: $ _____

Allowance Amount: $ 20,000.00

Bond Amount: $ _____

Grand Total - $ _____

Schedule. Project completed in 1 or 2 Summers _____

BID CATEGORIES A AND B SALINE MIDDLE SCHOOL: ALL AREAS 1-22

Deduct if Awarded Both Categories: $ _____

Schedule. Project completed in 1 or 2 Summers _____

Unit Pricing

Unit Prices (provide unit prices below for adds/deducts)

Replace deteriorated 1” x 6” wood nailers (L.F.) $ _____

Replace deteriorated 1” x 8” wood nailers (L.F.) $ _____

Replace deteriorated 2” x 4” wood nailers (L.F.) $ _____

Replace deteriorated 2” x 6” wood nailers (L.F.) $ _____

Replace deteriorated 2” x 8” wood nailers (L.F.) $ _____

Replace deteriorated 2” x 10” wood nailers (L.F.) $ _____

Replace deteriorated 2” x 12” wood nailers (L.F.) $ _____

Replace deteriorated 3/4” CDX plywood (S.F.) $ _____

Replace 1-inch thick flat stock isocyanurate insulation (S.F.) $_____

Replace 1.5-inch thick flat stock isocyanurate insulation (S.F.) $_____

Replace 2-inch thick flat stock isocyanurate insulation (S.F.) $_____

Replace 3-inch thick flat stock isocyanurate insulation (S.F.) $_____

Replace deteriorated drain bowls with cast iron (each) $ _____

Bid Questions

Acknowledge receipt of Addendums: _____

Do you agree to the schedule and terms of the schedule? ❒Yes ❒No

Bid Bond included? ❒Yes ❒No

Familial Disclosure Affidavit included? ❒Yes ❒No

Iran Linked Business Affidavit included? ❒Yes ❒No

Please state your warranty: _____

State any prompt payment terms: _____% _____days.

Do you conduct background checks on your employees? ❒Yes ❒No

Are you on the Excluded Parties List, which excludes you from receiving Federal Contracts or certain sub contracts, pursuant to the provisions of 31 U.S.C. 6101, note E.O. 12549, E.O. 12689, 48 C.F.R. 9.404? ❒Yes ❒No ❒Unknown

Provide your DUNS number, if you have one: _____

At least three (3) references with contact person:

Company: _____ Contact: _____ Phone: _____

Company: _____ Contact: _____ Phone:_____

Company: _____ Contact: _____ Phone:_____

CONSTRUCTION BID DISCLOSURE STATEMENT – FAMILIAL RELATIONSHIP

Pursuant to MCL 380.1267, a sworn and notarized statement disclosing any familial relationship that exists between the owner or any employee of the bidder and any member of the Saline Area Schools Board or the Saline Area Schools Superintendent must be accompanied with the bid**. Bids without this disclosure statement will not be accepted.**

The members of the Saline Area Schools Board are Jennifer Steben, Michael McVey, Kandace Jones, Brad Gerbe, Susan Estep, David Hayward, Jenney Miller, Tim Austin, and Lauren Gold.

The Saline Area Schools Superintendent is Dr. Stephen D. Laatsch

€ The Following are the familial relationships:
_____
_____
_____

€ There are none.

STATE OF MICHIGAN)
) ss
COUNTY OF_____)

The undersigned, authorized representative of bidder (insert name)
_____

does hereby acknowledge that bidder has read the foregoing disclosure statement and the

statements herein contained are true.

_____
Signature of Bidder Representative

_____
Print Name

_____
Title

Subscribed and sworn to before me this _____day of _____, _____

_____

Notary Public, _____County, Michigan
My commission expires: ____/____/_____

AFFIDAVIT OF COMPLIANCE – IRAN ECONOMIC SANCTIONS ACT
Michigan Public Act No. 517 of 2012

The undersigned, the owner or authorized officer of the below named contractor (the "Contractor"), pursuant to the compliance certification requirement provided in the Saline Area Schools (the "School District") Request For Proposals For Saline Middle School Roofing Project (the "RFP"), hereby certifies, represents and warrants that the Contractor (including its officers, directors and employees) is not an "Iran linked business" within the meaning of the Iran Economic Sanctions Act, Michigan Public Act No. 517 of 2012 (the "Act"), and that in the event Contractor is awarded a contract as a result of the aforementioned RFP, the Contractor will not become an "Iran linked business" at any time during the course of performing the Work or any services under the contract.

The Contractor further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than $250,000.00 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the School District's investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a request for proposal for three (3) years from the date it is determined that the person has submitted the false certification.

CONTRACTOR:

_____
Name of Contractor

By: _____

Its: _____

Date: _____

STATE OF _____)
)ss.
COUNTY OF _____)

This instrument was acknowledged before me on the _____ day of _____,
20 , by _____.

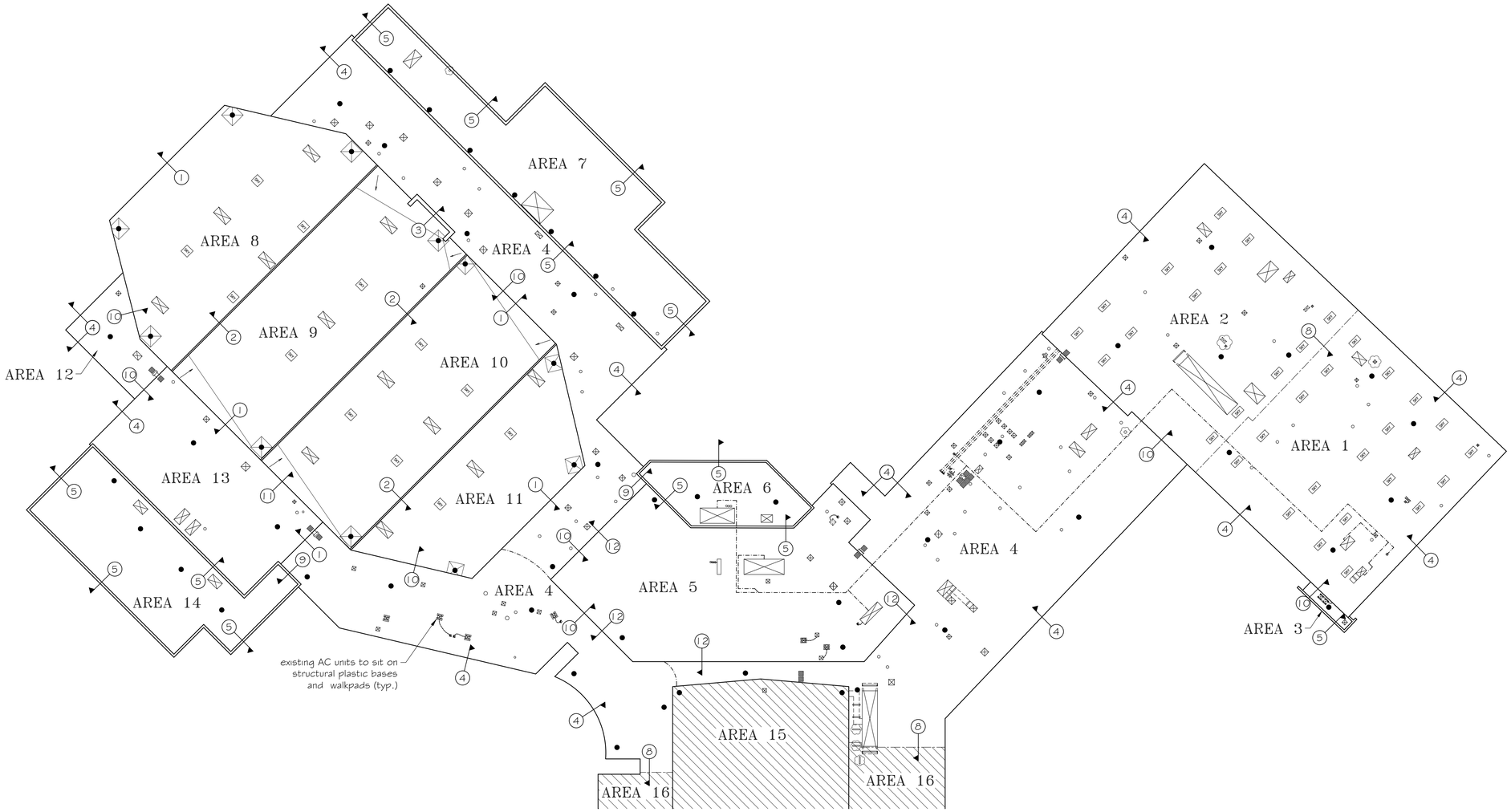
_____
, Notary Public

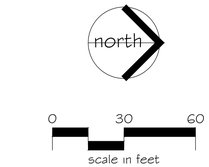
_____ County, _____

My Commission Expires:_____

Acting in the County of :_____

APPENDIX

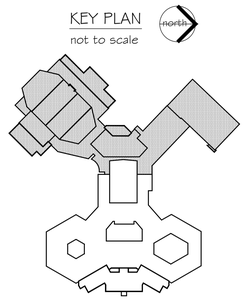




LEGEND:

- roof drain
- round penetration
- pitch pan
- mechanical unit
- elevated equipment
- roof hatch
- skylight
- ladder
- obsolete
- expansion joint
- supply line
- slope of tapered insulation
- RTA detail
- walk pads
- not in contract

KEY PLAN
not to scale



GENERAL NOTES:

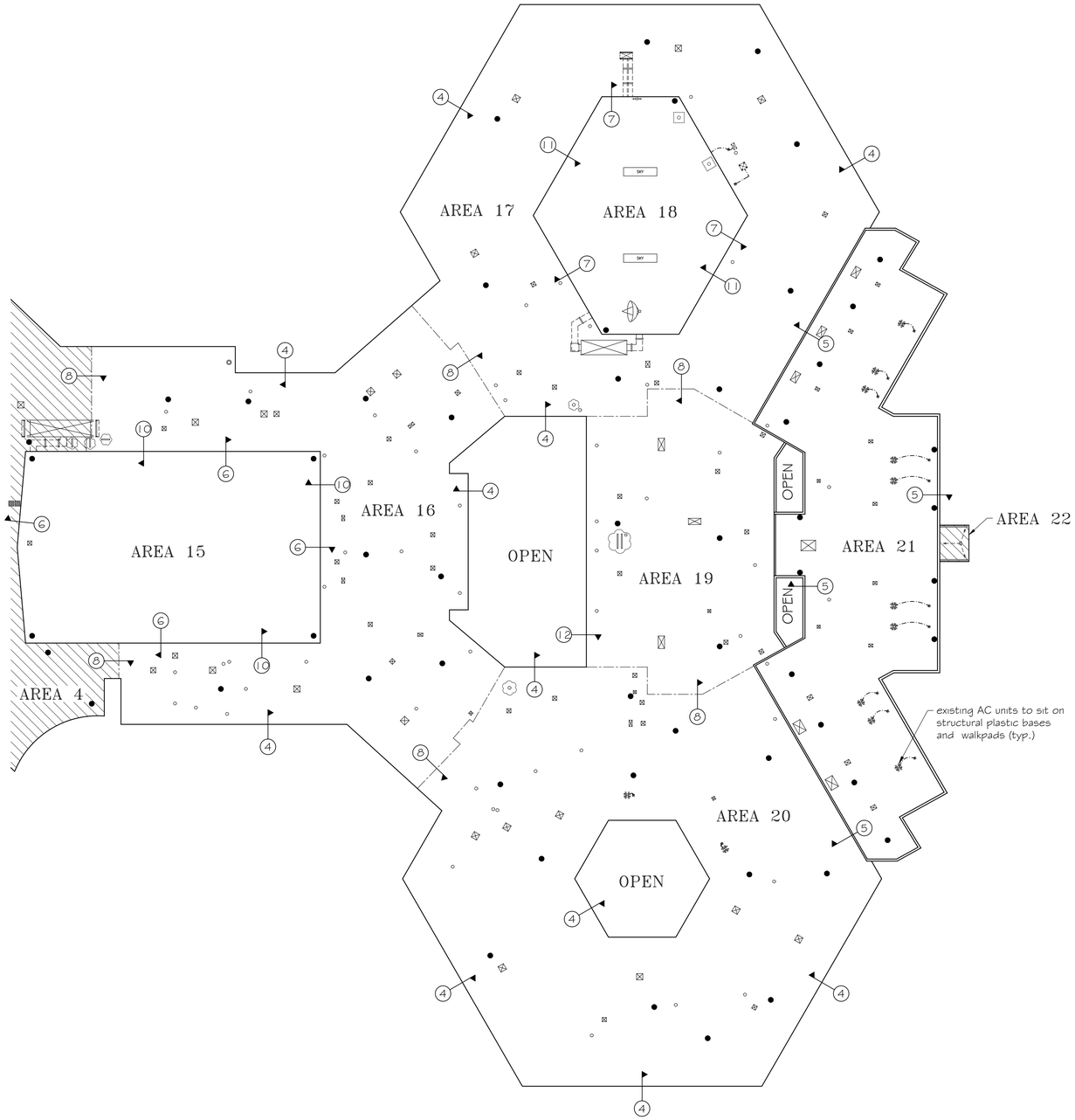
1. All areas and dimensions shown are approximate and based upon rough field measurements taken by representatives of Roofing Technology Associates, Ltd.
2. This drawing should not be used for bidding or estimating purposes. Contractors are responsible for their own field measurements, quantities and verification of conditions shown.

ROOFING TECHNOLOGY ASSOCIATES, LTD.
38031 SCHOOLCRAFT ROAD
LIVONIA, MICHIGAN 48150-1065
(734) 591-4444

SALINE MIDDLE SCHOOL

SALINE SCHOOLS
SALINE MIDDLE SCHOOL
7190 N MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Plate No:
23-071	APW	1
Date: NOV. 2023	Checked By: JJW	



north

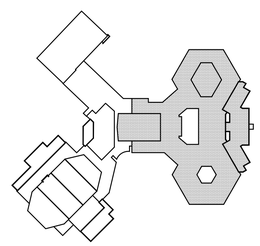
0 30 60

scale in feet

LEGEND:

- roof drain
- round penetration
- pitch pan
- mechanical unit
- elevated equipment
- roof hatch
- skylight
- ladder
- obsolete
- expansion joint
- supply line
- slope of tapered insulation
- RTA detail
- walk pads
- not in contract

KEY PLAN
not to scale



GENERAL NOTES:

1. All areas and dimensions shown are approximate and based upon rough field measurements taken by representatives of Roofing Technology Associates, Ltd.
2. This drawing should not be used for bidding or estimating purposes. Contractors are responsible for their own field measurements, quantities and verification of conditions shown.

rta
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SALINE MIDDLE SCHOOL

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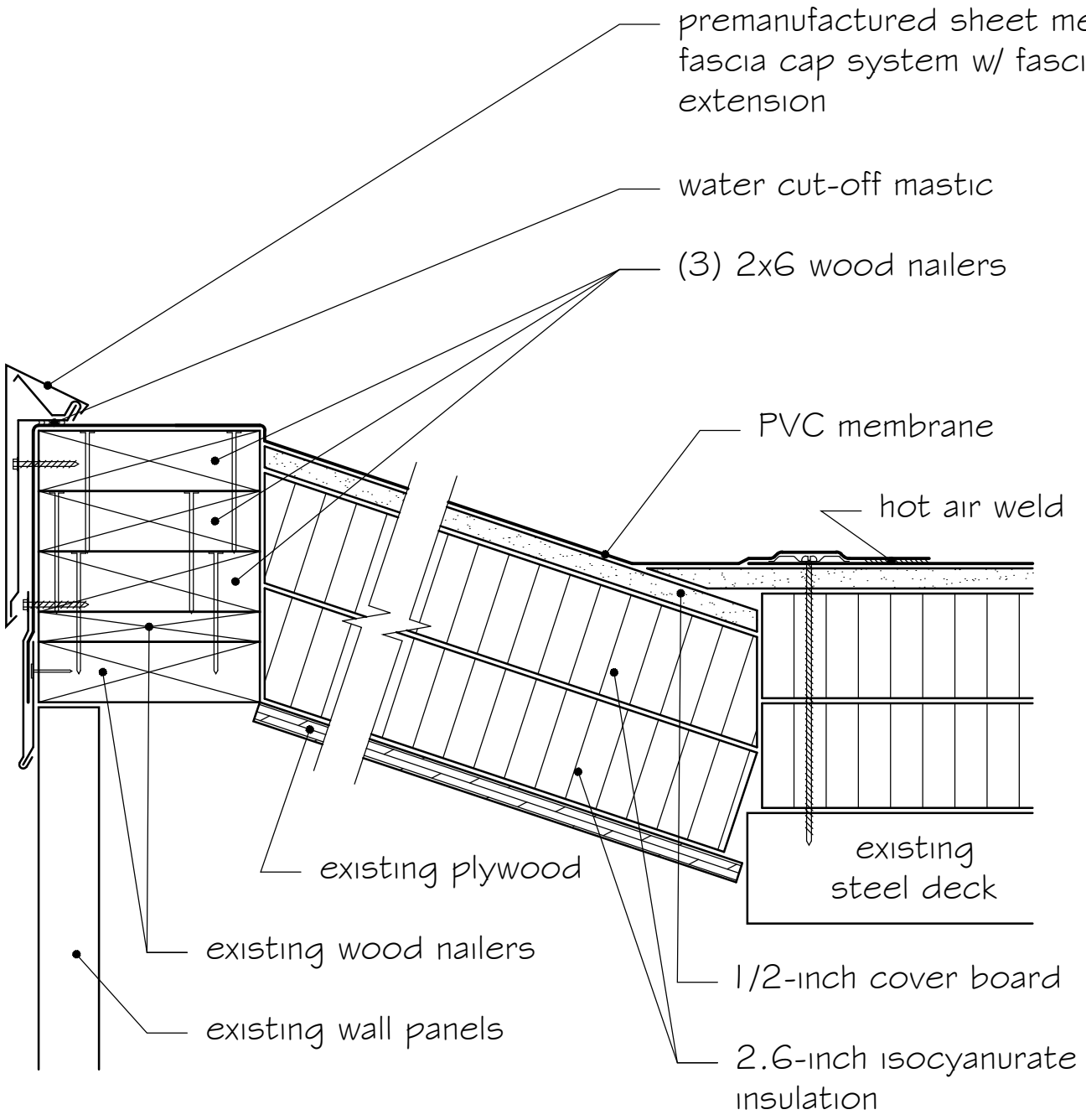
7190 N MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Plate No:
23-071	APW	2
Date: NOV. 2023	Checked By: JJW	



