

# COLUMBUS CONSOLIDATED GOVERNMENT

Georgia's First Consolidated Government



## FINANCE DEPARTMENT PURCHASING DIVISION

1111 1<sup>st</sup> AVENUE - 1<sup>st</sup> FLOOR, COLUMBUS, GEORGIA 31901  
P. O. BOX 1340, COLUMBUS, GEORGIA 31902-1340  
706-225-4087 | [www.columbusga.gov](http://www.columbusga.gov)

March 30, 2026

<p>REQUEST FOR BIDS:  <b>RFB No. 26-0033</b></p>	<p>Qualified vendors are invited to submit sealed bids, subject to conditions and instructions as specified, for the furnishing of:</p> <p style="text-align: center;"><b>GALLOPS SENIOR CENTER AND POP AUSTIN RECREATION CENTER ROOFING PROJECT</b></p>
<p><b>GENERAL SCOPE</b></p>	<p>Provide all labor, equipment, and materials to complete the specified work at Gallops Senior Center and Pop Austin Recreation Center, in full compliance with the project manual.</p> <p><b>This RFB will be awarded in total to the lowest responsive, responsible bidder. Therefore, vendors must bid on both roof projects in order to be considered for award.</b></p>
<p><b>MANDATORY SITE VISIT</b></p>	<p><b>A Mandatory Site Visit</b> is scheduled for <b>10:30 AM (Eastern) on Thursday, April 9, 2026</b>. Contractors shall convene and sign in at the Pop Austin Recreation Center, which is located at 1331 Alexander Street, Columbus, GA 31904.</p> <p><b>A Second Mandatory Site Visit</b> is scheduled for <b>1:00 PM (Eastern) on Thursday, April 9, 2026</b>. Contractors shall convene and sign in at the Gallops Senior Center, which is located at 1212 15<sup>th</sup> Street, Columbus, GA 31901.</p> <p><b>Refer to page 9 for additional information.</b></p>
<p><b>DUE DATE</b></p>	<p style="text-align: center;"><b>APRIL 29, 2026 - 2:30 PM (Eastern)</b></p> <p><b>Responses must be submitted via <u>DemandStar</u> on or before the due date. A virtual opening will be held during the 3:00 PM hour of the due date. Responding vendors are not required but are invited to attend the opening.</b></p> <p>If you wish to attend the virtual opening, use one of the Microsoft Teams meeting options: <a href="#">Click here to join the meeting</a> or call in (audio only) <a href="tel:+14782390725">+1 478-239-0725</a>, 855808406# United States, Macon Phone Conference ID: 855 808 406# <a href="#">Find a local number</a>   <a href="#">Reset PIN</a>. <i>Note: Columbus Consolidated Government is not responsible for technical issues that may arise during the virtual opening.</i></p>
<p><b>SUBMISSION REQUIREMENTS</b></p>	<p>See Appendix A for Submission Requirements, Submission Requirements Checklist, <b>DemandStar</b> Registration and Submission Instructions.</p>
<p><b>ADDENDA</b></p>	<p style="text-align: center;"><b><u>IMPORTANT INFORMATION</u></b></p> <p>Any and all addenda will be posted on the Purchasing Division's web page, at <a href="https://www.columbusga.gov/finance/purchasing/docs/opportunities/Bid_Opportunities.htm">https://www.columbusga.gov/finance/purchasing/docs/opportunities/Bid_Opportunities.htm</a>. <b>It is the vendors' responsibility to periodically visit the web page for addenda before the due date and prior to submitting a quote.</b></p>
<p>"NO BID" RESPONSE</p>	<p>If you are not interested in this solicitation, refer to page 3.</p>



Andrea J. McCorvey  
Purchasing Manager

# **IMPORTANT INFORMATION**

## **E-Notification**

Columbus Consolidated Government uses the Georgia Procurement Registry e-notification system. You must register with the Team Georgia Marketplace to receive future procurement notifications at <https://doas.ga.gov/state-purchasing/getting-started-supplier>.

**If you have any questions or encounter any problems while registering, please contact the Team Georgia Marketplace Procurement Helpdesk:**

**Telephone: 404-657-6000**

**Fax: 404-657-8444**

**Email: [procurementhelp@doas.ga.gov](mailto:procurementhelp@doas.ga.gov)**

# STATEMENT OF "NO BID"

Complete and return this form immediately if you do not intend to Bid:

Email: [BidOpportunities@ColumbusGA.org](mailto:BidOpportunities@ColumbusGA.org)

Attn: Heather Biddle, Buyer

Mail: Columbus Consolidated Government  
Purchasing Division  
P O Box 1340  
Columbus, GA 31902-1340

We, the undersigned decline to bid on your RFB No. 26-0033 for GALLOPS SENIOR CENTER AND POP AUSTIN RECREATION CENTER ROOFING PROJECT for the following reason(s):

- Specifications too "tight", i.e., geared toward one brand or manufacturer only (explain below)
- There is insufficient time to respond to the Request for Bids.
- We do not offer this product or service.
- We are unable to meet specifications.
- We are unable to meet bond requirements.
- Specifications are unclear (explain below).
- We are unable to meet insurance requirements.
- Other (specify below)

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

AGENT: \_\_\_\_\_

DATE: \_\_\_\_\_

EMAIL: \_\_\_\_\_

# GENERAL PROVISIONS

The provisions of the Procurement Ordinance for the Consolidated Government of Columbus, Georgia as adopted and amended by Council shall apply to all invitations for bids and award of all contracts and is specifically incorporated herein by this reference. A copy of the ordinance is on file in the Purchasing Division.

1. **TERM "CITY"**. The term "City" as used throughout these documents will mean Consolidated Government of Columbus, Georgia.
2. **PREPARATION OF FORM**. Bid proposals shall be submitted on the forms provided by the City. All figures must be written in ink or typewritten. Figures written in pencil or erasures are not acceptable. However, mistakes may be crossed out, corrections inserted adjacent thereto, initialed in ink by the person signing the proposal. If there are discrepancies between unit prices quoted and extensions, the unit price will prevail. Failure to properly sign forms, in ink, will render bid incomplete.
3. **EXECUTION OF THE BID PROPOSAL**. Execution of the bid proposal will indicate the bidder is familiar and in compliance with all local laws, regulations, ordinances, site inspections, licenses, dray tags, etc.
4. **BID DUE DATE**. The bid submission must arrive in the Purchasing Division on or before the stated due date and time. Upon receipt, bids will be time and date stamped. Bids will remain sealed and secured until the stated due date and time for the bid opening.
5. **BID OPENING**. Bids shall be opened publicly in the presence of one or more witnesses at the time and place stated in the public notice. The amount of each bid, the bidder's name and such other relevant information as the Purchasing Manager deems appropriate shall be recorded and retained in accordance with Georgia law. The record and each bid shall be open to the public in accordance with Article 3. 301A of the Procurement Ordinance (Public Access to Procurement Information).
6. **LATE BIDS**. It is the responsibility of the bidder to ensure bids are submitted by the specified due date and time. Bids received after the stated date and time will be returned, unopened, to the bidder. The official clock to determine the date and time will be the time/date stamp located in the Finance Department. All bids received will be time and date stamped by the official clock. The City will not be held responsible for the late delivery of bids due to the U.S. Mail Service, or any other courier service.
7. **RECEIPT OF ONE SEALED BID**. In the event only one sealed bid is received, no formal bid opening shall take place. First, the Purchasing Division shall conduct a survey of vendors to inquire of "no bid" responses and non-responsive vendors. If, from the survey, it is determined by the Purchasing Division that specifications need revision, the one bid received will be returned, unopened, to the responding vendor, with a letter of explanation and a new bid solicitation prepared. If it is determined that other vendors need to be contacted, the bid due date will be extended, and the one bid received will remain sealed until the new bid opening date. The vendor submitting the single bid will receive a letter of explanation.

**If it is determined the one bid received is from the only responsive, responsible bidder, then the bid shall be opened by the Purchasing Division Manager or designee, in the presence of at least one other witness.** The single bid will be evaluated by the using agency for award recommendation.

8. **RECEIPT OF TIE BIDS**. In the event multiple responsive, responsible bidders are tied for the lowest price and all other terms and requirements are met by all tied bidders, the award recommendation shall be resolved in the order of the preferences listed below:
  1. Award to the local bidder whose principal place of business is located in Columbus, Georgia.
  2. Award to bidder previously awarded based on favorable prior experience.
  3. Award to bidder whose principal place of business is located in the State of Georgia.
  4. If feasible, divide the award equally among the bidders.
  5. If it is not feasible to award equally and only two bidders are tied, perform a coin toss in the presence of the two bidders, either in person or virtually.
  6. *If the above preferences are insufficient to resolve the tie, all bid responses will be rejected and the bid will be re-advertised.*

9. **RECEIPT OF MULTIPLE BIDS**. Unless otherwise stated in the bid specifications, the City will accept one and only one bid per vendor. Any unsolicited multiple bid(s) will not be considered. If prior to the bid opening, more than one bid is received from the same vendor, the following will occur: (1) the bidder will be contacted and required to submit written acknowledgment of the bid to be considered; (2) the additional bid(s) will be returned to the bidder unopened. If at the bid opening more than one bid is enclosed in a single bid package, the City will consider the vendor non-responsive and bids will be returned to the bidder.