PERIMETER EDGE

not to scale

NOTE: components shown are new unless noted as existing

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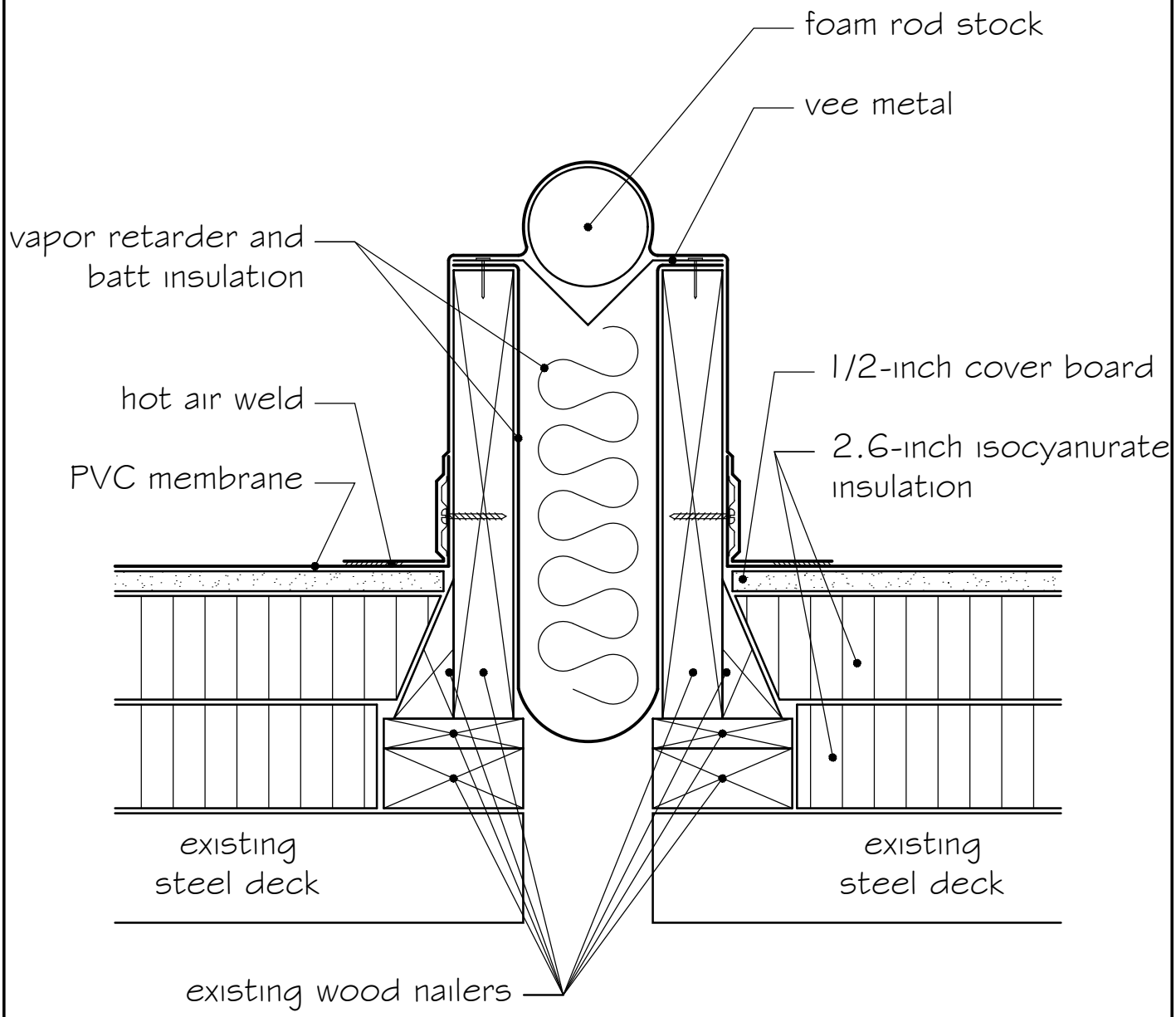
7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	1
Date: NOV, 2023	Checked By: JJW	



EXPANSION JOINT

not to scale

NOTE: components shown are new unless noted as existing

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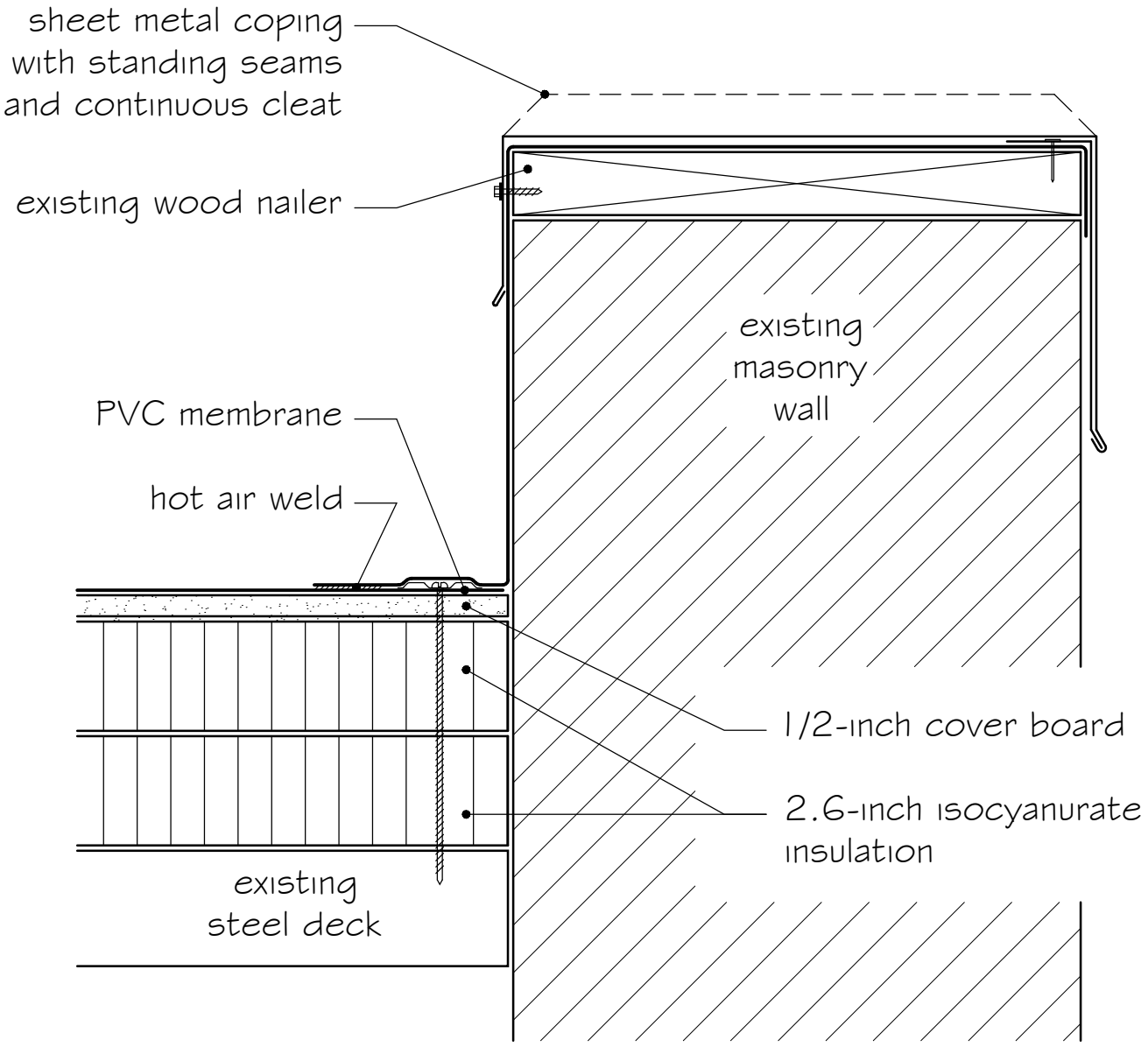
7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	2
Date: NOV, 2023	Checked By: JJW	



COPING

not to scale

NOTE: components shown are new unless noted as existing

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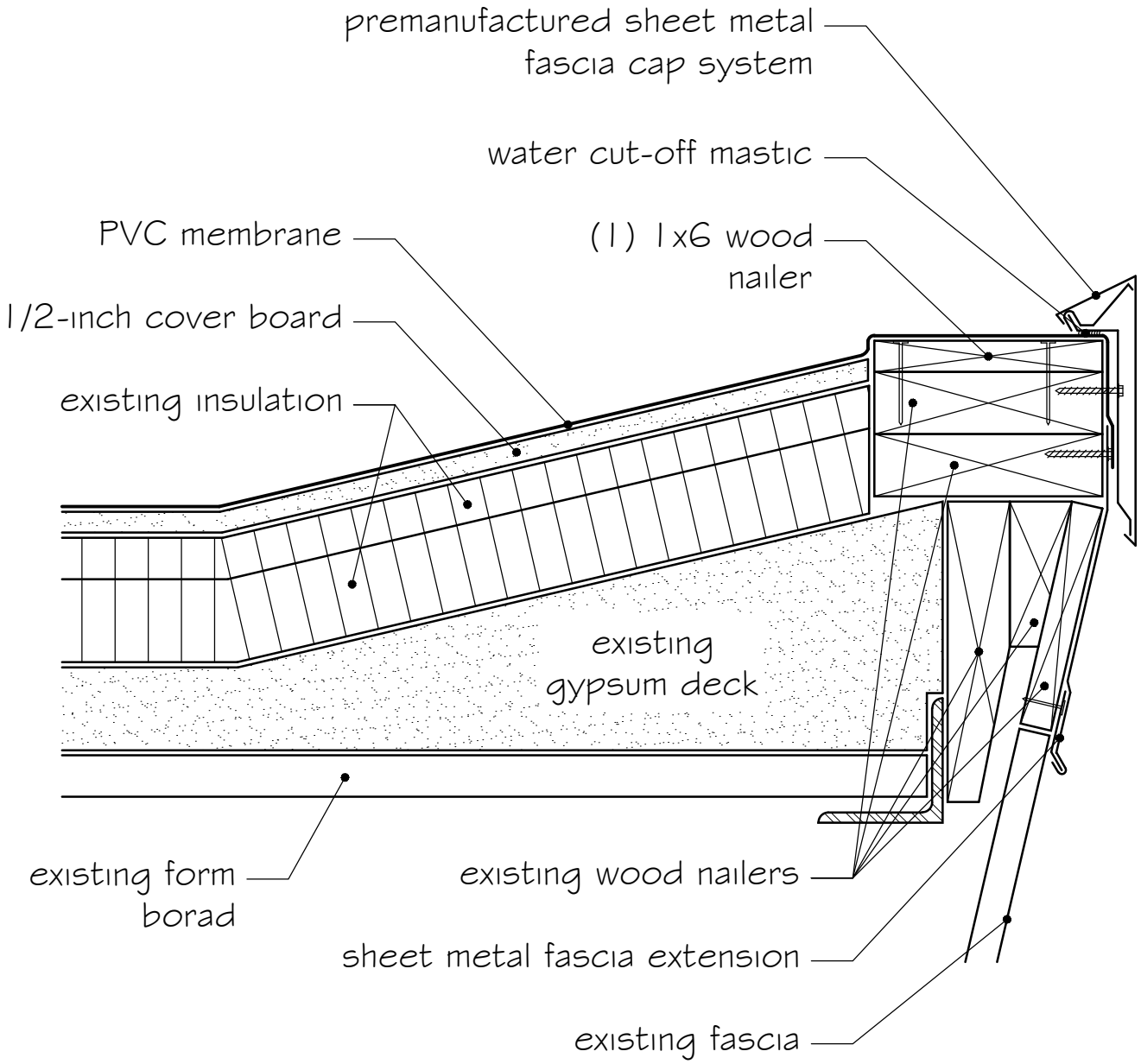
SALINE SCHOOLS
SALINE MIDDLE SCHOOL
7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	3
Date: NOV, 2023	Checked By: JJW	



PERIMETER EDGE

not to scale

NOTE: components shown are new unless noted as existing

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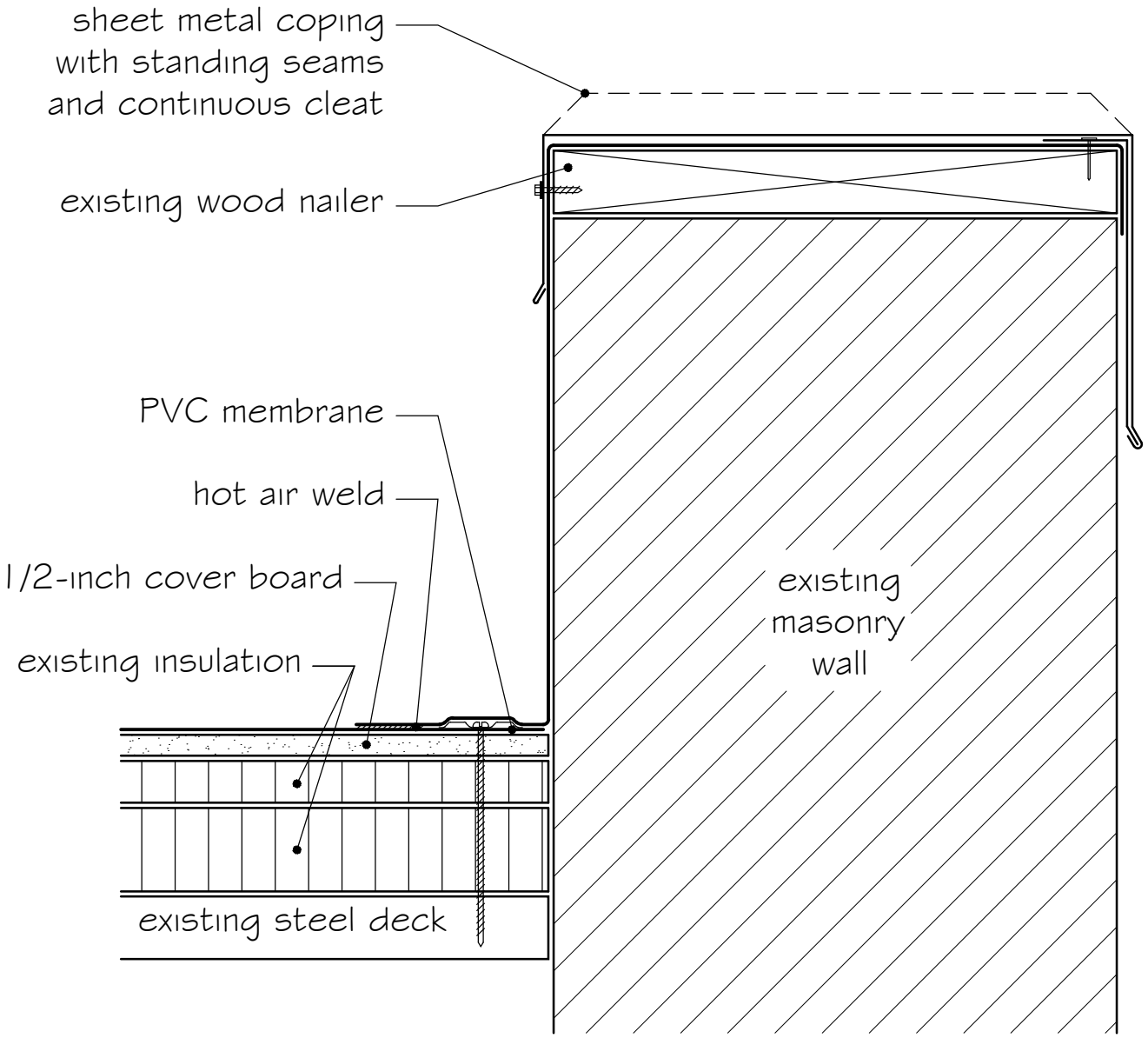
SALINE SCHOOLS
SALINE MIDDLE SCHOOL
7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	4
Date: NOV, 2023	Checked By: JJW	