10. **CONDITIONS AND PACKAGING**. Unless otherwise defined in the bid specifications, it is understood and agreed that any item offered or furnished shall be new, in current production and in first class condition, that all containers shall be new and suitable for storage or shipment, and that prices include standard commercial packaging.

11. **FREIGHT/SHIPPING/HANDLING CHARGES**. All freight, shipping, and handling charges shall be included in the bid price. The City will pay no additional charges.

12. **CORRECTION OR WITHDRAWAL OF BIDS; CANCELLATION OF AWARDS**

Correction or withdrawal of inadvertently erroneous bids before bid opening, or cancellation of awards or contracts based on such bid mistakes, may be permitted where appropriate. Mistakes discovered before bid opening may be modified or withdrawn by written notice received in the Purchasing Division.

After bid opening, corrections in bids shall be permitted only to the extent that the bidder can show by clear and convincing evidence that a mistake of a nonjudgmental character was made, the nature of the mistake and the bid price actually intended. After bid opening, no changes in bid prices or other provisions of bids prejudicial to the interest of the City or fair competition shall be permitted. In lieu of bid correction, a low bidder alleging a material mistake of fact may be permitted to withdraw its bid if the mistake is clearly evident on the face of the bid document but the intended correct bid is not similarly evident, or if the bidder submits evidence which clearly and convincingly demonstrate that a mistake was made.

All decisions to permit correction or withdrawal of bids or to cancel awards of contracts based on bid mistakes will be supported by the Purchasing Manager's written determination.

**13. ADDENDA AND INTERPRETATIONS.** If it becomes necessary to revise any part of this bid, a written addendum will be provided to all bidders. The City is not bound by any oral representations, clarifications, or changes made to the written specifications by City employees, unless such clarification or change is provided to the bidders in written addendum form from the Purchasing Officer. Bidders will be required to acknowledge receipt of the addenda (if applicable) in their sealed bid proposal. The vendor may provide an initialed copy of each addendum or initial the appropriate area on the bid form (pricing page). Failure to acknowledge receipt of the addenda (when applicable) will render bid incomplete. **It is the bidder's responsibility to ensure that they have received all addenda.**

**14. BID RECEIPT AND EVALUATION.** Bids shall be unconditionally received without alteration or correction except as authorized in the City's Procurement Ordinance. Bids shall be evaluated based on requirements set forth in the Invitation for Bid, which may include criteria to determine acceptability such as inspection, testing, quality, workmanship, delivery, and suitability for a particular purpose. Those criteria that will affect the bid price and be considered in evaluation for award shall be objectively measurable, such as discounts, transportation cost, and total or life-cycle costs. The specifications presented in the Invitation for Bids shall represent the evaluation criteria. No other criteria may be used to evaluate bids.

**15. TIME FOR CONSIDERATION.** Bids must remain in effect for at least ninety (90) days after date of receipt to allow for evaluation.

#### **16. BID SECURITY**

(1) Requirement for Bid Security. Bid security shall be required for all competitive sealed bids for construction contracts when the price is estimated by the Purchasing Manager to exceed \$50,000. Bid security shall be a bond provided by a surety company authorized to do business in the State, or other form satisfactory to the City. Such bonds may also be required on construction contracts under \$50,000 or other procurement contracts when circumstances warrant.

(2) Amount of Bid Security. Bid security shall be in an amount equal to at least five percent (5%) of the bid amount.

(3) Rejection of Bids for Noncompliance with Bid Security Requirements. When the invitation for Bids requires security, noncompliance with such requirement shall force rejection of a bid.

(4) Withdrawal of Bids. If a bidder is permitted to withdraw its bid before award as provided in Section 3-108 Subsection (G) (Competitive Sealed Bidding – Correction or Withdrawal of Bids: Cancellation of Awards), no action shall be had against the bidder or the bid security.

#### **17. CONTRACT PERFORMANCE AND PAYMENT BONDS**

(1) When Required: Amounts. When a construction contract is awarded in excess of \$50,000, the following bonds or security shall be delivered to the City, and shall be binding on the parties upon the execution of the contract:

a. a performance bond satisfactory to the City executed by a surety company authorized to do business in the State, or otherwise secured in a manner satisfactory to the City, amounting to one hundred percent (100%) of the price specified in the contract; and

b. a payment bond satisfactory to the City executed by a surety company authorized to do business in the State or otherwise secured in a manner satisfactory to the City, to protect all persons supplying labor and material to the contractor or its subcontractors for the performance of the work provided for in the contract, amounting to one hundred percent (100%) of the price specified in the contract.

At the discretion of the Purchasing Manager, this same condition may be placed on awards of any amount.

(2) Authority to Require Additional Bonds. Nothing in this Section shall be construed to limit the authority of the City to require a performance bond or other security in addition to the bonds, in circumstances other than the circumstances described in Subsection (1) above.

**18. SUBCONTRACTING.** Should bidder intend to subcontract all or any part of the work specified, name(s) and address(es) of subcontractor(s) must be provided in bid proposal (use additional sheet if necessary). The bidder shall be responsible for subcontractor(s) full compliance with the requirements of the bid specifications. **THE COLUMBUS CONSOLIDATED GOVERNMENT WILL NOT BE**

## **RESPONSIBLE FOR PAYMENTS TO SUBCONTRACTORS.**

**19. DISQUALIFICATION OF BIDDERS AND REJECTION OF BIDS.** Bidders may be disqualified and rejection of bid proposals may be recommended by the City for any (but not limited) to the following reasons:

- (A) Receipt after the time limit for receiving bid proposals as stated in the bid invitation.
- (B) Any irregularities contrary to the General Provisions or bid specifications.
- (C) Unbalanced unit price or extensions.
- (D) Unbalanced value of items.
- (E) Failure to use the proper forms furnished by the Consolidated Government.
- (F) Failure to complete the proposal properly
- (G) Omission of warranty, product literature, samples, acknowledgment of addenda or other items required to be included with bid proposal.
- (H) Failure to properly sign forms in ink.

**The City reserves the right to waive any minor informality or irregularity. The City reserves the right to reject any and all bids.**

**20. BRAND NAMES "OR EQUAL".** Whenever in this invitation any particular material, process and/or equipment are indicated or specified by patent, proprietary or brand name of manufacturer, such wording will be deemed to be used for the purpose of facilitating description of the material, process and/or equipment desired by the City. It is not meant to eliminate bidders or restrict competition in any bid process. Any manufacturers' names, drawings, trade names, brand names, specifications and/or catalog numbers used herein are for the purpose of description and establishing general quality levels. Bidders may propose equivalent equipment, services or manufacturer. Any proposal that is equivalent to or surpasses stated specifications will be considered. Determination of equivalency shall rest solely with the City. **Please Note: Due to existing equipment, specific manufacturers may be required to facilitate compatibility.**

**21. ASSIGNMENT OF CONTRACTUAL RIGHTS.** It is agreed that the successful bidder will not assign, transfer, convey or otherwise dispose of the contract or its right, title or interest in or to the same, or any part thereof, without previous consent of the City and any sureties.

**22. DISCOUNTS.** Terms of payments offered will be reflected in the space provided on the bid proposal form. Cash discounts will be considered net in the bid evaluation process. All terms of payment (cash discounts) will be taken and computed from the date of delivery of acceptable material or services, or the date of receipt of the invoice, whichever is later.

**23. TAXES.** The City is exempt from State Retail Tax and Federal Excise Tax. Tax Exemption No. GA Code Sec. 48-8-3. Federal ID No. 58-1097948.

**24. FEDERAL, STATE AND LOCAL LAWS.** All bidders will comply with all Federal, State, and Local laws and ordinances, relative to conducting business in Columbus, Georgia.

**25. BID INCLUSIONS.** When bid inclusions are required, such as warranty information, product literature/specifications, references, etc. The inclusions should reference all aspects of the specific equipment or service proposed by the bidder. Do not include general descriptive catalogs. References to literature or other required inclusions submitted previously does not satisfy this provision. Bids found to be in non-compliance with these requirements will be subject to rejection.