COPING

not to scale

NOTE: components shown are new unless noted as existing

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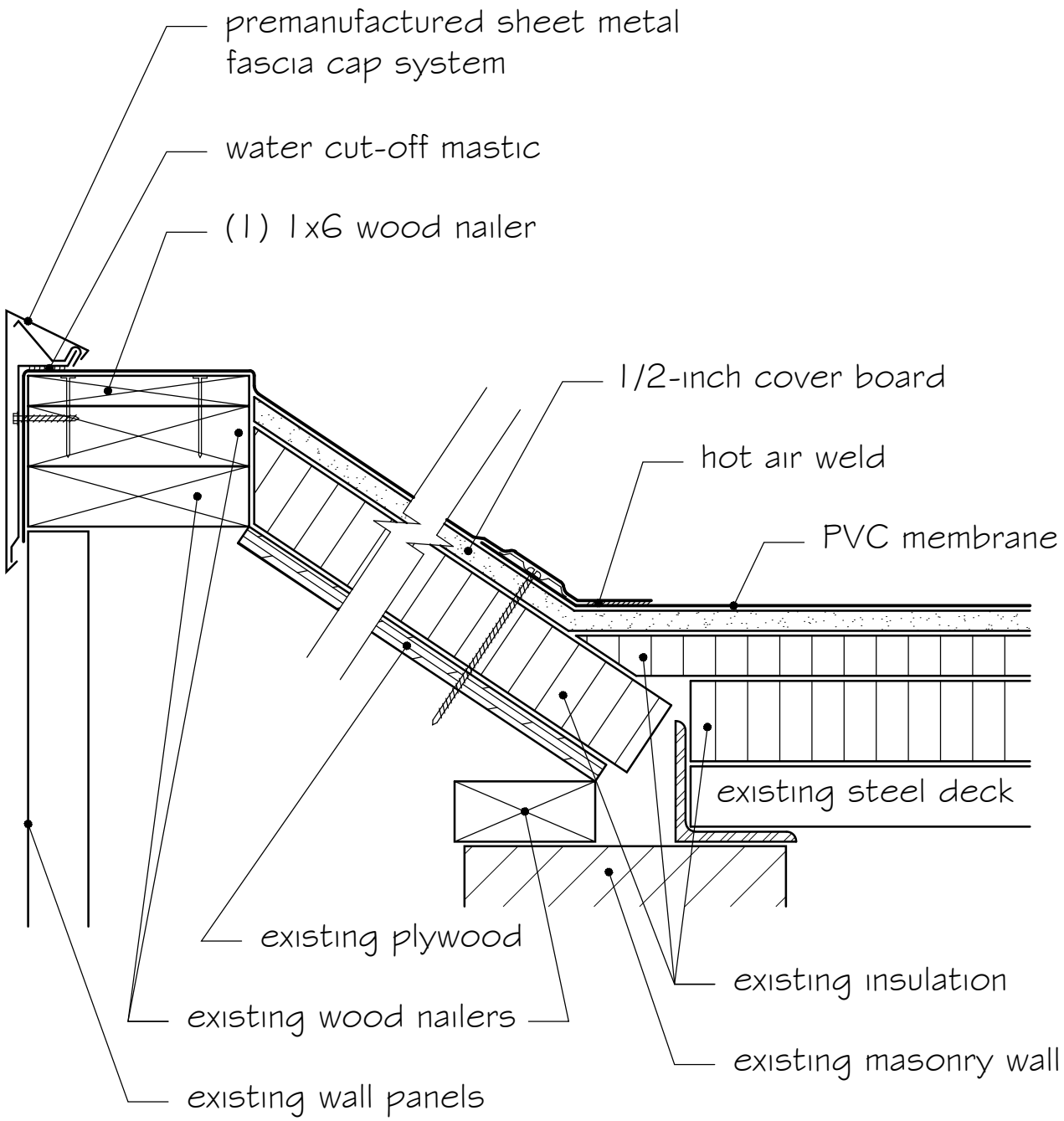
7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	5
Date: NOV, 2023	Checked By: JJW	



AREA 15 - PERIMETER EDGE

not to scale

NOTE: components shown are new unless noted as existing

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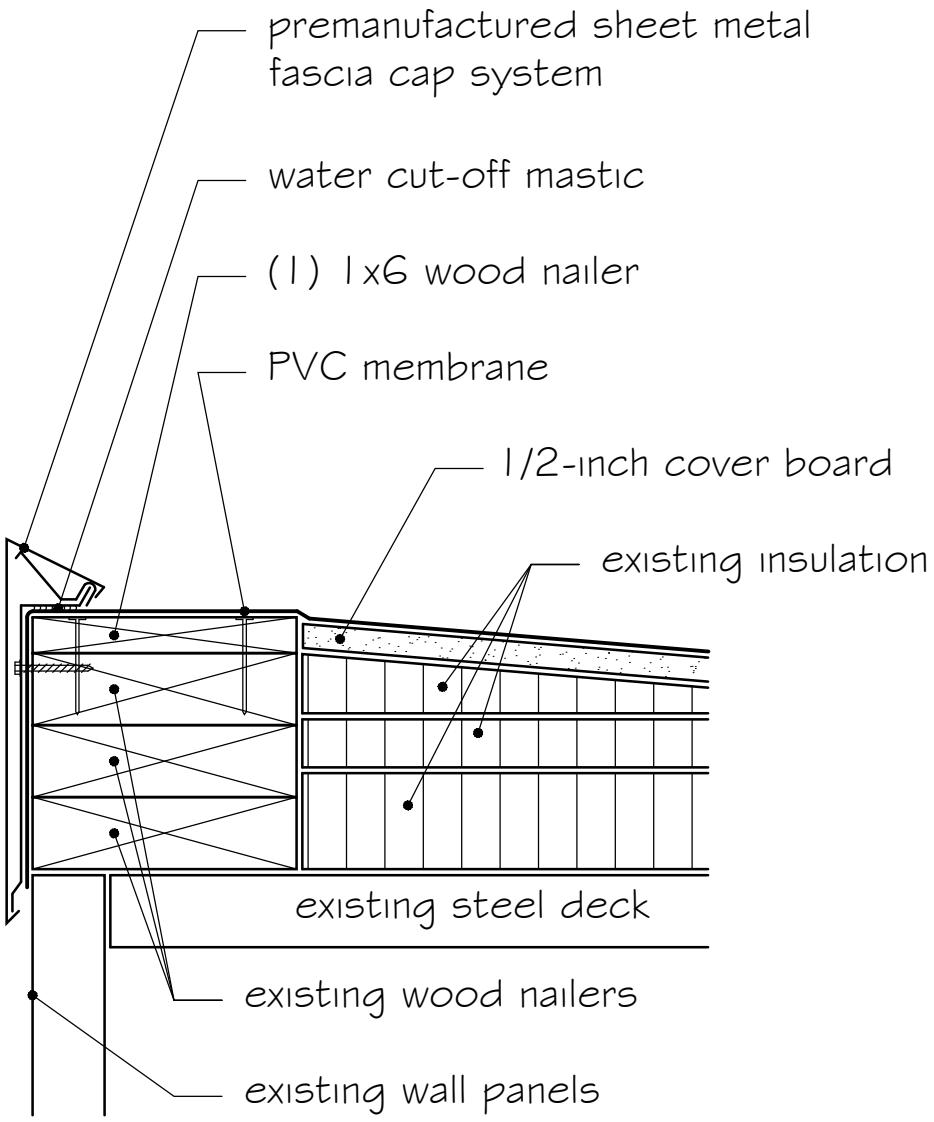
7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	6
Date: NOV, 2023	Checked By: JJW	



AREA 18 - PERIMETER EDGE

not to scale

NOTE: components shown are new unless noted as existing

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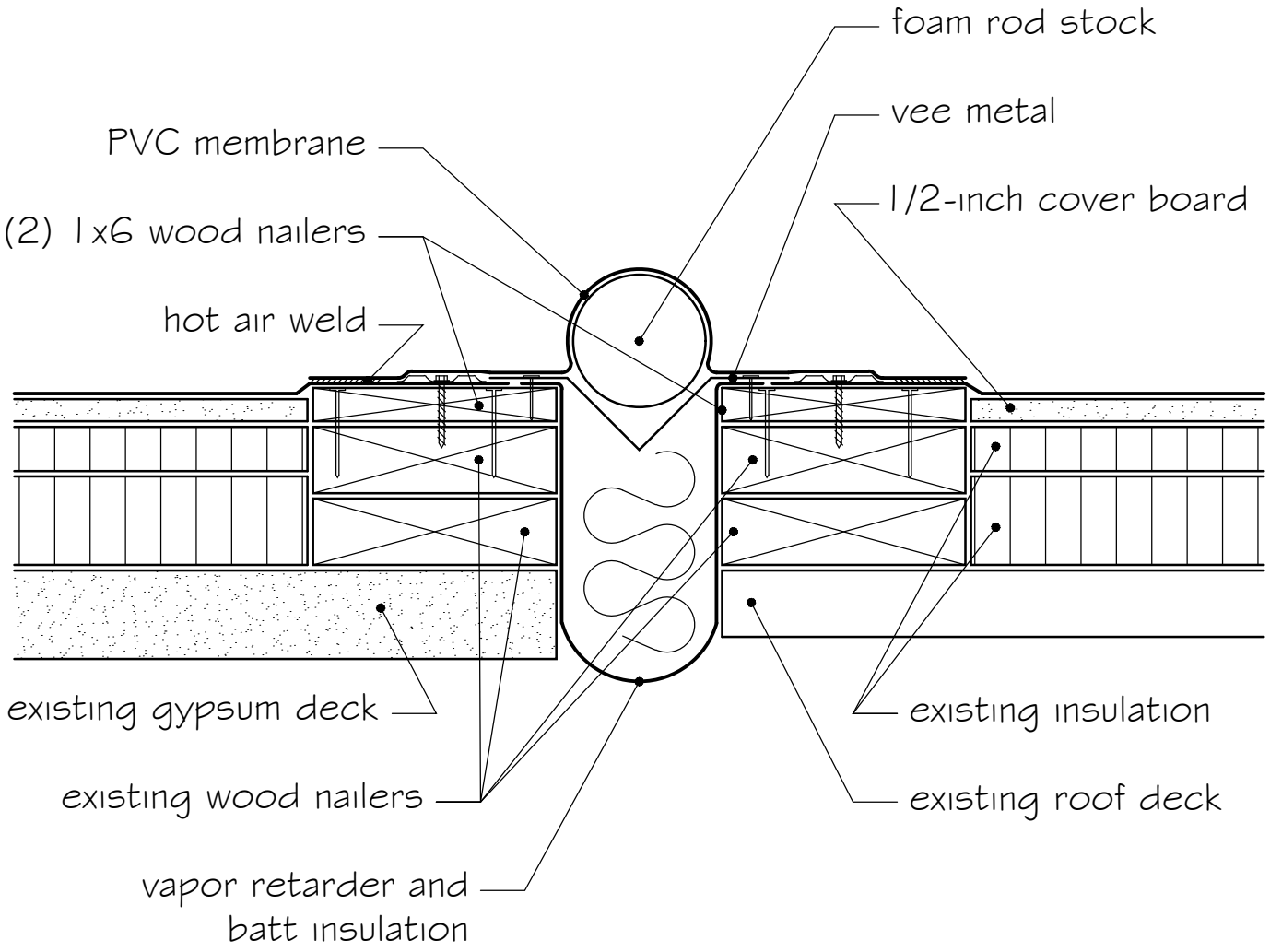
7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	7
Date: NOV, 2023	Checked By: JJW	



EXPANSION JOINT

not to scale

NOTE: components shown are new unless noted as existing

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7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
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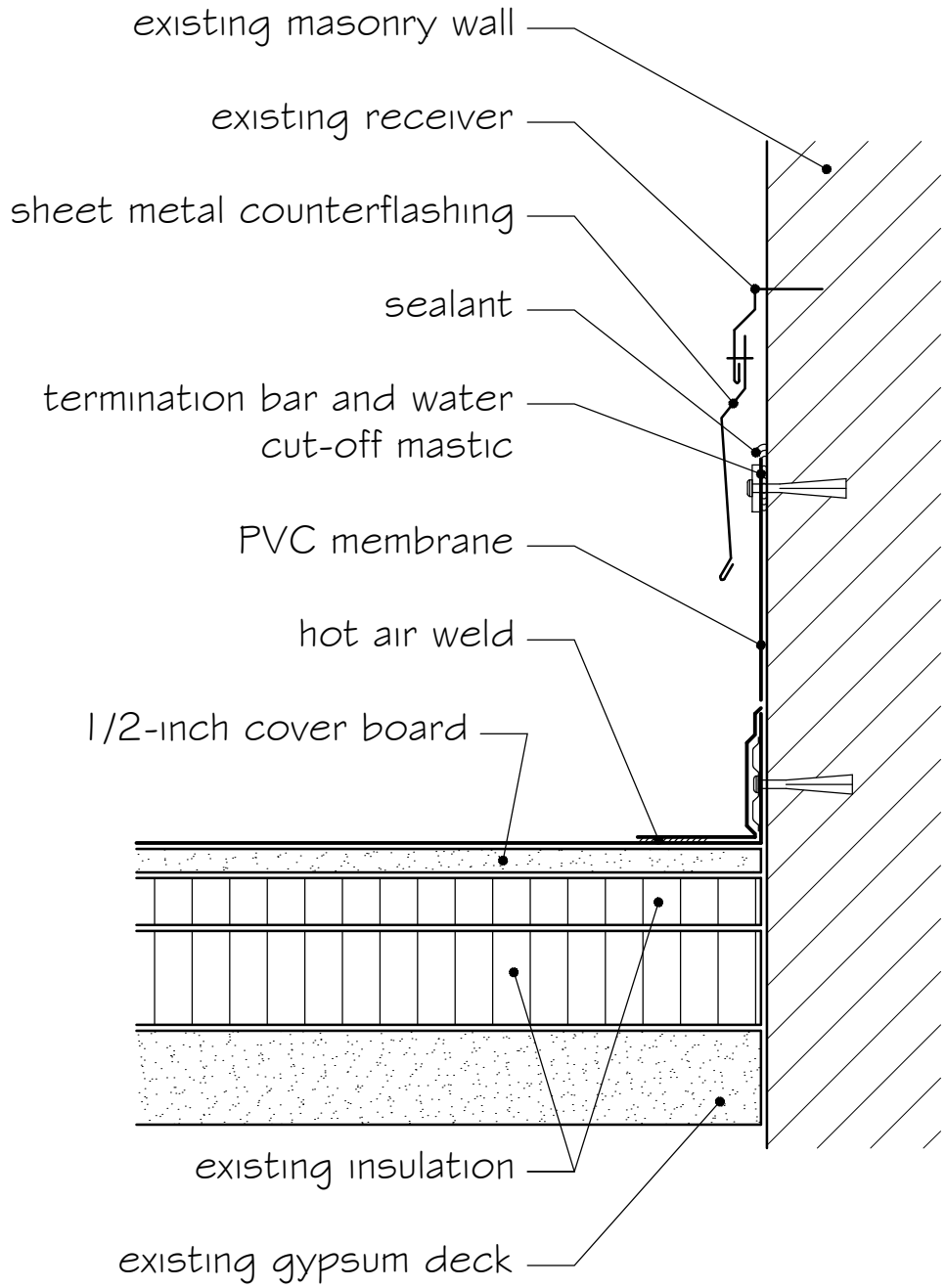