**26. NON-COLLUSION.** By signing and submitting this bid, bidder declares that its agents, officers or employees have not directly or indirectly entered into any agreements, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this bid. In the event, said bidder is found guilty of collusion, the company and agents will be removed from the City's bid list for one full year and any current orders will be canceled.

**27. INDEMNITY.** The successful bidder agrees, by entering into this contract, to defend, indemnify and hold City harmless from any and all causes of action or claims of damages arising out or under this contract.

**28. DISADVANTAGED BUSINESS ENTERPRISE.** Disadvantaged Business Enterprises (minority or women owned businesses) will be afforded full opportunity to submit proposals in response to this invitation and will not be discriminated against on the grounds of race, color, creed, sex, sexual orientation, gender identity or national origin in consideration for an award. It is the policy of the City that disadvantaged business enterprises and minority business enterprises have an opportunity to participate at all levels of contracting in the performance of City contracts to the extent practical and consistent with the efficient performance of the contract.

**29. AFFIRMATIVE ACTION PROGRAM - NON-DISCRIMINATION CLAUSE.** The Consolidated Government of Columbus, Georgia ("the City") is committed to using Disadvantaged Business Enterprises (DBEs) (small, women-owned and minority business enterprises) to the greatest extent practical in all solicitations and day-to-day procurement needs of the City and to taking specific affirmative actions to meet these commitments.

The City has an Affirmative Action Program in connection with Equal Employment Opportunities. The successful bidder will comply with all Federal and State requirements concerning fair employment and employment of the handicapped, and concerning the treatment of all employees, and will not discriminate between or among them by reason of race, color, age, religion, sex, sexual

orientation, gender identity, national origin or physical handicap.

**30. AWARDS TO LOCAL BUSINESSES.** Except for construction contracts, Federally funded projects, Request for Proposals and Request for Qualifications, awards will be made to responsive and responsible local businesses proposing a cost not more than two percent (2%) above the low bid or quote for contracts involving an expenditure less than or equal to \$50,000.00; and made to responsive and responsible local businesses proposing a cost not more than one percent (1%) above the low bid or quote for contracts involving an expenditure greater than \$50,000.00.

**31. RIGHT TO PROTEST.**

- (1) Right of Protest. Any actual or prospective bidder offeror, or contractor who is aggrieved in connection with a solicitation or award of a contract may protest to the Purchasing Manager initially. All protests shall be filed in the manner prescribed herein. Protests that do not comply with the following rules shall be deemed invalid and of no effect.
- (2) The protest must be in writing, executed by a company officer that is authorized to execute agreements on behalf of the bidder or offeror or provided by an authorized legal representative of the protestor.
- (3) A protest with respect to an invitation for Bids or Request for Proposals shall be submitted in writing no less than five (5) business days prior to the opening of bids or the closing date of proposals or qualification statements.
- (4) Stay of Procurement During Protests. If there is a timely protest submitted as described above, the Purchasing Manager shall not proceed further with the solicitation or award of the contract until all administrative remedies have been exhausted or until the City Council, Mayor, or City Manager makes a determination on the record that the award of the contract without delay is necessary to protect substantial interests of the City.

**32. FAILURE TO BID.** Vendors choosing not to submit a bid are requested to return a **Statement of "No Bid"**.

**33. PRODUCT/EQUIPMENT DEMONSTRATION - SITE VISIT.** During the evaluation of bids, the City reserves the right to request a demonstration or site visit of the product, equipment or service offered by a bidder. The demonstration or site visit shall be at the expense of the bidder. Bidders who fail to provide demonstration or site visit, as requested, will be considered non-responsive.

**34. CANCELLATION PROVISIONS.** An Invitation for Bid, Request for Proposal, or other solicitation may be canceled, or any or all bids, proposals or responses rejected in whole or in part, at the discretion of the City for any reason whatsoever. The reasons for the cancellation shall be sent to all businesses solicited or that responded. The notice shall identify the solicitation, give the reasons for the cancellation, and when appropriate state that an opportunity will be given to compete on any re-solicitation or similar procurement in the future. Reasons for rejection will be provided to unsuccessful bidders or offerors.

When such action is in the best financial interest of the City, contracts for supplies to be purchased or services to be rendered under an annual (term) contract basis may be canceled and re-advertised at the discretion of the Purchasing Officer and in accordance with contract terms.

After the receipt of a product or piece of equipment, it is found that said item does not perform as specified and required, payment for said product or equipment will be withheld. The successful vendor will be notified of the non-performance in writing. After notification, the successful vendor will have ten (10) calendar days, from the date of notification, to deliver product or equipment which performs satisfactorily. If a satisfactory product is not delivered within 10 calendar days, from the notification date, the City will cancel the contract (purchase order) and award to the next low, responsive, responsible bidder. The vendor will be responsible for the pick-up or shipment of the unsatisfactory equipment or product.

**35. QUESTIONS:** Questions concerning specifications must be submitted, in writing, at least 5 (five) working days (Monday-Friday) prior to receipt date. Questions received less than five working days prior to receipt date will not be considered.

**36. SAMPLES:** When samples are required to be included with the proposal response, the bidder will be responsible for the following:

- 1) **Unless otherwise specified**, bidders are required to submit exact samples of item(s) bid. Do not submit sample of "like" item(s).
- 2) Affix an identification label to each individual sample to include bidder's name, bid name and number.
- 3) Make arrangements for the return of sample after the bid award. All shipping costs will be the responsibility of the bidder. If bidder does not make arrangements for return of sample, within 60 days after award, the sample will be discarded.

**37. GOVERNING LAW:** The parties agree that this Agreement shall be governed by the laws of Georgia, both as to interpretations and performance.

**38. PAYMENT DEDUCTIONS:** The City reserves the right to deduct, from payments to awarded vendor(s), any amount owed to the City for various fees, to include, but not limited to: False Alarm fees, Ambulance fees, Occupation License Fees, Landfill fees, etc.

**39. PAYMENT TERMS:** The City's standard payment term is usually net 30 days, after successful receipt of goods or services. Payment may take longer if invoice is not properly documented or not easily identifiable, goods/services are not acceptable, or invoice is in dispute.

**40. FINAL CONTRACT DOCUMENTS:** If a formal contract is required as a result of the Request for Bid; the final contract shall RFB No. 26-0033 Gallops Senior Center & Pop Austin Recreation Center Roofing Project Page 7 of 36

include the following: 1) The RFB; 2) Addenda; 3) Awarded Vendors(s) Bid response; 4) Awarded Vendor(s) Clarifications; and 5) Awarded Vendor(s) Business Requirements.

**NOTICE TO VENDORS**

**Sec. 2-3.05. - Submitting bids to Consolidated Government, etc.—By mayor or councilmembers.**

Neither the mayor nor any member of the Columbus Council shall submit any bid to the consolidated government, nor shall the mayor or any member of the Columbus Council own or have a substantial pecuniary interest in any business that submits a bid to the consolidated government. (Ord. No. 92-60, 6-23-92)

**Sec. 2-3.06. - Same—By members of boards, authorities, commissions.**

No member of any board or authority or commission or other independent or subordinate entity of the consolidated government shall submit any bid to the consolidated government or have a substantial pecuniary interest in any business that submits a bid to the consolidated government if such bid pertains to the board or authority or commission on which such person holds such membership. (Ord. No. 92-61, 6-23-92)

# **MANDATORY SITE VISIT**

## **ATTENDANCE CONFIRMATION FORM**

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

To: Heather Biddle, Buyer  
Email: [BidOpportunities@ColumbusGA.org](mailto:BidOpportunities@ColumbusGA.org)

Re: Gallops Senior Center and Pop Austin Recreation Center Roofing Project – RFB No. 26-0033

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**A Mandatory Site Visit is scheduled for 10:30 AM (Eastern) on Thursday, April 9, 2026.** Contractors shall convene and sign in at the **Pop Austin Recreation Center**, located at 1331 Alexander Street, Columbus, GA 31904.

**A second Mandatory Site Visit is scheduled for 1:00 PM (Eastern) on Thursday April 9, 2026.** Contractors shall convene and sign in at the **Gallops Senior Center**, located at 1212 15<sup>th</sup> Street, Columbus, GA

The purpose of the site visits is to allow contractors to view and measure the work areas. The City will not be bound by any oral representations, clarifications or changes made at the site visit. If you have questions or requests for clarification resulting from the site visit, submit said inquires in the manner prescribed on pages 10 and 11 of these specifications.

Contractors shall sign an attendance sheet at both Mandatory Site Visits. **Only contractors who sign the attendance sheets will receive future addenda and will be allowed to submit a bid for this project.** The Purchasing Division will deem non-responsive any and all bids received from contractors who were not represented at the site visits.