WALL FLASHING

not to scale

NOTE: components shown are new unless noted as existing

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SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	9
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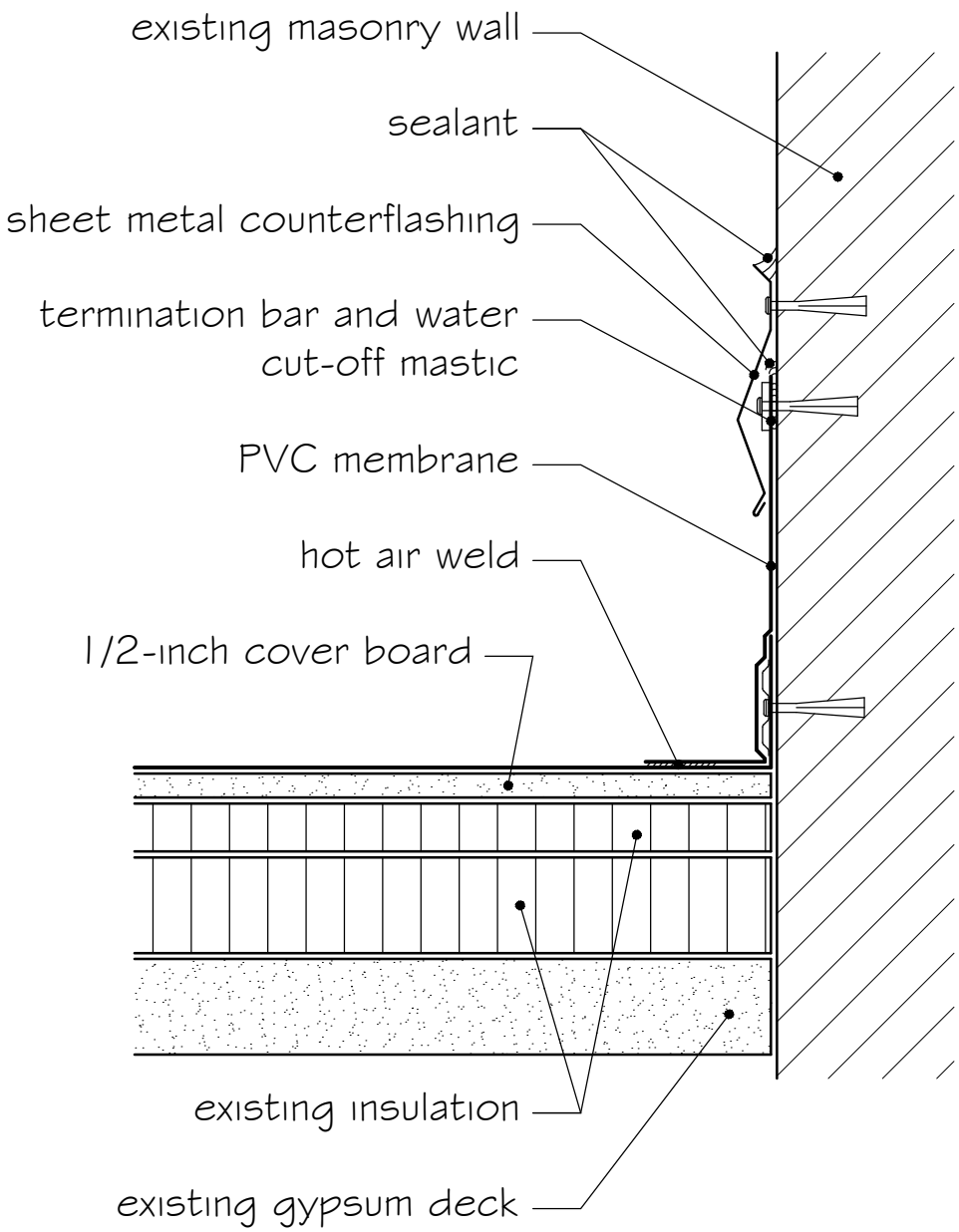

SURFACE MOUNTED COUNTERFLASHING

not to scale

NOTE: components shown are new unless noted as existing

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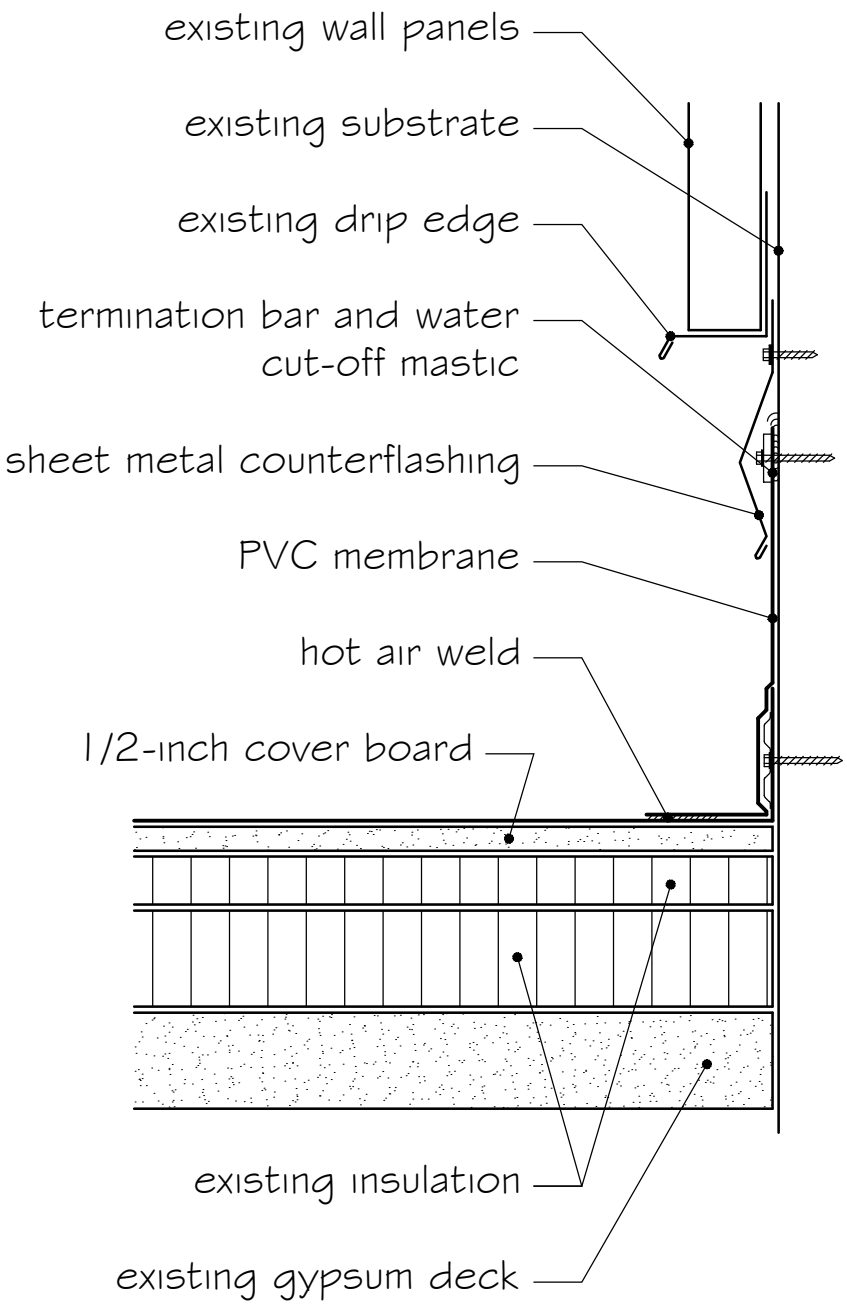
7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	10
Date: NOV, 2023	Checked By: JJW	



SLIP COUNTERFLASHING

not to scale

NOTE: components shown are new unless noted as existing

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(734) 591-4444

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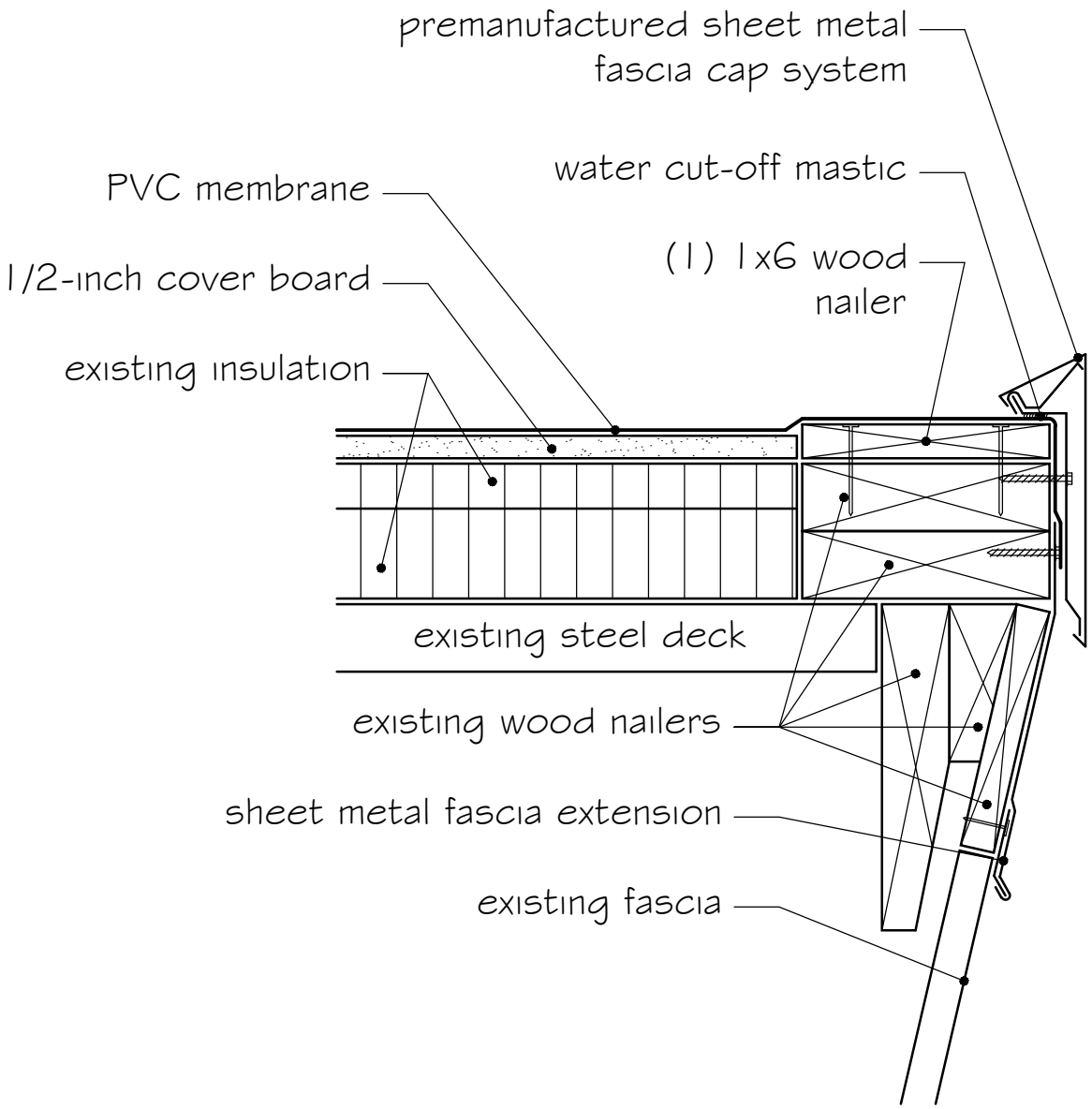
SALINE MIDDLE SCHOOL
7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	11
Date: NOV, 2023	Checked By: JJW	



PERIMETER EDGE

not to scale

NOTE: components shown are new unless noted as existing

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SALINE MIDDLE SCHOOL
7190 N. MAPLE ROAD
SALINE, MICHIGAN

Project No:	Drawn By:	Detail No:
23-071	APW	12
Date: NOV, 2023	Checked By: JJW	

METAL COPING (GENERAL)

The horizontal top surface of a wall is the most vulnerable point for water to penetrate. This is especially true of masonry walls. The most practical and attractive way to waterproof this vulnerable spot is to cap the wall with formed metal coping.

FORMED METAL COPINGS — DESIGN DATA

Figure 3–1 shows a typical coping installed on a masonry wall. Continuous blocking that is sloped toward the interior roof side must be securely anchored to the top of the wall. An appropriate underlayment must go over the blocking past the wall-to-blocking joint and then the cleats and coping are fastened to the blocking.

Continuous cleats are used on the side away from the roof—the exterior face side. On the interior roof side, the copings can be fastened through oversized holes located 24 in. (610 mm) OC with screws and watertight washers. Copings can be installed with continuous cleats on both sides of the coping. However, a coping that can be snapped on may also have enough flexibility to either snap off or admit water in some circumstances.

The coping is generally formed in 10 ft (3 m) sections and joined to allow for longitudinal expansion. Corners on copings should be mitered, lap-seamed, and sealed. On wider copings, stiffening type joints should be specified.

Sample coping shapes are shown in Figure 3-4. These combinations of corners, joints, and edges are representative.

See Figure 3-5 to 3-9 for installations. Recommended gages for formed copings are shown in Table 3–1 and are based on copings that have continuous backing. Thicker metal would be necessary for intermittent support and joint selection would be more limited.

The final selection of a coping design involves study of the service, exposure, thermal expansion, material durability, forming capability, wind uplift, and maintenance needs.

FIGURE 3–1

All single lap joints should be 3 in. (76 mm) minimum width. All back-up plates should be 6 in. (152 mm) width. All cover plates should be 6 in. (152 mm) minimum width.

Caulking is NOT indicated along either of the lower edges, intentionally. The only place sealing should be applied to a coping system is at the overlap of certain types of expansion joints—primarily flat, overlapping type joints—and at mitered corners that use folded seam construction. Since the coping and wall will expand at different rates, if sealant were continuously applied along the lower coping edges that sealant would be unlikely to remain adhered to both the wall and coping on a long-term basis.

If it were possible to completely and successfully seal along both the inside and outside lower edges of a coping, moisture could not escape. After a rain, sun-driven vapor pressure would force moisture up the wall and condensate would form under the coping and underlayment, drain down the "legs" of the coping and accumulate anywhere the caulking created an effective dam.

The most likely side of coping to be subject to wind-driven rain penetration is the outside edge but the continuous cleat on the outside edge is fastened against the wall and forms an effective block to wind-driven rain from that side.

If a designer requires that a sealant or sealing material be applied along a coping, between the wall and continuous cleat is the only appropriate location. Sealing the lower edge of copings or the cleats is not a recommended design practice.

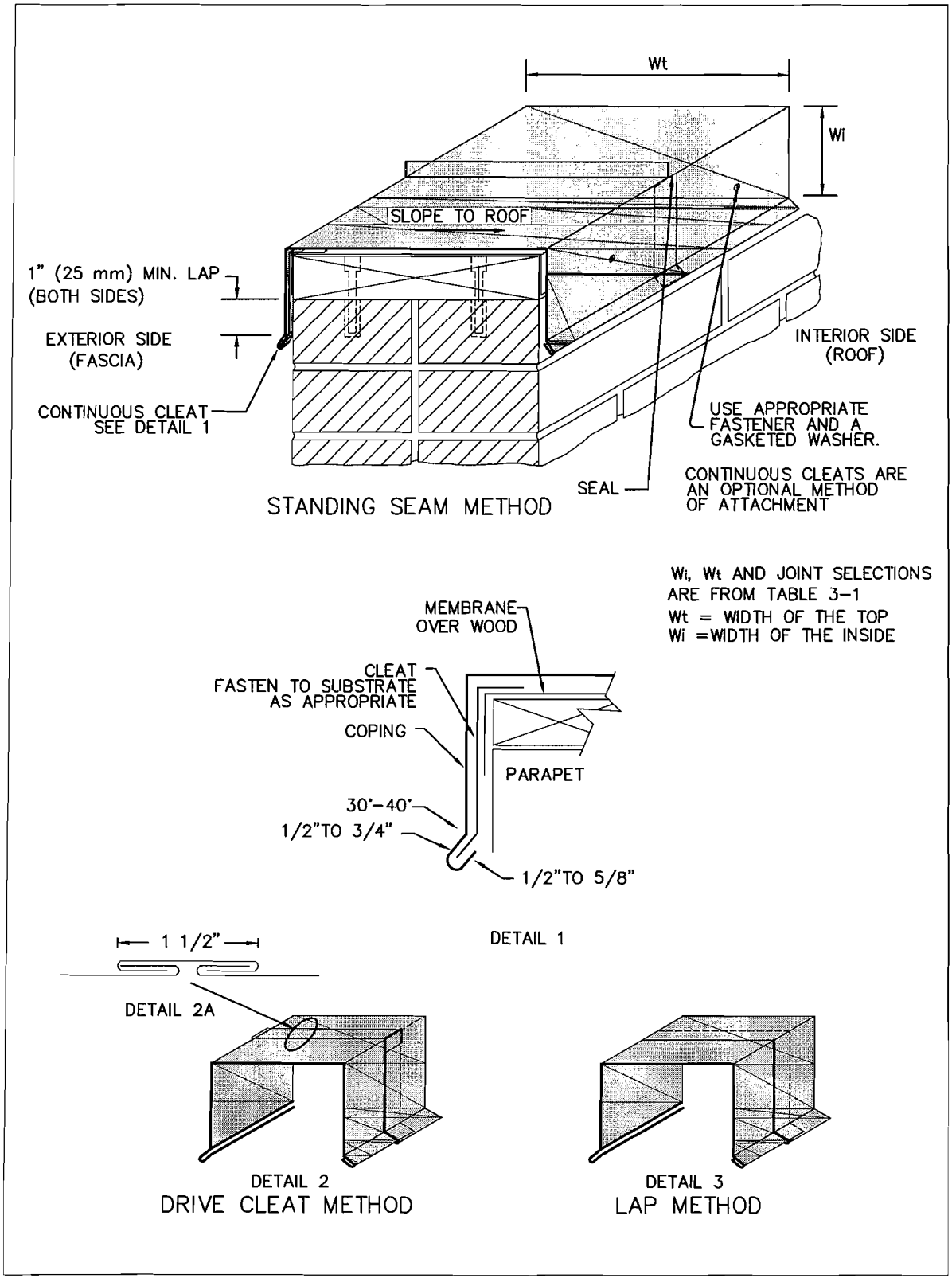
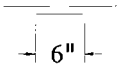
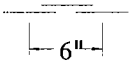
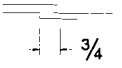


FIGURE 3-1 FORMED METAL COPINGS — DESIGN DATA

Metal Thickness (Nom.)				Joint (J) for Top Width (W_T)				Joint (J) for Interior / Exterior Fascia Dimension	
S/S gage (mm)	Al in. (mm)	Cu oz. (mm)	Steel* gage (mm)	6" Max. (150 mm)	Over 6" to 12" (300 mm)	Over 12" to 18" (450 mm)	Over 18" (460 mm)	9" Max. (230 mm)	Over 9" to 12" (300 mm)
28 (.38)	.025 (.64)	12 (.41)	26 (.55)	ALL	ALL	NONE	NONE	ALL	8–12
26 (.46)	.032 (.81)	16 (.55)	24 (.70)	ALL	ALL	5–12	8–11	ALL	8–12
24 (.58)	.040 (1.0)	20 (.69)	22 (.85)	ALL	ALL	5–12	5–9,12	ALL	8–12
22 (.74)	.063 (1.6)	24 (.82)	20 (1.0)	1–10,12	1–10,12	1–10,12	5–9,12	1–7,9,11,11A,12	1–7,9–12
20 (.89)	.080 (2.0)	32 (.92)	18 (1.3)	1–7,12	1–7,12	1–7,12	5–7,12	1–7,11A,12	1–7, 10–12
18 (1.2)	.100 (2.5)	48 (1.6)	16 (1.6)	1–7,12	1–7,12	1–7,12	5–7,12	1–7,11A,12	1–7, 10–12
16 (1.5)	.125 (3.2)		14 (2.0)	2,4,5,12	2,4,5,12	2,4,5,12	5–7,12	2, 4, 5, 11A, 12	2, 4, 5, 12
.075 (1.9)			12 (2.8)	2,4,12	2,4,12	2,4,12	5–7,12	2, 4, 5, 11A, 12	2, 3, 5, 12
.105 (2.7)			10 (3.5)	2,4,12	2,4,12	2,4,12	5–7,12	2, 4, 5, 11A, 12	2, 4, 5, 12

*Galvanized or coated 1" = 25 mm

J1	J2	J3	J4	J5	J6
					
3" LAP	BUTT + BACK-UP PLATE	4" JOGGLE (OFF-SET FLUSH)	BUTT + COV-ER PLATE	6" COVER + 6" BACKUP PLATES	T & G

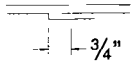
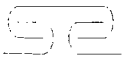
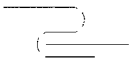
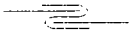
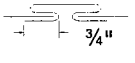
J7	J8	J9	J10	J11	J11A	J12
						
T & G FLUSH	STDG SEAM	1" DRIVE	¾" HOOK SEAM	¾" INSIDE SLIP (POCKET)	¾" S SLIP	DBL S

Table 3–1 Coping Design

NOTE:

Some cover plates slips and drives maybe fabricated with thickness lighter than the base coping material used. (J_2, J_4, J_5, J_6, J_7, J_9, J_{11A}, J_{12})

COUNTER FLASHING SYSTEMS — INSTALLATION

FIGURE 4–5

Figure 4–5A shows counter flashing installed using a metal reglet which is furnished by the sheet metal contractor for installation by others. The reglet is attached to the forms before the concrete is poured. Reglet corners should be mitered.

The counter flashing is held in place by wedges and the reglet filled with a sealant.

The counter flashing is notched and lapped at inside corners and joints. Outside corners are notched and seamed.

The Alternate Detail shows another method of installing counter flashing. The counter flashing is snapped in place and the reglet filled with a compatible sealant.

Reglets installed in concrete forms usually need to be fastened 12 in. (305 mm) OC to avoid being dislodged by vibration of concrete mix. Figure 4–5B shows a complete counter flashing system for use with poured concrete walls. The flashing receiver is furnished by the sheet metal contractor for installation by others. This receiver is attached to the forms before the concrete is poured. The down leg of the receiver is butted at corners. After the roofing and composition flashing are in place, the counter flashing is riveted to the receiver. The counter flashing is lapped at all joints and is lapped and sealed at corners.

Figure 4–5C shows a counter flashing method that can be used for exterior wall coverings of several types, both metallic and non-metallic.

The recommended minimum gage for counter flashing shown in this figure is 16 oz. (0.55 mm) copper, 26 ga (0.477 mm) stainless steel, or 26 ga (0.5512 mm) galvanized steel.

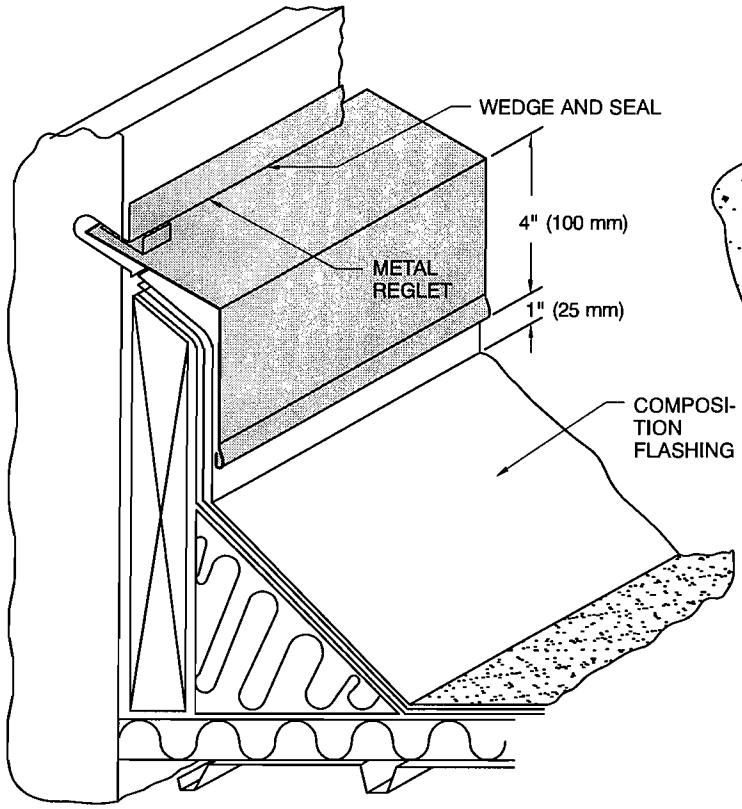
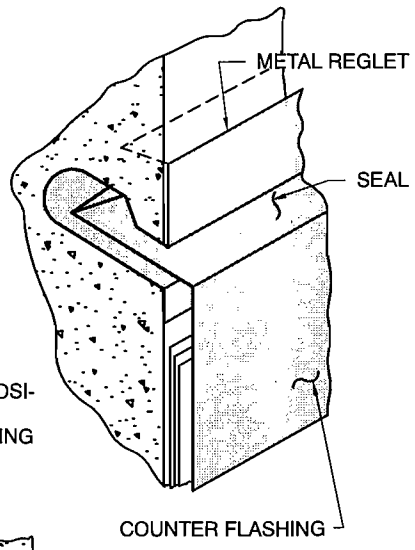


FIG 4–5A



ALTERNATE REGLET DETAIL

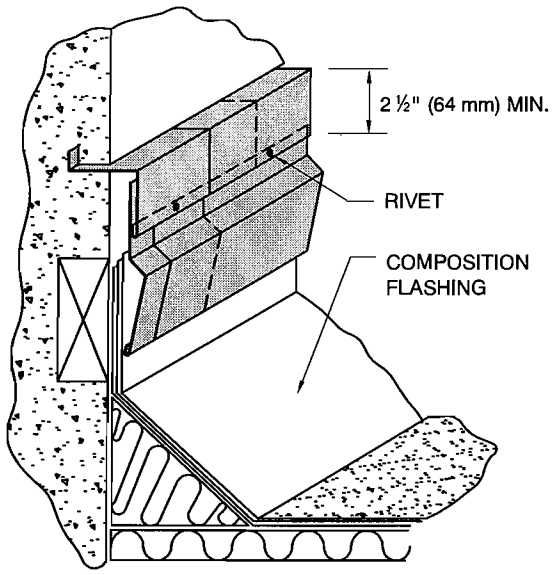


FIG 4–5B

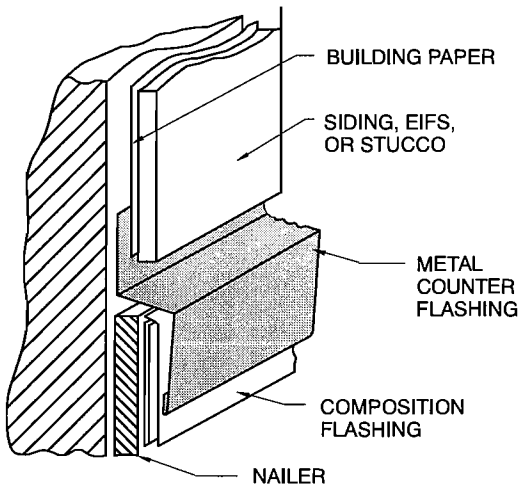


FIG 4–5C

FIGURE 4–5 COUNTER FLASHING SYSTEMS — INSTALLATION

ROOF PENETRATION FLASHING — PIPES

FIGURE 8–9

Figure 8–9A illustrates a method for flashing a roof opening without a curb. This method is recommended only if the pipes are turned horizontally within 24 in. (610 mm) of the roof and the opening is not greater than 18 × 18 in. (460 × 460 mm).

The flashing is made in pieces with base portion being flanged 4 in. (100 mm) onto the roof. The flange is fastened through the roofing felts and is then stripped in by the roofer. The top section is a formed metal hood over the metal pipe. The pipes should be sloped away from the penetration.

The recommended minimum gage for flashing in Figure 8–9A is 16 oz. (0.55 mm) copper, 26 ga (0.477 mm) stainless steel, or 24 ga (0.607 mm) galvanized steel.

Figure 8–9B illustrates two methods of flashing a vent pipe. The flange extends 4 in. (100 mm) on the roof and is stripped in by the roofer. Turn the top of the flashing down inside the vent pipe. The flashing may be of a one-piece or a two-piece style. When a vent pipe extends above the roof so far that it is impractical to completely cover it with flashing (Figure 8–9B), it is recommended that it be flashed as shown in Figure 8–9C, minimum 2 in. (50 mm). The minimum height of the base flashing in Figures 8–9B and 8–9C is 8 in. (205 mm) above the roof's surface.

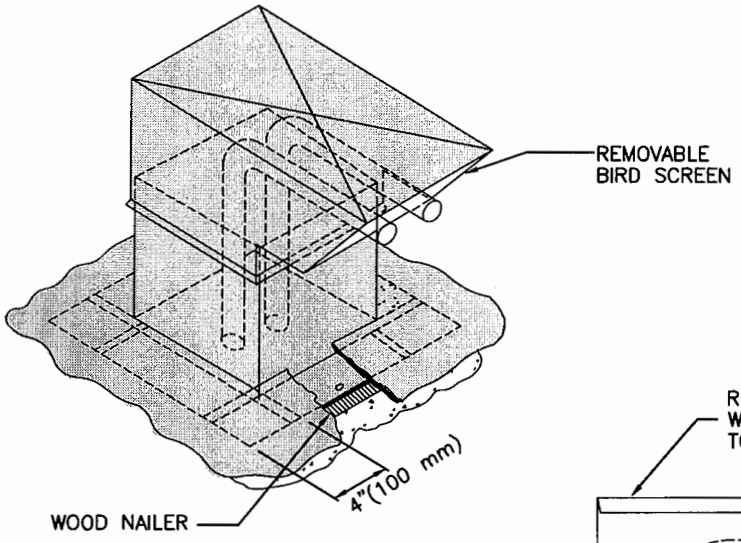
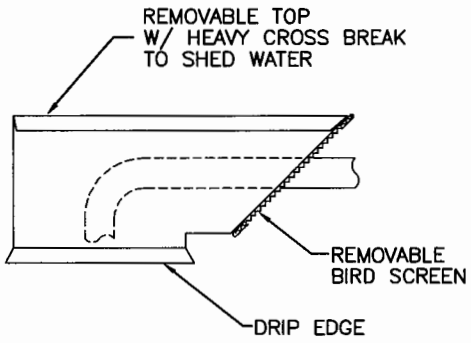


FIG 8-9A



TOP SECTION DETAIL

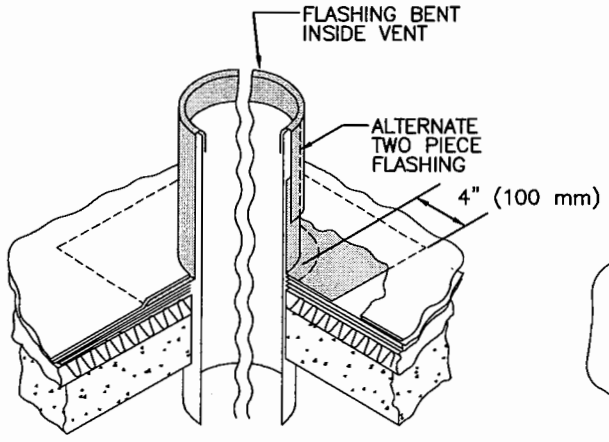


FIG 8-9B

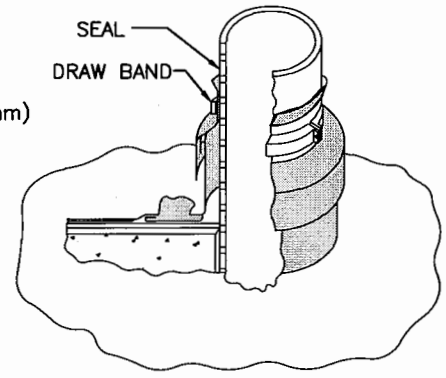


FIG 8-9C

FIGURE 8-9 ROOF PENETRATION FLASHING — PIPES

EQUIPMENT SUPPORT FLASHING

FIGURE 8-11

Figure 8–11A shows a method for flashing pipe stanchions. Attach a watertight counter flashing (umbrella) over a stripped-in metal base (roof jack) flashing on a concrete deck. The roof jack top should be 8 in. (203 mm) above the roof. The umbrella should lap the jack 4 in. (100 mm) and have ¼ in. (6.4 mm) minimum clearance.

Figure 8–11B illustrates a method for flashing equipment supports. Install composition base flashing over a cant and up 4 in. (100 mm) on the side of the support. Fabricate metal flashing to cap the support and extend 4 in. (100 mm) over the base flashing. Seam and solder all corners. This flashing may be used to cover columns that have been stubbed through the roof.

The bottom elevation of support structures and equipment supported should be selected by the designer with regard to access to the roof surface for maintenance and repair. Table 8–1 is a guide.

The designer should consider ease of access to the roof's surface for maintenance and repair when selecting the height of the equipment support structures. Consult Table 8–1.

Figure 8–11C illustrates the use of a pitch pan to flash a small penetration through the roofing where it is impossible to use other types of flashings.

Extend the flange onto the roof 4 in. (100 mm) and fasten it over the roofing felts. The flange is stripped in by the roofer. The sides should extend up from the roof a minimum of 4 in. (100 mm). All joints should be seamed and sealed.