Complete and return this form to confirm attendance:

_____	_____
Company Name	# of Attendees
_____	_____
Contact Person	Email Address
_____	_____
Mailing Address	City State Zip
_____	_____
Telephone Number	Fax Number

## **DO YOU HAVE QUESTIONS, CONCERNS OR NEED CLARIFICATION ABOUT THIS SOLICITATION?**

**COMMUNICATION CONCERNING ANY SOLICITATION CURRENTLY ADVERTISED MUST TAKE PLACE IN WRITTEN FORM AND ADDRESSED TO THE PURCHASING DIVISION.**

ALL QUESTIONS OR CLARIFICATIONS CONCERNING THIS SOLICITATION SHALL BE SUBMITTED IN WRITING. THE CITY WILL NOT ORALLY OR TELEPHONICALLY ADDRESS ANY QUESTION OR CLARIFICATION REGARDING BID/PROPOSAL SPECIFICATIONS. IF A VENDOR VISITS OR CALLS THE PURCHASING DIVISION WITH SUCH QUESTIONS, HE OR SHE WILL BE INSTRUCTED TO SUBMIT THE QUESTIONS IN WRITING.

**ALL CONTACT CONCERNING THIS SOLICITATION SHALL BE MADE THROUGH THE PURCHASING DIVISION.**

BIDDERS SHALL NOT CONTACT CITY EMPLOYEES, DEPARTMENT HEADS, USING AGENCIES, EVALUATION COMMITTEE MEMBERS OR ELECTED OFFICIALS WITH QUESTIONS OR ANY OTHER CONCERNS ABOUT THE SOLICITATION. QUESTIONS, CLARIFICATIONS, OR CONCERNS SHALL BE SUBMITTED TO THE PURCHASING DIVISION IN WRITING. IF IT IS NECESSARY THAT A TECHNICAL QUESTION NEEDS ADDRESSING, THE PURCHASING DIVISION WILL FORWARD SUCH TO THE USING AGENCY, WHO WILL SUBMIT A WRITTEN RESPONSE.

THE PURCHASING DIVISION WILL FORWARD WRITTEN RESPONSES TO THE RESPECTIVE BIDDER OR IF IT BECOMES NECESSARY TO REVISE ANY PART OF THIS SOLICITATION, A WRITTEN ADDENDUM WILL BE ISSUED TO ALL BIDDERS.

THE CITY IS NOT BOUND BY ANY ORAL REPRESENTATIONS, CLARIFICATIONS, OR CHANGES MADE TO THE WRITTEN SPECIFICATIONS BY CITY EMPLOYEES, UNLESS SUCH CLARIFICATION OR CHANGE IS PROVIDED TO THE BIDDERS IN A WRITTEN ADDENDUM FROM THE PURCHASING MANAGER.

BIDDERS ARE INSTRUCTED TO USE THE ENCLOSED "QUESTION/CLARIFICATION FORM" TO FAX OR EMAIL QUESTION.

ANY REQUEST, AFTER A SOLICITATION HAS CLOSED AND PENDING AWARD, MUST ALSO BE SUBMITTED IN WRITING TO THE PURCHASING DIVISION.



**SPECIFICATIONS**  
**Gallops Senior Center and Pop Austin Recreation Center**  
**Roofing Project**  
**RFB No. 26-0033**

**I. SCOPE:**

Provide all labor, equipment, and materials to complete the specified work at Gallops Senior Center and Pop Austin Recreation Center, in full compliance with the project manual.

- A. Contractors are responsible for all measurements and estimating material quantities required to satisfy these specifications.
- B. The work shall commence within (30) days after award, or as agreed upon by the Contractor and Owner.
- C. The successful Contractor shall be responsible for all building permits.
- D. If a conflict arises between the RFB document and the project manuals, the more stringent requirement shall prevail.

**This RFB will be awarded in total to the lowest responsive, responsible bidder. Therefore, vendors must bid on both roof projects in order to be considered for award.**

**Refer to ATTACHMENT A**, for the Project Manual and Technical Specifications for: **Gallops Senior Center Roof Project**.

**Refer to ATTACHMENT B**, for the Project Manual and Technical Specifications for: **Pop Austin Recreation Center Roof Project**.

**Attachments begin after page 36.**

- II. INSURANCE:** The vendors shall be required, at their own expense, to furnish to the City of Columbus Purchasing Division, evidence showing the insurance coverage to be in force throughout the term of the contract. Insurance requirements are listed on the attached **Insurance Checklist**. **The limits shown are minimum limits. Vendor shall indicate the actual limit they will provide for each insurance requirement. The bidder shall complete the Insurance Checklist and include with bid response. Certificate of Insurance is acceptable.** The Insurance Checklist will indicate to the City, the bidder's ability and agreement to provide the required insurance, in the event of contract award.

The successful candidate shall provide the required Certificates of Insurance within **10 business days** after award notification. The Certificates of Insurance will name Columbus Consolidated Government as an additional insured, **as well as list the applicable project or annual contract name, and/or Solicitation name and number.** The Certificate of Insurance will be included with the contract documents prior to signing.

- III. GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT/E-VERIFY:** Pursuant to O.C.G.A. § 13-10-91, a public employer shall not enter into a contract for the performance of services unless the contractor registers and participates in the federal work authorization program. If a supplier is providing services under a contract with a total compensation amount of \$2,500 or greater, (even if such services will be performed outside of the state of Georgia), Columbus Consolidated Government requires a notarized affidavit from the supplier attesting to the following:

- (A) The affiant has registered with, is authorized to use, and uses the federal work authorization program;

- (B) The user identification number and date of authorization for the affiant;
- (C) The affiant will continue to use the federal work authorization program throughout the contract period; and
- (D) The affiant will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the same information required by subparagraphs (A), (B), and (C) of this paragraph.

Additional information regarding the State's E-Verify requirements can be found at: <https://www.audits2.ga.gov/wp-content/uploads/2021/10/13-10-91.pdf>. **A completed, notarized E-Verify Affidavit must be included with bid submittal; failure to do so will render the company's or individual's bid submittal non-responsive and ineligible for award consideration.**

**IV. INDEMNIFICATION:**

The Contractor covenants to save, defend, hold harmless, and indemnify the City, and all of its officers, departments, agencies, agents, and employees (collectively the "City") from and against any and all claims, losses, damages, injuries, fines, penalties, costs (including court costs and attorney's fees), charges, liability, or exposure, however caused, resulting from, arising out of, or in any way connected with the Contractor's intentional, negligent, or grossly negligent acts or omissions in performance or nonperformance of its work called for by the Contract Documents.

**V. BID SUBMISSION REQUIREMENTS:**

**Responses must be submitted via DemandStar.** See Appendix A (page 31) for *Submission Requirements, Submission Requirements Checklist, and DemandStar Registration and Submission Instructions*.

Each bidder shall include the following information with bid submission. Bidder shall submit **ONE (1) ELECTRONIC BID RESPONSE VIA DEMANDSTAR**. Submissions will be deemed incomplete/non-responsive if the following required documents are not included, as prescribed within the specifications: **E-Verify Affidavit, Conflict of Interest Affidavit, and Communication Concerning This Solicitation form**. However, the City reserves the right to request **any other** omitted information, **WHICH DOES NOT AFFECT THE SUBMITTED BID PRICE**.

1. **E-Verify Affidavit:** Provide a properly notarized E-Verify Affidavit (*Form 1*).
2. **Conflict of Interest Affidavit** (*Form 2*)
3. **Communication Concerning This Solicitation** (*Form 3*)
4. **Non-Collusion Affidavit:** Provide all information requested (*Form 4*)
5. **Federal Compliance:** Provide all information requested (*Form 5*)
6. **Addenda Acknowledgement:** Provide all information requested (*Form 6*)
7. **Statement of Qualifications and Work Guarantee** (*Form 7*): Provide all information requested. Refer to the project manuals for specifications regarding Workmanship, Final Inspections, Adjustments and Repair, and Acceptability of Completed Work.
8. **Insurance:** Refer to Page 12, Section II (*Form 8*).
9. **Bid Form (Pricing Page):** Provide all information requested (*Form 9A for Gallops Senior Center and Form 9B for Pop Austin Recreation Center*).
10. **Contract Signature Page:** Provide all information requested (*Form 10*).
11. **Bid Bond:** Provide a bid surety in the form of a Cashier's Check, Certified Check, or Bid Bond payable to the Consolidated Government of Columbus, Georgia in the amount of five percent (5%) of the sum of the bid submittal. The bid surety will be forfeited to the City if successful Bidder fails to execute a contract within ten (10) calendar days after award notification, or if the successful Bidder fails to furnish Performance and Payment Bonds (see page 13, section VI) within ten (10) calendar days after award notification.
12. **Warranty Information:** Provide a copy of the manufacturer's warranty on Manufacturer's letterhead.
13. **Business License:** Submit a copy of the Business License (Occupation License) that is required to conduct business at your location. If the business location is not in Georgia, vendor must provide a current copy of their

active Articles of Incorporation from the State and/or a current business license from the City/State in which business is located. If awarded the contract, the successful vendor must obtain a business license from the City of Columbus. However, If the business is not located in Muscogee County and has proof of being properly licensed by a municipality in Georgia, and paid applicable occupation taxes in that city, the vendor will not be required to pay occupation taxes in Columbus, Georgia.