A pitch pan should be 2 in. (50 mm) greater in length and width than the support it is flashing. It is filled by the roofer. A bonnet flashing should be used to cover a pitch pan. It is easier to fit this to a pipe stanchion than to other shapes of support.

Precaution: Pitch pans are not inherently maintenance free. Building managers should set up a program of routine inspection and maintenance.

Manufactured rubber boots that effectively seal against supports and shield the roof jacks are acceptable as umbrellas. Such products must resist ozone and ultraviolet rays and have a suitable service temperature.

The gage of metal used will depend on the size of the flashing. The recommended minimum gage is 16 oz. (0.55 mm) copper, 26 ga (0.477 mm) stainless steel, or 24 ga (0.607 mm) galvanized steel.

Width of Equipment		Height of Legs	
inches	**mm**	**inches**	**mm**
Up to 24	Up to 610	14	360
25 to 36	635 to 910	18	460
37 to 48	930 to 1220	24	610
49 to 60	1240 to 1520	30	760
60 and wider	1520 and wider	48	1220

Table 8–1 Rooftop Equipment Elevation

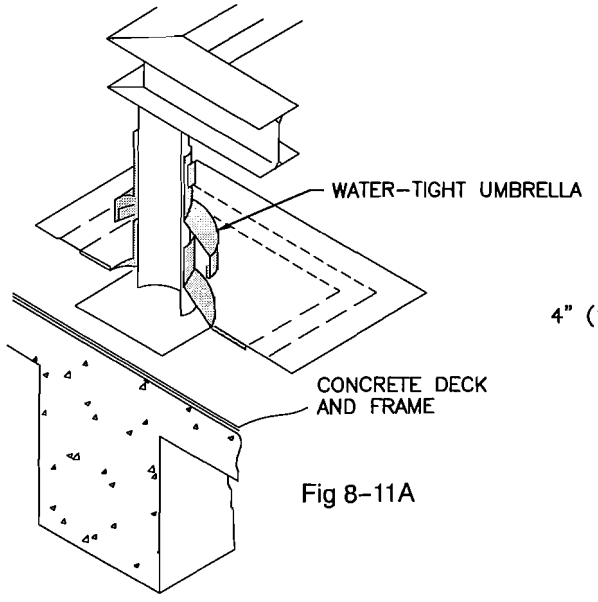
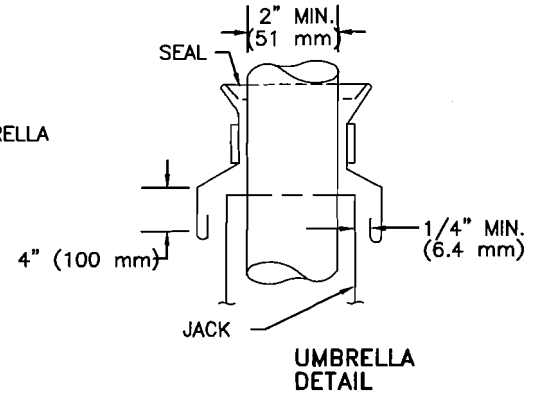


Fig 8–11A



UMBRELLA DETAIL

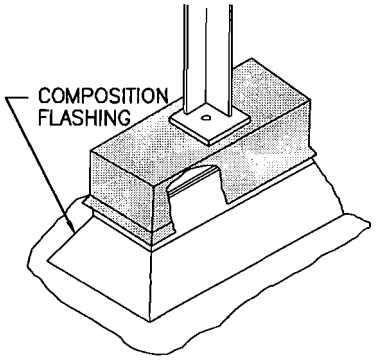


Fig 8–11B

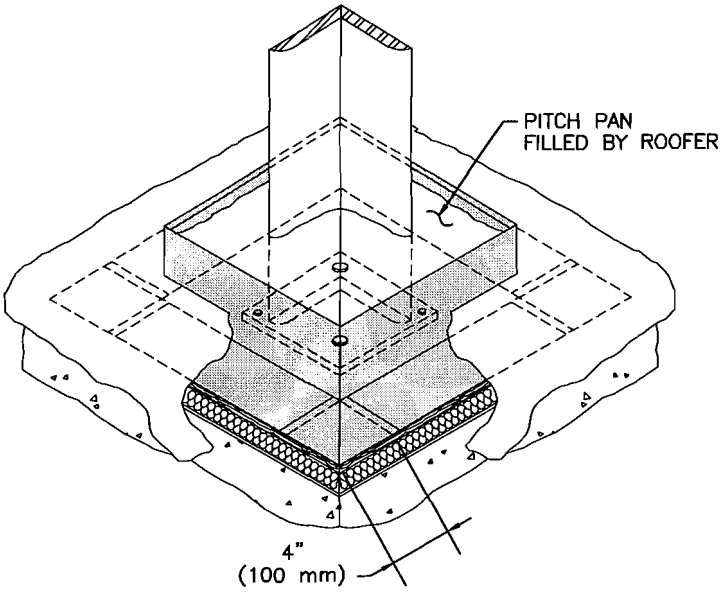


Fig 8–11C

FIGURE 8–11 EQUIPMENT SUPPORT FLASHING

SECTION 01 2100
ALLOWANCES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Insultation replacement allowance.

B. Contingency allowance.

1.02 INSULATION REPLACEMENT ALLOWANCE

A. The contractor will include in his base bid, the replacement of 3,000 square feet of 3-inch thick wet insulation.

B. The unused portion of this allowance will be returned back to the owner in the form of a credit at the rate determined by the contractor's unit price for 3-inch thick isocyanurate insulation.

1.03 CONTINGENCY ALLOWANCE

A. The contractor will include a contingency allowance of $20,000 to accommodate unforseen adjustments to the work such as broken drain bowls, deteriorated nailers, damaged/warped (but dry) insulation, etc. The unit prices for these materials will be applied at the appropriate unit quantities. The unused portion of this allowance will be returned back to the owner in the form of a credit.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2200
UNIT PRICES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. List of unit prices, for use in preparing Bids.

B. Measurement and payment criteria applicable to Work performed under a unit price payment method.

C. Defect assessment and non-payment for rejected work.

1.02 COSTS INCLUDED

A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.03 UNIT QUANTITIES SPECIFIED

A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements of actual Work will determine the payment amount.

1.04 MEASUREMENT OF QUANTITIES

A. Take all measurements and compute quantities. Measurements and quantities will be verified by Roof Consultant.

B. Measurement by Area: Measured by square dimension using mean length and width or radius.

C. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.

1.05 PAYMENT

A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Roof Consultant, multiplied by the unit price.

B. Payment will not be made for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products remaining on hand after completion of the Work.
   4. Loading, hauling, and disposing of rejected Products.

1.06 DEFECT ASSESSMENT

A. Replace Work, or portions of the Work, not complying with specified requirements.

B. If, in the opinion of Roof Consultant, it is not practical to remove and replace the Work, Roof Consultant will direct one of the following remedies:
   1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of Roof Consultant.
   2. The defective Work will be partially repaired to the instructions of the Roof Consultant, and the unit price will be adjusted to a new unit price at the discretion of Roof Consultant.

C. The authority of Roof Consultant to assess the defect and identify payment adjustment is final.

1.07 SCHEDULE OF UNIT PRICES

A. Unit Price No. 1 - Wood Nailers and Plywood - Replace, as necessary and designated by the Owner's Representative, deteriorated wood nailers and plywood. Quote a per lineal foot price for dimensional lumber and a per square foot price for plywood on the Bid Form for the following sizes:
   1. 1" x 6"
   2. 1" x 8"
   3. 2" x 4"
   4. 2" x 6"

5. 2" x 8"
6. 2" x 10"
7. 2" x 12"
8. 3/4-inch CDX plywood

B. Unit Price No. 2 - Replacement Roof Insulation - Replace, as necessary and designated by the Owner's Representative, wet, warped, or damaged roof insulation. Roof insulation board replacement shall be bid as a Unit Price Extra. The price quoted shall be per square foot.
1. 1-inch thick flat stock isocyanurate insulation
2. 1.5-inch thick flat stock isocyanurate insulation
3. 2-inch thick flat stock isocyanurate insulation
4. 3-inch thick flat stock isocyanurate insulation

C. Unit Price No. 3 - Roof Drain Replacement - Replace deteriorated drain bowls, if necessary and as directed by the Owner’s Representative, to provide watertight drain assemblies. Install in accordance with state and local plumbing codes. The price quoted shall be per roof drain bowl removed and replaced, including labor.

D. Unit Price No. 4 - Drain Clamping Ring Replacement - Replace broken roof drain clamping rings as necessary..

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 ROADWAYS, DRIVES, PARKING AREAS AND SIDEWALKS

A. The Contractor is responsible for the condition of all existing roadways, sidewalks, etc., used during construction operations and shall repair same as required and leave same in good condition at the completion of the job.

1.02 BARRICADES AND PROTECTION

A. The property on which work is to be done is in use. This means that employees and other general public may be adjacent to and below the construction operations.

B. The Contractor will provide and maintain in good repair all barricades, guard railings and temporary protection as required by law and/or to suit job conditions.

C. The Contractor shall do everything possible to protect the public, the workmen, the premises and adjoining property from injury or damage.

D. Properly protect all sidewalks, pavements, existing building areas, building facades, windows and skylights. Replace or repair all parts of same which become damaged or defaced during or as a result of construction operations. Repairing of damaged parts shall be done in strict accordance with all local codes and ordinances and the Owner as conditions require.

1.03 VANDALISM

A. The Contractor shall pay for all damage by vandalism to material or equipment that occurs to items finished or installed under this Contract. The Contractor shall be responsible for the work under this Contract during the construction period from the start until the final acceptance of the entire project by the Owner.

1.04 PROTECTION

A. Provide and erect all required barricades and safety precautions in accordance with local, State and Federal Codes and other legal requirements.

B. Provide secure, weatherproof protection for existing buildings, finishes, walks, drives, landscaping, lawns, etc., to remain. Repair any damage to the satisfaction of the Owner.

C. Remove all protection and guards when work is completed and restore disturbed areas.

D. Whenever lifting materials or equipment over or near existing or occupied buildings, give advance notice and arrange to have any potentially endangered spaces vacated.

1.05 TEMPORARY WEATHER PROTECTION

A. The Contractor shall provide, maintain and pay for all temporary weather protection as required to properly protect all parts of the work from damage. This shall include temporary protective coverings.

1.06 RUBBISH DISPOSAL, FIRE SAFETY

A. During non-construction hours, trash containers shall be covered and sealed to prevent wind blown debris and access into trash containers.

B. The location of the trash containers shall be subject to the approval of the Owner.

C. All rubbish and debris shall be removed from the site daily or more often if directed by the Owner's Representative. Burning of trash on-site shall not be allowed.

D. No open fire shall be permitted on the building site at any time.

1.07 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.

B. Use of existing facilities is not permitted.

C. Maintain daily in clean and sanitary condition.

1.08 REMOVAL OF TEMPORARY WORK

A. All temporary structures, barricades, protection and similar work shall be removed by the Contractor at completion of the project or when directed. Any repairs or alterations necessitated by such removal shall be made by the Contractor, and at the Contractor's expense.

1.09 WORK ACTIVITIES

A. Contractors and subcontractors shall direct their employees to conduct themselves so as not to interfere with or disrupt the building activities. The Contractor shall schedule construction operations to minimize interference with operations, and cooperate with Owner's Representative in maintaining public access to existing building facilities.

B. All construction operations, delivery and storage of material and movement of equipment shall be governed by applicable local building codes, traffic regulation and safety and fire regulation of local authorities.

C. Contractors, subcontractors, and their employees or suppliers shall not use or interfere with existing public access, drives, roads or parking lot, except as specifically indicated or by prior arrangement with the Owner's Representative.

D. Contractor’s employees parking, delivery trucks and other construction vehicle parking shall only be at areas designated by the Owner’s Representative.

1.10 TEMPORARY SERVICES

A. Temporary power, as required for the project, shall be provided by the Contractor. The generator and all electrical cords must be maintained in areas approved by the Owner’s Representatives.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 07 5400
THERMOPLASTIC MEMBRANE ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Adhered system with thermoplastic roofing membrane.

B. Insulation, cover board.

C. Prefabricated pipe flashing, penetration flashing and walkway pads.

1.02 RELATED REQUIREMENTS

A. Section 07 6200 - Sheet Metal Flashing and Trim: Coping, Fascia cap, sheet metal penetration flashing and counterflashings.

1.03 REFERENCE STANDARDS

A. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2021.

B. ASTM D4434/D4434M - Standard Specification for Poly(Vinyl Chloride) Sheet Roofing; 2021.

C. NRCA (WM) - The NRCA Waterproofing Manual; 2005.

D. UL (DIR) - Online Certifications Directory; Current Edition.

E. UL (FRD) - Fire Resistance Directory; Current Edition.

1.04 SUBMITTALS

A. Product Data: Provide data indicating membrane materials, flashing materials, insulation, and fasteners.

B. Shop Drawings: Submit drawings that indicate joint or termination detail conditions and conditions of interface with other materials.

C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

D. Manufacturer's Installation Instructions: Indicate membrane seaming precautions and perimeter conditions requiring special attention.

E. Manufacturer's qualification statement.

F. Installer's qualification statement.

G. Warranty Documentation:
   1. Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
   2. Submit installer's written verification that installation complies with warranty conditions for waterproof membrane.

1.05 PRE-CONSTRUCTION MEETING

A. Prior to scheduled commencement of roofing work, the Contractor and representatives of other entities directly concerned with performance of roofing system shall have a pre-construction meeting. Review requirements (Contract Documents), submittals, status of coordinating work, availability of materials and installation facilities and establish preliminary installation schedule. Review requirements for inspections, testing, certifications, forecasted weather conditions, governing regulations, insurance requirements, and proposed installation procedures. The Contractor shall record the items discussed including agreement or disagreement on matters of significance; furnish copy of recorded discussions to each participant. Review foreseeable methods and procedures related to roofing work, including but not necessarily limited to the following:
   1. Tour representative areas of roofing substrates, inspect and discuss conditions of substrate.
   2. Review roofing system requirements (drawings, specifications and other Contract Documents).

3. Review required submittals.
4. Review and finalize construction schedule related to roofing work and verify availability of materials, Installer's personnel, equipment and facilities needed to make progress and avoid delays.
5. Review required inspection, testing, certifying and material usage accounting procedures.
6. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original containers, dry and undamaged, with seals and labels intact, unless otherwise indicated.

B. Store materials in weather protected environment, clear of ground and moisture.

C. Ensure storage and staging of materials does not exceed static and dynamic load-bearing capacities of roof decking.

D. Protect foam insulation from direct exposure to sunlight.

1.07 FIELD CONDITIONS

A. Do not apply roofing membrane during unsuitable weather.

B. Do not apply roofing membrane when ambient temperature is below 40 degrees F (5 degrees C)

C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

E. Schedule applications so that no partially completed sections of roof are left exposed at end of workday.

1.08 WARRANTY

A. Provide the Owner with a Contractor’s written warranty covering all materials and workmanship for a 2-year period after Date of Substantial Completion.

B. Provide 25-year manufacturer's material and labor warranty to cover failure to prevent penetration of water.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Thermoplastic Polyvinyl Chloride (PVC) Membrane Roofing Materials. Approved Manufacturers and products shall be as follows:
1. Sika Corporation Roofing, Sarnafil S327-80 EnergySmart; usa.skia.com
2. Carlisle Roofing Systems, Inc., Sure-Flex PVC KEE HP 80 mil: www.carlisle-syntec.com.
3. Holcim Elevate, PVC KEE 80 mil: www.holcimelevate.com.

2.02 MEMBRANE ROOFING AND ASSOCIATED MATERIALS

A. Membrane Roofing Materials:
1. PVC: Polyvinyl chloride (PVC) complying with ASTM D4434/D4434M, Type III, sheet contains polyester reinforcing scrim.
   a. Membrane thickness: 80 mil, 0.080 inch (2.032 mm), minimum.
2. Sheet Width: Largest sheet size allowed by the manufacturer.

B. Flexible Flashing Material: Same material as membrane.

C. Membrane Adhesive: Low VOC, One-part, synthetic polymer-based membrane adhesive as recommended by the roofing manufacturer.
1. Sika Corporation Roofing, Sarnacol-2170 Adhesive
2. Carlisle Roofing Systems, Inc., Sure-Flex PVC Low-VOC Bonding Adhesive.

3. Holcim Elevate, PVC LVOC Bonding Adhesive.

D. All materials used in the roofing system shall be as furnished by a single roofing manufacturer. Adhesives, sealants, seam sealants, water cut-off mastic, pourable sealers and other required items shall be as furnished or recommended by a single roofing manufacturer.

E. All details relating to the installation of the roof system shall be approved by the roofing manufacturer and installed in such a manner that the roofing manufacturer will furnish its 20-year total system warranty for the installation.