If you have questions regarding this requirement, please contact the Revenue Division at 706-225- 3780.

**14. W-9 Form:** Complete and return **Page 1** of the Form W-9 ( <https://www.irs.gov/pub/irs-pdf/fw9.pdf> )

**Note:** *After award of contract by Columbus Council, the successful bidder will be notified to provide an identical hard copy of their submitted bid, with original signatures.*

## **VI. PERFORMANCE AND PAYMENT BONDS:**

The successful Bidder shall, without any additional cost to the City, furnish Performance and Payment Bonds, both in the amount of one hundred percent (100%) of the total contract amount, within ten (10) calendar days after notification of award. Such bond shall be issued from a reliable surety company, licensed to do business in the state of Georgia and acceptable to the City.

## **VII. AWARD/NOTICE TO PROCEED/FINAL INSPECTION/INVOICE**

A. Award: This RFB will be awarded in total to the lowest responsive, responsible bidder. Therefore, vendors must bid on both roof projects in order to be considered for award.

Columbus Consolidated Government (the City) will be the sole judge of the factors and will make the award accordingly. Should the successful bidder not be able to supply the required services, the City reserves the right to procure from other sources. After award of the bid by Columbus Council, the successful vendor will be required to provide a hard copy of their submitted bid, with original signatures, before the contract is executed.

B. Notice to Proceed: The Facilities Maintenance Manager (or designee) shall issue the notice to proceed with the work.

C. Final Inspection: Contractor must obtain final inspection approval from the Facilities Maintenance Manager (or designee) after work is completed and approved by Merik Building Construction Consultants.

D. Invoices: After satisfactory and completion of the work, the successful vendor shall forward an invoice to the following address. The invoice shall reference the purchase order number. Failure to reference the purchase order number may delay payment of the invoice:

Columbus Consolidated Government  
Accounting Division  
P. O. Box 1340  
Columbus, Georgia 31902-1340

## **VIII. TERMINATION OF CONTRACT**

A. Default: If the contractor refuses or fails to perform any of the provision of this contract with such diligence as will ensure its completion within the time specified in this contract, or any extension thereof, otherwise fails to timely satisfy the contract provisions, or commits any other substantial breach of this contract, the Purchasing Division Director may notify the contractor in writing of the delay or non-performance and if not cured within ten (10) days or any longer time specified in writing by the Purchasing

Division Director, such director may terminate the contractor's right to proceed with the contract or such part of the contract as to which there has been delay or a failure to properly perform.

In the event of termination in whole or in part the Purchasing Division Director may procure similar supplies or services, from other sources, in a manner and upon terms deemed appropriate by the Purchasing Division Director. The contractor shall continue performance of the contract to the extent it is not terminated and shall be liable for excess costs incurred in procuring similar goods or services.

B. Compensation: Payment for completed supplies delivered and accepted by the City shall be at the contract price. The City may withhold from amounts due the contractor such sums as the Purchasing Division Director deem necessary to protect the City against loss because of outstanding liens or claims of former lien holders and to reimburse the City for the excess costs incurred in procuring similar goods and services.

C. Excuses for Nonperformance or Delayed Performances: Except with respect to defaults of subcontractors, the contractor shall not be in default by reason of any failure in performance of this contract in accordance with its terms, if the contractor has notified the Purchasing Division Director within 15 days after the cause of the delay and the failure arises out of causes such as: acts of God; acts of public enemy; acts of the City and any other governmental entity in its sovereign or contractual capacity; fires; floods; epidemics; quarantine restrictions; strikes or other labor disputes; freight embargoes; or unusually severe weather. If the failure to perform is caused by the failure of a subcontractor to perform or to make progress, and if such failure arises out of causes similar to those set forth above, the contractor shall not be deemed in default, unless the supplies or services to be furnished by the subcontractor were reasonably obtainable from other sources in sufficient time to permit the contractor to meet the contract requirements.

Upon request of the contractor, the Purchasing Division Director shall ascertain the facts and extent of such failure, and, if such director determines that any failure to perform was occasioned by any one or more of the excusable causes, and that, but for the excusable cause, the contractor's progress and performance would have met the terms of the contract, the delivery schedule shall be revised accordingly.

**CONTRACTOR AFFIDAVIT  
E-VERIFY / GEORGIA SECURITY & IMMIGRATION COMPLIANCE ACT**

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of **Columbus Consolidated Government** has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A. § 13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

\_\_\_\_\_  
Company ID Number (*numerical, 4-7 digits*)                      Date of Authorization  
**\*\*See <https://e-verify.uscis.gov/emp/vislogin.aspx?JS=YES> to access your E-Verify Company Identification Number.**

\_\_\_\_\_  
Name of Contractor  
**Gallops Senior Center and Pop Austin Recreation Center Roofing Project – RFB No. 26-0033**  
Name of Project

**Columbus Consolidated Government**  
Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on \_\_\_\_\_, \_\_, 20\_\_ in \_\_\_\_\_ (city), \_\_\_\_\_ (state).

\_\_\_\_\_  
Signature of Authorized Officer or Agent

\_\_\_\_\_  
Printed Name and Title of Authorized Officer or Agent

*Subscribed and sworn before me on this the \_\_\_ day of \_\_\_\_\_, 20\_\_.*

\_\_\_\_\_  
*NOTARY PUBLIC*

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

**A properly completed, notarized/stamped E-Verify Affidavit must be included with bid submittal; failure to do so will render the submittal non-responsive and ineligible for further consideration.**

**CONFLICT OF INTEREST AFFIDAVIT:**

**THIS PAGE MUST BE SIGNED, NOTARIZED/STAMPED AND RETURNED WITH THE VENDOR'S BID/PROPOSAL. FAILURE TO INCLUDE THIS FORM WILL AUTOMATICALLY RENDER VENDOR'S RESPONSE NON-RESPONSIVE.**

**Pursuant to Columbus Georgia Code Part I – Charter, Appendix Two Code of Ethics and Prohibited Practices:**

I hereby declare that any person(s) employed by the City of Columbus, who has direct or indirect personal or financial interest in this solicitation, has been identified and the interest disclosed below. (Please include in your disclosure any interest which you know of).

An example of a direct interest would be a City of Columbus employee, City of Columbus City Council Member who would be paid to perform services if awarded the contract.

An example of indirect interest would be a City of Columbus employee who is related to any officers, employees principal, or shareholders of your firm or to you. (If in doubt as to status or interest, please disclose to the extent known).

**CONFLICT OF INTEREST:    YES    NO**

**Disclosed Conflict of Interests:**

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I hereby certify that the information on this form is complete and accurate. If necessary, I will provide the information required to verify this data (e.g., pay stubs, bank account statements, etc.). I, therefore, authorize such verification, and I will provide supporting documentation, if necessary.

**I hereby declare under penalty of perjury that the foregoing is true and correct.**

Executed on \_\_\_\_\_, \_\_\_\_\_, 20\_\_ in \_\_\_\_\_ (city), \_\_\_\_ (state).

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

\_\_\_\_\_  
**Signature of Authorized Officer or Agent**

\_\_\_\_\_  
**Printed Name and Title of Authorized Officer or Agent**

*Subscribed and sworn before me on this the \_\_ day of \_\_\_\_\_*

\_\_\_\_\_  
**NOTARY PUBLIC SIGNATURE**

\_\_\_\_\_  
**PRINT NAME OF NOTARY PUBLIC**

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

**COMMUNICATION CONCERNING THIS SOLICITATION**

**THIS PAGE MUST BE SIGNED AND RETURNED WITH THE VENDOR'S BID/PROPOSAL. FAILURE TO INCLUDE THIS FORM WILL AUTOMATICALLY RENDER VENDOR'S RESPONSE NON-RESPONSIVE.**

.....  
ALL QUESTIONS OR CLARIFICATIONS CONCERNING THIS SOLICITATION SHALL BE SUBMITTED IN WRITING. THE CITY WILL NOT ORALLY OR TELEPHONICALLY ADDRESS ANY QUESTION OR CLARIFICATION REGARDING BID/PROPOSAL SPECIFICATIONS. IF A VENDOR VISITS OR CALLS THE PURCHASING DIVISION WITH SUCH QUESTIONS, HE OR SHE WILL BE INSTRUCTED TO SUBMIT THE QUESTIONS IN WRITING.