F. Accessories: Prefabricated penetration flashings, corner flashing, slef-adhering flashing, t-joint patches, walkway pads, termination bars, insulation plates and fasteners and base tie-in plates and fasteners as required by the roofing manufacturer for use in their roof system assemblies.

2.03 INSULATION

A. Manufacturers: Match the roofing manufacturer. Subject to compliance with requirements:
   1. Sika Corporation Roofing, Sarnatherm ISO
   2. Carlisle SynTec Incorporated, InsulBase Polyiso
   3. Holcim Elevate, ISOGARD GL

B. Coverboard:
   1. Densdeck Prime 1/2-inch thick

C. Insulation Materials:
   1. Replacement Roof Insulation: Closed-cell polyisocyanurate foam core with non-HCFC blowing agent, integrally laminated to heavy non-asphaltic fiber reinforced felt facers; conform to ASTM C 1289-13e1, Type II, Class 1, Grade 2.
      a. Thermal Resistivity (R-value): 11.4 at 75 degrees F for 2.0-inch thick insulation board.
      b. Compressive Strength: 20 psi.
      c. Maximum size: 4-feet by 8-feet.
   2. Tapered Edge Strips: Wood fiber uniform density board complying to ASTM C 208.
      a. Tapered edge strip: 1-1/2-inches by 18-inches.

D. Insulation Screws and Plates For Use On Steel Deck: Fasteners for securing the roof insulation to steel roof deck shall be a #14 heavy duty screw (self-drilling) and metal plate system approved by the roofing manufacturer for the type of deck being covered. The fasteners shall provide a minimum of 300 pounds of pull-out when tested on the subject deck. Length shall be sufficient to penetrate deck a minimum of 3/4-inch to a maximum of 1-1/2-inch. Minimum insulation plate size: 3-inch by 3-inch.

E. Insulation Screws and Plates for Use on Gypsum Deck: Fasteners for securing the coverboard (through the roof insulation to gypsum roof deck) shall by Polymer fasteners by one of the following manufacturers:
   1. Sika Corporation Roofing: Fastener Polymer Gyptec and Sarnadisc GypTec
   2. Carlisle SynTec Incorporated: Gyptec Fasteners and Plates
   3. Holcim Elevate: Polymer Fastener

2.04 WOOD NAILERS AND CURBS

A. Wood nailers and blocking: PS 20, construction grade lumber.
   1. Sizes: Nominal sizes as indicated on drawings, S4S.
   2. Moisture Content: S-dry or MC19.
   3. Species: SPF.
   4. Grade: No. 2.

B. Plywood Sheathing: PS 1, Grade C-D, Exposure I. Thicknesses: 1/2-inch and 3/4-inch.

C. Fasteners in contact with wood blocking and nailers shall be galvanized nails in conformance with ASTM A153 unless otherwise specified.

2.05 MISCELLANEOUS

A. Steel deck replacement: Match existing roof deck: material, gauge, profile and finish.

B. Plates to cover small holes in the steel deck and/or isolated areas of deterioration shall be 18-gauge galvanized steel.

C. Filler for sheet metal penetration pockets shall be non-shrink grout (bottom) and pourable elastomeric sealant (top).

D. Foam backer rod: Closed-cell polyethylene foam, 1-1/2 times the diameter of intended opening.

E. Replacement roof drains and accessories for the low-slope roof areas shall be cast iron as manufactured by J. R. Smith Manufacturing Co., 1000 Series, Size: to match the existing diameter and a bottom outlet to match the existing drain pipe. Acceptable connection: Speedi-Set Gasket. Utilize the drain manufacturer's specified cast iron underdeck clamp, clamping ring and drain strainer.

F. Replacement roof drain strainers and clamping rings shall be cast iron, sized to fit the existing roof drain bowl.

G. Walkway Pads: PVC roll, 30-inch to 36-inch with non-slip tread surface as manufactured by the selected roofing manufacturer.

H. Equipment Pads: Three-inch thick reinforced polypropylene pad for installation below AC units. Approved manufacturers or approved equal:
   1. Carson Industries, DuraGrid Equipment Pads.
   2. Diversitech, E Lite Equipment Pad.

I. Pipe Supports:
   1. Up to 1.5-inch diameter: Miro Industries, Inc., Product Name: Pillow Block Pipestand Model No. 1.5 or an approved equal.
   2. Up to 3-inch diameter: Miro Industries, Inc., Roller-bearing pipe support, Model No. 3-RAH or an approved equal.
   3. For 4-inch diameter gas supply line: Base Material: High density polypropylene with UV-Inhibitors and Antioxidants. Rod Type: Hot dip galvanized. Roller Type: 5" cast iron roller with malleable sockets. Approved manufacture or approved equal:
      a. Miro Industries, Inc., Roller-bearing pipe support, Model No. 3-RAH or an approved equal.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces and site conditions are ready to receive work.

B. Verify deck is supported and secure.

C. Verify walls and deck are clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.

D. Verify deck surfaces are dry and free of snow or ice.

E. Maintain a daily watertight condition in the existing roof areas. At no time shall the existing roof remain vulnerable to moisture intrusion. Overnight tie-ins are required regardless of the weather forecast.

3.02 DEMOLITION AND SURFACE PREPARATION

A. Remove and discard the following components or prepare surfaces as described:
   1. On all existing EPDM Roof Areas (all roof Areas except 8, 9, 10, and 11) remove and discard existing EPDM roof membrane, base flashing, walkpads and other miscellaneous debris down to the surface of the roof insulation.
   2. For all existing EPDM roofs, save the existing polyicocyanurate insulation for re-use.
   3. Remove and discard built-up roofing, insulation, flashing and ancillary details down to the steel roof deck on Roof Areas 8, 9, 10 and 11. These areas are to be fully replaced down to the deck, and two new layers of 2.6-inch thick insulation will be installed.

4. Remove and discard deteriorated, wet or damaged roof insulation. Prepare to install matching new roof insulation.
    a. NOTE: Replacement insulation shall be bid as a Unit Price Extra with an allowance amount carried in the base bid.
5. Remove and discard the existing sheet metal coping, termination bars, counterflashing, and other sheet metal flashing accessories. Remove and discard the repair materials from the walls and perimeter edges.
6. Remove and discard the existing receiver mounted counterflashing. The existing receiver is to remain in place.
7. Temporarily displace mechanical ventilator unit covers to facilitate the removal and replacement of the base flashing. Remove and discard existing counterflashing from the roof curbs if present.
8. Add nailers as needed in order to raise curbs where a minimum of 8-inches of base flashing height is not present.
9. Temporarily displace the AC units supported by wood sleepers. Remove and discard the wood sleepers to be replaced by Equipment Pads.
10. Remove and discard existing plumbing vent pipe flashings and supply line penetration flashings. Clean off all repair materials and caulk from the pipes.
11. Remove and discard the existing sheet metal flange, sleeve and umbrella from the stacks, elevated frame support legs and supply line penetration locations.
12. Remove and discard the existing penetration pocket flashing and filler material. Clean off the filler material from the penetrations.
13. Remove and discard multiple pipe penetration flashings.
14. Remove and discard the obsolete rooftop equipment as shown on the Roof Plan. Prepare to infill the resultant openings in the roof deck with matching roof deck.
15. Temporarily displace satellite dish and frame.
16. Temporarily displace conduits installed on the existing counterflashings at the base of the walls adjacent to Area 4 to facilitate the removal and replacement of these counterflashings.
17. Temporarily displace supply lines to facilitate the removal and replacement of the roof system. Remove and discard wood blocking pipe supports in preparation for replacement with prefabricated pipe supports. Remove and discard damaged prefabricated pipe supports.
    a. Prefabricated pipe supports in good condition shall remain.
    b. NOTE: Report gas supply line clean outs too low to the new roof system requiring raising to the Owner's Representative.
18. Temporarily displace ladders adjacent to Area 4 to facilitate removal and replacement of copings on the top of the adjacent walls. Adjust and remount the ladders as necessary.
19. Remove and discard plastic roof drain strainers. Replace any missing or plastic roof drain strainers with properly sized cast iron drain strainers. Remove and save the existing cast iron clamping rings.
    a. Broken or damaged roof drain clamping rings shall be removed and replaced with matching new cast iron clamping rings as a Unit Price Extra.
20. Closely inspect the existing roof drain bowls for cracks, broken flanges or deteriorated conditions. Remove and replace any damaged drain bowl with a matching cast iron drain bowl. The installation shall be in accordance with local plumbing codes.
    a. Roof drain replacement shall be bid as a Unit Price extra.
    b. NOTE: Roof drain inserts will not be permitted on this project.
21. Thoroughly clean out the roof drain bowls and clamping rings in preparation for reuse.
22. Remove and discard deteriorated wood nailers and plywood.
    a. NOTE: Wood nailer and plywood replacement shall be bid as a Unit Price extra.
23. Closely inspect the existing steel decking for deteriorated conditions. Repair isolated deck damage not exceeding 6-inches x 6-inches with 18-gauge galvanized flat stock.

a. NOTE: Deck repairs accomplished with 18-gauge galvanized flat stock shall be bid as a Unit Price Extra.
b. NOTE: Excessively sized roof deck openings at rooftop penetrations shall be reduced using 18-gauge galvanized flat stock installed as a Unit Price Extra.

24. Remove and replace deteriorated steel deck with matching steel deck to provide a structurally sound roof deck.
    a. NOTE: Steel deck replacement shall be bid as a Unit Price Extra.
25. Prior to cutting and removing the deteriorated roof deck, the area below the required deck replacement area must be cordoned off and monitored by the Contractor's appointed safety coordinator during the entire cutting and patching procedure. The safety coordinator must be in communication with the foreman during removal and replacement and have in his possession a fully charged fire extinguisher.
26. Broom sweep and utilize gas powered blowers to remove rooftop debris from the existing roof deck surface prior to installing new materials.
27. Remove debris, scrap and rubbish from the roof areas and building grounds daily.

3.03 INSTALLATION PROCEDURES

A. General: Comply with roofing manufacturer's instructions, except where more stringent requirements are indicated herein.
1. Details relating to the installation of the new roof system shall be approved by the roofing manufacturer and the Roof Consultant and installed in such a manner that the roofing manufacturer will furnish the specified warranty for the installation.
2. Do not begin roofing work until all decks, walls, curbs, nailers, accessories, and underlying substrates are ready and acceptable to have roofing materials installed. Deck surfaces must be clean, smooth, dry and free of moisture prior to beginning roof application.
3. Schedule and supervise work crews so that the area of roofing begun one day is completely finished before leaving the job site that day. Included are all flashings within each day's work area.
4. Do not install any roofing materials during rain or other inclement weather. One exception is that temporary work may be installed during such weather to protect the building interior and new materials that are already installed. Remove all temporary work and materials that have been exposed to such weather, then install permanent materials as specified during acceptable weather conditions.
5. At the end of each day's roofing installation, protect edge of incomplete work, including membrane and insulation. Install temporary water cut-offs to provide a weather tight seal to both the roof deck and existing roof membrane. Remove temporary water cut-off materials at the beginning of next day's work.
6. Materials must be stored dry and protected with tarps and on pallets at all times. Wet or damaged materials will be removed from the job site.

B. Steel Deck
1. Install replacement steel roof deck where deteriorated steel roof deck was removed.
    a. The replacement steel deck shall not span less than three supports when replacing deteriorated roof deck. The roof deck may be installed in single span (two supports) where obsolete curbs are removed, provided the opening is framed with steel and is less than 6-feet wide. The end of each roof deck panel shall be supported for two inches and overlap the purlin a minimum of two inches. Each roof deck panel is to be fastened to the purlins with self-drilling screws drilled through the bottom ribs at intermediate supports at 12-inch centers. Fasteners at end laps and intermediate supports within 6-feet of the building perimeter shall be spaced at 6-inch centers. The new roof deck panels shall overlap adjacent panels at the side laps. The side laps shall be mechanically fastened with self-tapping sheet metal screws spaced a maximum of 36-inches on-center. For spans under 6-feet, a single side lap fastener shall be provided at mid-span. For spans over 6-feet, the side lap fasteners shall be placed at the third points of the span.

2. Infill the roof deck with matching steel deck at resultant openings where obsolete rooftop equipment was removed. Properly secure the new roof deck to purlins and structural steel framing.
3. Install 18-gauge galvanized plates at small holes (less than 6-inches by 6-inches) and/or at isolated areas of deterioration of the steel roof deck. Install plates where excessively sized roof deck openings exist. The plates shall extend 6-inches past the deficient area in each direction. The plates shall be mechanically fastened in place with self-drilling screws 6-inches on center.
4. Install 18-gauge galvanized plates at obsolete equipement openings in the roof deck which are 6-inches by 6-inches or smaller. Mechanically fasten the plate in place.

C. Roof Drain Replacement (If Required)
1. The Contractor shall hire a licensed plumbing subcontractor to install replacement roof drains as necessary. The Contractor shall coordinate the roof drain installation with the plumber. Temporary roofing work needed at the roof drain location shall be provided by the Contractor at no additional cost to the Owner.
    a. Install new roof drain assemblies at the deteriorated roof drain locations. Utilize the manufacturer's recommended underdeck clamp to secure the drain bowl in place or to the sump pan.
    b. The new roof drain shall be connected to the existing drain pipes in accordance with state and local plumbing codes and the drain manufacturers requirements. Insulate the new roof drain and drain pipe to prevent condensation. Water test the new roof drain to verify that the new roof drain functions properly.
    c. Install new cast iron clamping rings and cast iron roof drain strainers at the new replacement roof drain locations.

D. Wood Nailers
1. Install new wood nailers as designated on the attached RTA Details. Secure the wood nailers to existing roof deck with screws spaced 12-inches on center. Or to existing wood nailers with galvanized 16d nails in two staggered rows spaced 12-inches on center.
2. Resecure all loose existing wood nailers to provide solid securement for the new roof system and perimeter edge sheet metal. Secure the existing wood nailers with appropriate fasteners.
3. Install wood nailers at roof curbs which are not 8-inches above the new finished roof surface. The wood nailers shall be installed to match the existing opening or inside dimension of the curb. The wood nailers shall be a minimum of 1.5-inches thick and shall be of sufficient width to provide a minimum curb height of 8-inches above the completed roof surface. Secure the wood nailers with appropriate fasteners.
4. Install replacement wood nailers where the existing wood nailers were removed due to deterioration. The wood nailers shall be secured using the same methods that the originally installed wood nailers were secured and/or in a manner to provide solid securement.

E. Insulation - Replacement
1. Install isocyanurate insulation where the existing wet or damaged insulation was removed. Neatly cut to fit edges and penetrations. Fill gaps larger than 1/4-inch with matching insulation.

F. Insulation - General
1. Install the specified insulation in accordance with manufacturer's latest printed instructions as shown on the Roof Plan Insulation Schedule.
2. Install the specified two layers of 2.6-inch thick insulation layer with staggered board joints between boards on Areas 8, 9, 10 and 11. Offset the board joints from the existing base layer of insulation.
3. Stagger board joints by the maximum dimension possible. Neatly cut to fit edges and penetrations. Fill gaps larger than 1/4-inch with matching insulation.

a. Secure the bottom layer of insulation to the steel roof decks with the approved screws and metal plates as follows:
    1) One approved fastener per 2.67 square feet (12 fasteners per 4-foot by 8-foot board) of insulation board.
    2) 8-foot wide perimeter edges of the roof: Increase the number of fasteners by 50%.
    3) 8-foot by 8-foot building corners: Increase the number of fasteners by 75%.
4. On Areas 8, 9, 10 and 11 - the second layer of insulation and the Densdeck coverboard shall be set in low rise foam adhesive.
5. Install tapered edge strips at perimeter edges as needed or in lieu of installing fasteners and plates if height difference will permit. Trim the tapered edge strip as required to provide a smooth transition. Mechanically fasten or foam adhere the tapered edge strip to provide solid securement.

G. Insulation - Cover Board (All roofs)
1. Install new 1/2-inch thick Densdeck prime cover board on the properly prepared insulation layers. Stagger the board joints from the intermediate layer of insulation. Neatly cut to fit edges and penetrations. Fill gaps larger than 1/4-inch with matching insulation.
    a. Mechanically fasten the cover board layer through the existing insulation boards with the approved screws and metal plates as follows:
        1) One approved fastener per two square feet (8 fasteners per 4-foot by 4-foot board) of cover board.
    b. On Areas 8, 9, 10 and 11; set the coverboard in 2-part low-rise foam adhesive.