**ALL CONTACT CONCERNING THIS SOLICITATION SHALL BE MADE THROUGH THE PURCHASING DIVISION.** BIDDERS SHALL NOT CONTACT CITY EMPLOYEES, DEPARTMENT HEADS, USING AGENCIES, EVALUATION COMMITTEE MEMBERS, INCLUDING NON-CCG EMPLOYEES, CONTRACTED PERSONNEL ASSOCIATED WITH THIS PARTICULAR PROJECT (I.E. ARCHITECTS, ENGINEERS, CONSULTANTS), OR ELECTED OFFICIALS WITH QUESTIONS OR ANY OTHER CONCERNS ABOUT THE SOLICITATION. QUESTIONS, CLARIFICATIONS, OR CONCERNS SHALL BE SUBMITTED TO THE PURCHASING DIVISION IN WRITING. IF IT IS NECESSARY THAT A TECHNICAL QUESTION NEEDS ADDRESSING, THE PURCHASING DIVISION WILL FORWARD SUCH TO THE USING AGENCY, WHO WILL SUBMIT A WRITTEN RESPONSE.

THE PURCHASING DIVISION WILL FORWARD WRITTEN RESPONSES TO THE RESPECTIVE BIDDER. IF IT BECOMES NECESSARY TO REVISE ANY PART OF THIS SOLICITATION, A WRITTEN ADDENDUM WILL BE ISSUED TO ALL BIDDERS.

THE CITY IS NOT BOUND BY ANY ORAL REPRESENTATIONS, CLARIFICATIONS, OR CHANGES MADE TO THE WRITTEN SPECIFICATIONS BY CITY EMPLOYEES, UNLESS SUCH CLARIFICATION OR CHANGE IS PROVIDED TO THE BIDDERS IN A WRITTEN ADDENDUM FROM THE PURCHASING MANAGER.

BIDDERS ARE INSTRUCTED TO USE THE ENCLOSED "QUESTION/CLARIFICATION FORM" TO FAX OR EMAIL QUESTION. **QUESTIONS AND REQUESTS FOR CLARIFICATION MUST BE SUBMITTED AT LEAST FIVE (5) BUSINESS DAYS BEFORE THE DUE DATE.**

ANY REQUEST/CONCERN/PROTEST, AFTER A SOLICITATION HAS CLOSED AND PENDING AWARD, MUST ALSO BE SUBMITTED IN WRITING TO THE PURCHASING DIVISION.

-----  
**I agree to forward all communication about this solicitation, in writing, to the Purchasing Division. I understand that communication with other persons, other than the Purchasing Division, will render my Bid/Proposal response non-responsive and I will no longer be considered in the solicitation process.**

**Vendor Name:** \_\_\_\_\_

**Print Name of Authorized Agent:** \_\_\_\_\_

**Signature of Authorized Agent:** \_\_\_\_\_

**NON-COLLUSION AFFIDAVIT OF PRIME BIDDER**

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

I, being first duly sworn, deposes and says that;

- 1) I am fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
- 2) Such Bid is genuine and is not a collusive or sham Bid;
- 3) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this Affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Columbus Consolidated government or any person interested in the proposed Contract; and
- 4) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this Affiant.

By: \_\_\_\_\_  
Authorized Signature Date of Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Title

\_\_\_\_\_  
Company Name

*Subscribed and sworn before me on this the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.*

\_\_\_\_\_  
*Notary Public*

*My Commission Expires:*

\_\_\_\_\_

**FEDERAL COMPLIANCE**

*In the event a procurement under this contract is federally funded, the Contractor agrees to comply with all federal statutes relating to nondiscrimination, labor standards, and environmental compliance. The Contractor will be notified if the procurement is federally funded.*

With regards to “**Rights to Inventions Made Under a Contract or Agreement**,” If the Federal award meets the definition of “funding agreement” under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

Contractor agrees to be wholly compliant with the provisions of **2 CFR 200, Appendix II**. Additionally, for work to be performed under the Agreement or subcontract thereof, including procurement of materials or leases of equipment.

Contractor shall comply and shall notify each potential subcontractor or supplier of the Contractor's federal compliance obligations. These may include, but are not limited to:

- (a) **Title VII of the Civil Rights Act of 1964 (P.L. 88-352)** which prohibits discrimination on the basis of race, color or national origin;
- (b) **Title IX of the Education Amendments of 1972**, as amended (20 U.S.C. §§ 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex;
- (c) the **Fair Labor Standards Act of 1938 (29 USC 676 et. seq.)**,
- (d) **Section 504 of the Rehabilitation Act of 1973, as implemented by Executive Orders 11914 and 11250**, which prohibits discrimination on the basis of handicaps and the Americans with Disabilities Act of 1990;
- (e) the **Age Discrimination in Employment Act of 1967 (29 USC 621 et. seq.)** and the Age Discrimination Act of 1974, as amended (42 U.S.C. §§ 6101-6107), which prohibits discrimination on the basis of age;
- (f) the **Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255)**, as amended, relating to nondiscrimination on the basis of drug abuse;
- (g) the **Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616)**, as amended, relating to the nondiscrimination on the basis of alcohol abuse or alcoholism;
- (h) **§§ 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3)**, as amended, relating to confidentiality of alcohol and drug abuse patient records;
- (i) **Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.)**, as amended, relating to nondiscrimination in the sale, rental or financing of housing;
- (j) any other nondiscrimination provisions in any specific statute(s) applicable to any Federal funding for this Agreement;
- (k) the requirements of any other nondiscrimination statute(s) which may apply to this Agreement;
- (l) applicable provisions of the **Clean Air Act (42 U.S.C. §7401 et seq.)**, the **Federal Water Pollution Control Act, as amended (33 U.S.C. §1251 et seq.)**, **Section 508 of the Clean Water Act (33 U.S.C. 1368)**, **Permits required by Section 404 of the Clean Water Act, Executive Order 11738, Endangered Species Act (P.L. 93-205)**, and the **Environmental Protection Agency regulations at 40 CFR Part 15**;
- (m) **DBE requirements found at 40 CFR Part 33, Executive Order 11246, and Equal Employment Opportunity regulations at 41 CFR § 60-4**;
- (n) applicable provisions of the **Davis-Bacon Act (40 U.S.C. 276a - 276a-7)** as it relates to cleanup activities, the **Copeland Act (40 U.S.C. 276c)**, the **Anti-Kickback Act (40 USC § 3145)**, the **OSHA Worker Health & Safety Standard (29 CFR § 1910.120)**, and the **Contract Work Hours and Safety Standards Act (40 U.S.C. 327-333)**, as set forth in Department of Labor Regulations at 20 CFR 5.5a;
- (o) applicable provisions of **Uniform Relocation Act (40 USC § 61)** and the **National Historic Preservation Act (16 USC § 470)**;
- (p) the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the **Energy Policy and Conservation Act (P.L. 94-163)**.
- (q) the Buy America sourcing requirements in the **Build America, Buy America Act (41 U.S.C. § 8301-8305)**;
- (r) the general provisions of **Section 3** offering economic opportunities for low-income persons (**12 U.S.C. 1701u**).

**To demonstrate acknowledgement and understanding of the above listed Federal Requirements, vendor is required to sign below and return with bid response:**

**Vendor Name:** \_\_\_\_\_

**Signature of Authorized Agent:** \_\_\_\_\_

**Print Name and Title of above Agent:** \_\_\_\_\_

**ADDENDA ACKNOWLEDGEMENT**

**Gallops Senior Center and Pop Austin Recreation Center  
Roofing Project  
RFB No. 26-0033**

The Purchasing Division will post addenda (if any) on the Bid Opportunities page: <https://www.columbusga.gov/finance/Bid-Opportunities>. It is the vendors' responsibility to periodically visit the page to check for addenda, **both before the due date and prior to submitting a response in DemandStar**.

**IF ADDENDA WERE ISSUED:**

By signing below, I acknowledge 1) I have received the addenda (if any) as indicated below, 2) my submittal reflects the changes to the specifications, and 3) my submittal includes the most recently revised forms:

Addendum No. ____ dated _____	Addendum No. ____ dated _____
Addendum No. ____ dated _____	Addendum No. ____ dated _____
Addendum No. ____ dated _____	Addendum No. ____ dated _____
Addendum No. ____ dated _____	Addendum No. ____ dated _____
Addendum No. ____ dated _____	Addendum No. ____ dated _____

**IF NO ADDENDA WERE ISSUED:**

By signing below, I acknowledge that I reviewed the Bid Opportunities page referenced above on \_\_\_\_\_ and did not see any addenda listed for this solicitation.

\_\_\_\_\_  
(date)

\_\_\_\_\_  
**Business Name** **Date**

\_\_\_\_\_  
**Authorized Signature** **Print Name**

**STATEMENT OF QUALIFICATIONS & WORK GUARANTEE**  
**Gallops Senior Center and Pop Austin Recreation Center**  
**Roofing Project**  
**RFB No. 26-0033**

The undersigned certified under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

Submitted to: \_\_\_\_\_

Submitted by: Company Name: \_\_\_\_\_

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

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

Qualification Statement Submitted for - Project Name: \_\_\_\_\_

**Type of Work:**

Site Preparation \_\_\_\_\_ Roofing \_\_\_\_\_ Plumbing \_\_\_\_\_ HVAC \_\_\_\_\_  
Sprinkler \_\_\_\_\_ Electrical \_\_\_\_\_ General Const. \_\_\_\_\_ Other \_\_\_\_\_  
(File separate form for each classification of work)

**Organization:**

Please provide the following information concerning your organization:

Type of Entity: Corporation \_\_\_\_\_ Partnership \_\_\_\_\_ Individual \_\_\_\_\_ Other \_\_\_\_\_

**Name of Principal, Owners or Partners**

<u>Name</u>	<u>Position</u>	<u>Years of Service with Organization</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number of years this organization has been in business? \_\_\_\_\_

Have members of this organization operated under former names/businesses? Yes \_\_\_\_\_ No \_\_\_\_\_

If "yes," list name, type of entity and names of principal, owners or partners.

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

Provide a brief description of the general type of construction the firm performs. Please indicate for this project the work you intend to subcontract or perform.

	<u>Perform</u>	<u>Subcontract</u>		<u>Perform</u>	<u>Subcontract</u>
Earth Work	_____	_____	Sprinkler	_____	_____
Concrete Work	_____	_____	Plumbing	_____	_____
Masonry Work	_____	_____	HVAC	_____	_____
Structural Work	_____	_____	Electrical	_____	_____
Roofing Work	_____	_____			

**Experience**

Please list on a separate sheet marked "ATTACHMENT A" the major construction projects your organization has in progress providing the name of project, owner, architect, contract amount, bonding company, insurance carrier, percentage complete and scheduled completion date.

Please list on a separate sheet marked "ATTACHMENT B" the major projects your organization has completed in the past five years, giving the name of project, owner, architect, contract amount, bonding company, date of completion and percentage of the cost of the work performed with your own forces.

**Insurance and Bonds**

Please list names of current insurance carrier and number of projects insured by carrier:

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Please list names of bonding company/agent utilized for projects constructed during the last five years:

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**Warranty**

Describe your Warranty and Guarantee of Work (Use additional paper if necessary) \_\_\_\_\_

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**Claims and Suits**

Has your organization ever failed to complete any construction work it has been awarded? Yes \_\_\_ No \_\_\_

Within the last five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? (If the answer is yes, please describe in full.) Yes \_\_\_ No \_\_\_

Has there been in the last ten years, or is there now pending or threatened, any litigation, arbitration, investigation, or governmental or regulatory proceeding involving claims in excess of \$100,000 or requesting a declaratory judgment or injunctive relief with respect to the construction or operation of any building which your firm, its principals, predecessors or affiliates constructed? Yes \_\_\_ No \_\_\_

Are all city, county, state and Federal taxes of any type, including real estate, FICA and Workmen's Compensation paid to date? Yes \_\_\_ No \_\_\_

Is there any potential claim, demand, litigation, arbitration, investigation, governmental proceeding or regulatory proceeding involving your firm, or its principals, predecessors or affiliates? If the answer to either of the preceding questions is "Yes," please describe in full in an attachment. Yes \_\_\_ No \_\_\_

In addition to the litigation, arbitration, investigation or governmental or regulatory proceeding referred to in the preceding paragraphs, is there any litigation, arbitration, investigation or governmental or regulatory proceeding now pending or threatened to which your firm is or may be a party, or are you aware of any potential claim or demand, which might otherwise affect the capacity of your firm to perform with respect to your involvement with the Owner, whether or not it concerns other work which you have undertaken? If so, please describe in full. Yes \_\_\_ No \_\_\_

**Bankruptcy**

Has your firm, its principals, predecessors, or affiliates been the subject of any proceeding under the federal bankruptcy laws or any other proceedings under state or federal law in which a court or government agency has assumed jurisdiction over any of the assets or business of your firm, its principals, predecessors or affiliates?

If so, please identify the proceedings, the court or governmental body and the date such jurisdiction was assumed in an attachment.

Yes\_\_\_\_ No\_\_\_\_

Name and address of firm preparing attached financial statement and date thereof.

**References**

Please list below Trade References:

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

Please list below Bank References:

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

---

**Business Name**

**Date**

---

**Authorized Signature**

**Print Name**

**INSURANCE CHECKLIST**

**Gallop Senior Center and Pop Austin Recreation Center  
Roofing Project  
RFB No. 26-0033**

**CERTIFICATE OF INSURANCE MUST SHOW ALL COVERAGE  
AND ENDORSEMENTS INDICATED BY "X"**

CSL = Combined Single Limit; BI = Bodily Injury; PD=Property Damage

Required Coverage(s)	Limits (Figures denote minimums)	Bidders Limits/Response
<b>X</b>	1. Worker's Compensation and Employer's Liability	<b>STATUTORY REQUIREMENTS</b>
	<b>Comprehensive General Liability</b>	
<b>X</b>	2. General Liability Premises/Operations	\$1 Million CSL BI/PD each occurrence, \$1 Million annual aggregate
<b>X</b>	3. Independent Contractors and Sub - Contractors	\$1 Million CSL BI/PD each occurrence, \$1 Million annual aggregate
	4. Products Liability	\$1 Million CSL BI/PD each occurrence, \$1 Million annual aggregate
<b>X</b>	5. Completed Operations	\$1 Million CSL BI/PD each occurrence, \$1 Million annual aggregate
<b>X</b>	6. Contractual Liability (Must be shown on Certificate)	\$ 1 Million CSL BI/PD each occurrence, \$1 Million annual aggregate
	<b>Automobile Liability</b>	
<b>X</b>	7. *Owned/Hired/Non-Owned Vehicles/ Employer non ownership	\$1 Million BI/PD each Accident, Uninsured Motorist
	<b>Others</b>	
	8. Miscellaneous Errors and Omissions	\$1 Million per occurrence/claim
<b>X</b>	9. Umbrella/Excess Liability	\$1 Million Bodily Injury, Property Damage and Personal Injury
	10. Personal and Advertising Injury Liability	\$1 Million each offense, \$1 Million annual aggregate
	11. Professional Liability	\$1 Million per occurrence/claim
	12. Architects and Engineers	\$1 Million per occurrence/claim
	13. Asbestos Removal Liability	\$2 Million per occurrence/claim
	14. Medical Malpractice	\$1 Million per occurrence/claim
	15. Medical Professional Liability	\$1 Million per occurrence/claim
	16. Dishonesty Bond	
	17. Builder's Risk	Provide Coverage in the full amount of contract

Required Coverage(s)	Limits (Figures denote minimums)	Bidders Limits/Response
18. XCU (Explosive, Collapse, Underground) Coverage		
19. USL&H (Long Shore Harbor Worker's Compensation Act)		
20. Contractor Pollution Liability	\$2 Million per occurrence/claim	
21. Environmental Impairment Liability	\$2 Million per occurrence/claim	
22. Pollution	\$2 Million per occurrence/claim	
<b>X</b> 23. Carrier Rating shall be Best's Rating of A-VII or its equivalents		
<b>X</b> 24. Notice of Cancellation, non-renewal or material change in coverage shall be provided to City at least 30 days prior to action.		
<b>X</b> 25. The City shall be named Additional Insured on all policies		
<b>X</b> 26. Certificate of Insurance shall show <u>Solicitation Number</u> ( <i>RFB No. 26-0033</i> ) and <u>Solicitation Title</u> ( <i>Gallops Senior Center and Pop Austin Rec Center Roof Project</i> )		

\*If offeror's employees will be using their privately owned vehicles while working on this contract and are privately insured, please state that fact in the **Bidders Limits/Response** column of the insurance checklist.

**BIDDER'S STATEMENT:**

If awarded the contract, I will comply with contract insurance requirements.