H. Membrane Installation
1. Roofing system shall be installed following the latest printed installation instructions of the roofing manufacturer.
2. Evenly apply adhesives at rate recommended by the roofing manufacturer to both the underside of the membrane and the insulation. Apply bonding adhesive uniformly, stopping short of the splice areas along the seams. Allow the adhesive to flash off until tacky.
3. Reposition the membrane, free of air pockets and wrinkles. Firmly press the sheet into place without stretching. Broom the surface to improve adhesion immediately after installation.
4. Overlap edges and ends and seal by roofing manufacturer’s recommended dimensions.
5. Shingle lap joints on sloped substrates in the direction of drainage.
6. Complete the roof membrane seams by heat welding. Use mechanical welding machine wherever possible. Roll the hand welded seams with a hand roller across the seam as required. Check all seams daily. Provide welded seam test samples as required by the manufacturer.
7. Secure the roof membrane at base tie-ins with the roofing manufacturer’s screws and fasteners at the required spacing.
8. Apply T-joint covers, stripping and appropriate sealant where specified by the roofing manufacturer on a daily basis.
9. Apply seam sealer on all cut edges of the PVC membrane and flashing.

I. Flashing Installation
1. Use pre-formed flashing accessories wherever possible.
2. Perimeter edge flashing, wall flashing and roof curbs shall be installed in accordance with the roofing manufacturer’s adhered flashing details using the longest pieces practicable. The installed flashing shall be fastened along the top edge 12-inches on-center (maximum). The latest printed flashing instructions must be followed as issued by the roofing manufacturer. Hand roll the flashings to promote adhesion.
    a. NOTE: ALL FLASHINGS SHALL BE COMPLETED DAILY AS THE PROJECT PROGRESSES WITH THE INSTALLATION OF THE NEW ROOF SYSTEM.

3. Install a termination bar at the horizontal and vertical ends of the flashing where the flashing is exposed to the weather or as shown on the details. The termination bar shall be mechanically fastened (12-inches on-center, maximum) into slotted holes. The termination bar and fastener heads shall be sealed with the specified polyurethane sealant.
4. Secure the top edge of the flashing installed on the roof hatch curbs with foam backer rod. Adhere the backer rod in place as required by the roofing manufacturer.
5. Seal roof drains per the roofing manufacturer's required details. Install clamping rings and cast iron drain strainers immediately after placing the membrane. Drain strainers and clamping rings must be securely fastened to the roof drain bowl.

J. Penetration Flashing
1. Provide isolation material to eliminate PVC flashing contact with residual asphalt products.
2. Use pre-formed flashing accessories wherever possible.
3. Flash single penetrations passing through the membrane and flashing. Factory prefabricated pipe flashing shall be used to flash all penetrations where installation is possible. Where factory prefabricated pipe flashing cannot be installed, field fabricated penetration flashing may be used. All flashings and terminations shall be completed in accordance with the roofing manufacturer's requirements.
4. Flash multiple pipe penetration flashings with manufacturer approved flashing method to provide a watertight condition.
   a. Penetration pocket side wall material may be PVC or sheet metal as approved by the roofing manufacturer.
   b. Fill penetration pockets with non-shrink grout (bottom half) and the roofing manufacturer's pourable sealer (top half). Mound the pourable sealer to shed water.
5. Hot vent stacks require isolation flanged sleeves and umbrellas. See Section 07 6200 Sheet Metal Flashing and Trim.
6. Square penetration flashings shall receive sheet metal counterflashing. See Section 07 6200 Sheet Metal Flashing and Trim.

K. Sheet Metal
1. See Section 07 6200 Sheet Metal Flashing and Trim for fabrication and installation.

L. Miscellaneous
1. Return the existing mechanical units to their original positions and secure to the existing roof curb with EPDM-gasketed screws, a minimum of two on each side of the roof curb.
2. Reinstall the conduits that were mounted to the counterflashing on the high walls adjacent to Area 4 using appropriate supports. Provide appropriate pipe supports in lieu of the existing wood blocking on the membrane.
3. Reinstall ladders that were temporarily displaced on Area 4. Adjust the ladder attachment as necessary.
4. Install new walkway pads at the locations shown on the Roof Plan. Hot air weld the entire perimeter edges of the new walkway pads in accordance with the roofing manufacturer's instructions.
   a. Note: Additional walkpads will be required to be installed concurrent with the installation of the solar panel trays and arround the solar panel arrays. This work will be priced separately at a later time.
5. Install new equipment pads at the AC units. Secure the AC units to the new equipment pads using stainless steel hardware. The equipment pads must be set on walkpads.
6. Return the satellite dish and frame to its original position on the provided membrane protection. Notify the Tenant that re-alignment can be scheduled.
7. Return the existing supply lines to their original positions. Reinstall prefabricated pipe supports on the supply lines. Replace the wood pipe supports and the damaged pipe supports with new prefabricated pillow block style and roller type style pipe supports depending on the supply line diameter. Provide membrane protection at each pipe support if required by the manufacturer. Maximum pipe support spacing: 10-feet or as required by the pipe support manufacturer.

8. Return the concrete splash blocks to original positions below condensate lines. Provide membrane protection at each splash block location.
9. Repair duct wrap and duct penetration flashing at roof curbs using matching materials or materials approved by the Roof Consultant. Repairs shall be long-lasting and watertight. Caulk repairs are not allowed.

M. Precautions
1. Do not use asphalt or coal-tar pitch base products or other products known to cause membrane contamination in conjunction with PVC materials.
2. Heat welding surfaces must be clean and dry.
3. Daily Seal: Care should be exercised to ensure that water does not flow beneath any completed sections of roof by temporarily sealing the loose edge of the membrane overnight. The roofing manufacturer's requirements should be followed closely.
4. An open flame may not be used to dry the roof membrane or to heat the flashing materials.

N. Field Quality Control
1. The Contractor shall coordinate inspection services during roof application. Prior to final payment, and as a condition thereof, the Contractor shall obtain final approval from the Roof Consultant indicating proper compliance with the Contract Documents.
2. The Roof Consultant shall review and approve all shop drawing submittals.
3. Notify Roof Consultant whenever roofing work is to be done, in sufficient time to arrange inspections. Provide safe access to roof for monitoring.
4. Furnish Roof Consultant with all pertinent job information prior to beginning work in accordance with Roof Consultant's directions.
5. The Roof Consultant may perform any testing required to verify the integrity of the work and confirm that work is in conformance with roofing manufacturer's recommendations.

O. Cleaning
1. Remove adhesives, soil or other markings from finished surfaces.
2. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and comply with their documented instructions.
3. Repair or replace defaced or damaged finishes caused by work of this section.
4. The Contractor will be responsible for cleaning the building interior on a daily basis of any reroofing related debris entering the building as a result of deck repair and reroofing operations.

P. Protection
1. Protect installed roofing and flashings from construction operations.
2. Where traffic must continue over finished roof membrane, protect surfaces using rigid insulation and plywood.

END OF SECTION

SECTION 07 6200
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. This Section is part of the entire set of Contract Documents and shall be coordinated with the applicable provision of the other parts.

1.02 SECTION INCLUDES

A. Sheet metal coping, counterflashing and miscellaneous penetration flashing.

B. Premanufactured sheet metal fascia cap.

1.03 RELATED REQUIREMENTS

A. Section 07 5400 - Thermoplastic Membrane Roofing.

1.04 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2023.

B. SMACNA (ASMM) - Architectural Sheet Metal Manual 2012.

C. ANSI/SPRI ES-1-2003 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.

1.05 SUBMITTALS

A. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

B. Samples: Submit selection and verification samples for finishes, colors and textures. Color to be selected by the Owner.

1.06 QUALITY ASSURANCE

A. Perform work in accordance with SMACNA (ASMM) requirements and standard details, except as otherwise indicated.

B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with 5 years of documented experience. Engage an experienced installer who has completed sheet metal flashing and trim work similar in material, design and extent to that indicated for this Project and with a record of successful in-service performance.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

B. Prevent contact with materials that could cause discoloration or staining.

C. Do not expose to direct sunlight or extreme heat trim material with factory applied strippable film.

PART 2 PRODUCTS

2.01 SHEET METAL FLASHING AND TRIM

A. Sheet Materials
   1. Galvanized Steel for Continuous Cleat: ASTM A 653, with G90 zinc coating; minimum 0.034 inch (22 gauge) thick base metal.
   2. Galvanized Steel Base Metal: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch (0.61 mm) thick base metal.

B. Prefinished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch (0.61 mm) thick base metal, shop pre-coated with PVDF coating.
   1. Fluoropolymer Coating: High performance organic powder coating, AAMA 2604; multiple coat, thermally cured fluoropolymer finish system.

2. Color: As selected by Owner from manufacturer's standard colors.
3. Acceptable Manufacturer's:
    a. Holcim Elevate: Una-Clad
    b. Petersen Aluminum Corporation: Pac-Clad

C. Accessories
1. Fasteners: Same metal as sheet metal flashing or other noncorrosive metal as recommended by sheet metal manufacturer.
2. Gasketed washers: Soft neoprene washers.
3. Elastomeric Sealant: High performance, one component polyurethane-base, non-sag elastomeric sealant as manufactured by one of the following manufacturers or approved equivalents:
4. Sika Corporation, Sikaflex - 1a
5. Tremco, Vulkem 116

D. Fabrication, General
1. Sheet Metal Fabrication Standard: Fabricate sheet metal flashing and trim to comply with recommendations of SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal and other characteristics of the item indicated.
2. Comply with details shown to fabricate sheet metal flashing and trim that fit substrates and result in waterproof and weather-resistant performance once installed. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
3. Form material with watertight end joints and seams.
4. Fabricate vertical faces with bottom edge hemmed 1/2-inch and bent outward to form a drip edge unless specified otherwise.
5. Form exposed sheet metal work, shop fabricated or field fabricated, that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated.
6. Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
7. Conceal fasteners and expansion provision where possible. Exposed fasteners are not allowed on faces of sheet metal exposed to public view.
8. Corners: corners must be formed, mitered, lapped, notched, sealed or soldered as necessary to provide a continuous system that is not more susceptible to leaks than straight sections.

E. Fabrication, Sheet Metal
1. General: Fabricate sheet metal items in thickness or weight needed to comply with performance requirements but not less than that listed below for each application and metal.
2. Coping: Coil-Coated Galvanized Steel: 0.0276 inch (24 gauge) thick. Fabricate the coping in accordance with SMACNA Figure 3-1. Fabricate the coping with 1-inch tall single lock standing seams. Fabricate the inside face with a minimum face dimension of 3-inches. Fabricate the outside face of the coping to extend a minimum of 1-inch below the bottom of the wood nailer along the parapet. Hem the bottom edge of the inside and outside faces and bent outward to form a drip edge. Form the outside face with an open lock to receive a continuous cleat. See RTA Detail Nos. 2, 3 and 4.
3. Premanufactured Fascia Cap: ANSI/SPRI/FM 4435/ES-1 to design pressure of 29 psf (perimeters) and 37 psf (corners). The fascia cap shall be 24-gauge coil-coated galvanized steel. See RTA Details No. 1, 4, 6, 7 and 12. Approved manufacturer, approved equal and basis of design:
    a. Metal-Era, Edge Systems One, Single-Ply Application, Snap-on Cover, 20 ga. Cleat Spring Clips.
4. Counterflashing: Fabricate from the following material:
    a. Coil-Coated Galvanized Steel: 0.0276 inch (24 gauge) thick.

b. Fabricate the receiver mounted counterflashing in accordance with SMACNA Figure 4-5B. Fabricate the counterflashing with a hemmed drip edge along the bottom edge and a minimum face of 4-inches. The top edge to receive behind the receiver or as shown in RTA Details 1-1/2-inches minimum. See RTA Detail No. 9
c. Fabricate the surface mounted counterflashing in accordance with RTA Detail No. 10. Fabricate the counterflashing with a hemmed drip edge along the bottom edge and a minimum face of 4-inches.
d. Fabricate the surface mounted counterflashing (slip flashing) in accordance with SMACNA Figure 4-5B. Fabricate the counterflashing with a hemmed drip edge along the bottom edge and a minimum face of 4-inches. The top edge to receive behind the curb cap cover 2-inches minimum.

5. Miscellaneous Flashing: Fabricate from the following material:
   a. Galvanized Steel: 0.028 inch (24 gauge) thick.
   b. Fabricate penetration pockets in accordance with SMACNA Figure 8-11C. Fabricate the penetration pockets with 4-inch tall sides (minimum), 4-inch wide flanges and soldered corner stiffeners.
   c. Fabricate the closure box flashing in accordance with SMACNA Figure 8-9A. Closure box size shall be as required to accommodate the pipes. Pipe penetration diameters shall closely match the pipe diameters. Provide watershedding slope in the closure box cap. Fabricate the vertical curb covers with 4-inch wide faces and hemmed bottom edges. Lap widths: 1-inch minimum. Seam and solder all joints in the closure box where possible.
   d. Fabricate flange, sleeve and umbrellas in accordance with SMACNA Figure 8-11A. Fabricate the flashing with 4-inch wide flanges. Fabricate the flange and sleeve with continuous soldered joints. Fabricate with a sleeve height of 8-inches minimum. Fabricate the umbrella to lap the top of the sleeve 4-inches minimum.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.

B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 INSTALLATION

A. Unless otherwise indicated, install sheet metal flashing and trim to comply with performance requirements, manufacturer's installation instructions and SMACNA's "Architectural Sheet Metal Manual". Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weatherproof.

B. Expansion Provisions: Provide for thermal expansion of exposed sheet metal work. Space movement joints at maximum of 10 feet with no joints allowed within 24 inches of corner of intersection.

C. Coping
   1. Install a continuous cleat along the outside face of the parapet wall in preparation for receiving the coping. Secure the continuous cleat with sheet metal screws spaced 12-inches on-center. Use screws long enough to achieve 1-1/2-inches of embedment into the substrate. Use screws with a screw head which will not contact the back side of the coping.
   2. Install coping on the parapet walls as shown in the RTA details. Engage the bottom edge outside face of the coping with the continuous cleat. Hand crimp the bottom edge along the entire length. Secure the coping sections along the inside face with gasketed screws spaced 18-inches on-center. Provide the specified end joints between coping sections.

D. Prefabricated Sheet Metal Fascia Cap

1. Install the specified premanufactured sheet metal fascia cap along the designated perimeter edges. The installation shall be in accordance with the manufacturer's requirements.

E. Counterflashing
   1. Receiver Mounted Counterflashing: Install counterflashing into the existing receivers. Notch and lap the endjoints in the counterflashing 4-inches. Secure the counterflashing to the receiver with stainless steel pop rivets spaced 24-inches on center.
   2. Slip Flashing: Install counterflashing along the top of any curb where the top of the base flashing is not protected by a minimum of 3-inches. The counterflashing must cover the top edge of the base flashing a minimum of 3-inches. The top edge of the counterflashing must be concealed by the curb cap a minimum of 2-inches. Secure 24-inches on center with gasketed screws. Notch and lap the corners and end joints in the counterflashing 4-inches.
   3. Counterflashing At Structural Supports: Install counterflashing at square and round structural supports to protect the top edge of the PVC flashing. Use any approved counterflashing detail from the selected roofing membrane manufacturer.

F. Penetration Pocket
   1. Install sheet metal penetration pockets at the locations shown on the Roof Plan. Secure the penetration pocket flanges with screws into the roof deck. Seal the flanges in accordance with the manufacturer's typical details.
   2. Fill the flashing with the specified non-shrink grout and pourable sealer. The pourable sealer must be mounded to promote watershedding capabilities.

G. Closure Box
   1. Provide closure boxes at miscellaneous roof penetrations which cannot be flashed with a flange, sleeve and umbrella flashing. Field seam and solder the joints in the closure box.
   2. Secure the flange to the roof deck with screws. Neatly field wrap the sheet metal flashing in accordance with the selected membrane manufacturer's requirements.
   3. Provide tight sheet metal closures around all pipe penetrations through the sides of the closure box and seal the pipe penetrations with the specified sealant. Loosely fill the closure box with unfaced glass fiber batt insulation.
   4. Install the closure box cap and secure the cap to the box with gasketed screws spaced 6-inches on center or a minimum of one gasketed screw per side of the box.

H. Stack Flashing
   1. Provide flange, sleeve and umbrella flashing at round stacks and roof penetrations whenever possible. Field seam and solder the joints in the flange and sleeve.
   2. Secure the flange to the roof deck with screws. Neatly field wrap the sheet metal flashing in accordance with the selected membrane manufacturer's requirements.
   3. Install an umbrella with 1/4-inch minimum clearance from the top of the sleeve. Tightly secure the umbrella in place with a stainless steel drawbands. Seal the top of the umbrella to the penetration with the specified caulk.

3.03 FIELD QUALITY CONTROL

A. Inspection will involve surveillance of work during installation to ascertain compliance with specified requirements.

3.04 CLEANING

A. Remove bituminous markings from finished surfaces.

B. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.

C. Repair or replace defaced or damaged finishes caused by work of this section.

END OF SECTION