\_\_\_\_\_  
Vendor Name

\_\_\_\_\_  
Signature of Authorized Agent      Date

\_\_\_\_\_  
Title of Authorized Representative

\_\_\_\_\_  
Print Name of Authorized Agent

# FORM 9A

**BID FORM (PRICING PAGE)**  
**GALLOPS SENIOR CENTER AND POP AUSTIN RECREATION CENTER**  
**ROOFING PROJECT**  
**RFB No. 26-0033**

By signing this form, the authorized representative attests to the fact that the company has examined all agreements and specifications and has examined the site of the work; and on the basis of the agreements and specifications, the company proposes to furnish all necessary labor, materials, and equipment and will perform said work in the manner specified:

**IMPORTANT INFORMATION:**

Each bidder shall include the following information with bid submission. Bidder shall submit **ONE (1) ELECTRONIC BID RESPONSE VIA DEMANDSTAR**. Submissions will be deemed incomplete/non-responsive if the following required documents are not included, as prescribed within the specifications: **E-Verify Affidavit, Conflict of Interest Affidavit, and Communication Concerning This Solicitation form**. However, the City reserves the right to request **any other** omitted information, **WHICH DOES NOT AFFECT THE SUBMITTED BID PRICE**. Use the following checklist to verify the items are included in sealed bid:

- E-Verify Affidavit    Communications Concerning this Solicitation form    Bid Bond    Addenda Acknowledgement
- Federal Compliance form    Conflict of Interest Affidavit    Non-Collusion Affidavit    Statement of Qualifications
- Proof of Insurance    Bid Form (Pricing Page)    Contract Signature Page    Warranty Information    Business License
- W-9

**The Contractor shall accept sole and exclusive responsibility for all taxes and required bonds/surety.**

**GALLOPS SENIOR CENTER**

Item	Manufacturer of Replacement Sections	Total Sq/Ft Measured & Included in Bid	Base Bid
Roof repairs and Replacements			\$

**Unit Prices, as specified in the project manual.**

1. Unit Price No. 1 – Replacement of Existing Deteriorated Wood Blocking and/or Nailers, per board foot	\$
2. Unit Price No. 2 – Replacement of Existing Wood Decking, per square foot	\$

**Additional Bid Criteria**

We will begin the work, as specified, within \_\_\_\_\_ days after notice to proceed.

The average number of roofing crew on-site for this project will be \_\_\_\_\_ people.

Our anticipated number of actual working days to complete this project is \_\_\_\_\_ days.

# FORM 9B

**BID FORM (PRICING PAGE)  
GALLOPS SENIOR CENTER AND POP AUSTIN RECREATION CENTER  
ROOFING PROJECT  
RFB No. 26-0033**

**The Contractor shall accept sole and exclusive responsibility for all taxes and required bonds/surety.**

**POP AUSTIN REC CENTER**

Item	Manufacturer of Replacement Sections	Total Sq/Ft Measured & Included in Bid	Base Bid
Roof repairs and Replacements			\$
<b>Unit Prices, as specified in the project manual.</b>			
1. Unit Price No. 1 – Replacement of Existing Wood Blocking and/or Nailers, per board foot			\$
2. Unit Price No. 2 – Rehabilitation of Concrete Deck, per square foot			\$
3. Unit Price No. 3 – Rehabilitation of Existing Cementitious Wood Fiber Deck, per square foot			\$
4. Unit Price No. 4 – Additional Wet Roof Material Removal and Replacement without crickets on <b>Lower</b> roof areas, per square foot			\$
5. Unit Price No. 5 – Additional Wet Room Removal and Replacement without crickets on <b>Upper</b> roof areas, per square foot			\$
<b>Additive Alternate Prices, as specified in the project manual section 01 2300</b>			
6. Alternate No. 1 – Install fully adhered KEE fleeceback thermoplastic roof membrane in lieu of TPO fleeceback membrane.			\$
<b>Additional Bid Criteria</b>			
We will begin the work, as specified, within _____ days after notice to proceed.			
The average number of roofing crew on-site for this project will be _____ people.			
Our anticipated number of actual working days to complete this project is _____ days.			

<b>GALLOPS SENIOR CENTER, BASE BID:</b>	\$
<b>POP AUSTIN RECREATION CENTER, BASE BID:</b>	\$
<b>TOTAL BASE BID FOR BOTH FACILITIES</b>	\$

**Company Name**

**Authorized Signature**

**Print Name**

**Date**

**CONTRACT SIGNATURE PAGE**  
**GALLOPS SENIOR CENTER AND POP AUSTIN RECREATION CENTER**  
**ROOFING PROJECT**  
**RFB No. 26-0033**

**THE UNDERSIGNED HEREBY DECLARES THAT HE HAS/THEY HAVE CAREFULLY EXAMINED THE SPECIFICATIONS HEREIN REFERRED TO AND WILL PROVIDE ALL EQUIPMENT, TERMS AND SERVICES TO THE CONSOLIDATED GOVERNMENT OF COLUMBUS, GEORGIA.**

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Signature of Authorized Representative      Date

\_\_\_\_\_  
Title of Authorized Representative

\_\_\_\_\_  
Print Name of Authorized Signatory

(Corporate seal, if applicable)

*Company Ordering Address*

*Company Payment Address*

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

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

Contact: \_\_\_\_\_

Contact: \_\_\_\_\_

Contact Email \_\_\_\_\_

Contact Email \_\_\_\_\_

Telephone \_\_\_\_\_

Telephone \_\_\_\_\_

Fax \_\_\_\_\_

Fax \_\_\_\_\_

**CONSOLIDATED GOVERNMENT OF COLUMBUS, GEORGIA**

Accepted this \_\_\_ day of \_\_\_\_\_ 20\_\_\_

**APPROVED AS TO LEGAL FORM:**

\_\_\_\_\_  
**B.H. "Skip" Henderson, III, Mayor**

\_\_\_\_\_  
**Clifton C. Fay, City Attorney**

**ATTEST:**

\_\_\_\_\_  
**Lindsey G. McLemore, Clerk of Council**

### **DEMANDSTAR SUBMISSION INFORMATION**

**Responses must be submitted via DemandStar. See the following pages for Registering with DemandStar and Responding to an Electronic Bid in DemandStar.**

There is no cost to submit responses electronically through DemandStar; you will only incur a fee if you opt to receive e-notifications directly from DemandStar. You must select "Columbus Consolidated Government" as your free agency (see registration instructions). Solicitations may be accessed thru the DemandStar link posted at <https://www.columbusga.gov/finance/Bid-Opportunities>.

Per Georgia HB489, the Purchasing Division will continue to post solicitations on the Georgia Procurement Registry. To receive future procurement notifications, you must register with the Team Georgia Marketplace at <https://doas.ga.gov/state-purchasing/getting-started-supplier>.

Excluding responses to Requests for Information (RFI), Requests for Proposals (RFP) and Requests for Qualifications (RFQ), a tabulation of responses will be available on DemandStar shortly after the solicitation closes. The Purchasing Division will also continue to post tabulations at <https://www.columbusga.gov/finance-2/Bid-Tabulations>.

**Failure to submit electronic responses, via DemandStar, will result in the rejection of your response. Submittals received via U.S. Postal Service, FedEx, UPS, etc., will be returned unopened at the expense of the sender. The Purchasing Division will not accept hand-delivered submittals and will immediately discard any submittal left in the reception area of the Finance Department.**

## **ELECTRONIC SUBMITTAL CHECKLIST**

GALLOPS SENIOR CENTER AND POP AUSTIN RECREATION CENTER ROOFING PROJECT  
RFB No. 26-0033

### **Submit your electronic response as instructed below:**

1. Vendors shall submit **only** the required documents listed using the “**Bidder Response ALL Documents**” function.
2. **Zip files with multiple files are not acceptable**; vendors shall submit one PDF file of their submittal.
3. Due to file size limitations, please **do not resend the City’s full specifications** as this information is already on file.
4. **This is a Sealed Bid, in the event DemandStar requires a dollar value for your submittal, enter “0”.**

- 1. **E-Verify Affidavit (Form 1)\***
- 2. **Conflict of Interest Affidavit (Form 2)\***
- 2. **Communication Concerning this Solicitation (Form 3)\***
- 3. **Non-Collusion Affidavit (Form 4)\***
- 4. **Federal Compliance (Form 5)**
- 5. **Addenda Acknowledgement (Form 6)**
- 6. **Statement of Qualifications and Work Guarantee (Form 7)**
- 7. **Proof of Insurance (Form 8 or Certificate of Liability Insurance)**
- 8. **Bid Form/Pricing Page (Forms 9A and 9B) \***
- 9. **Contract Signature Page (Form 10)**
- 10. **Bid Bond\***
- 11. **Warranty Information**
- 12. **Business License (Occupation License)**
- 13. **Page 1 of Form W-9 (<https://www.irs.gov/pub/irs-pdf/fw9.pdf>)**

**\* Denotes mandatory submission requirements**

***Please note: After award of contract by Columbus City Council, awarded vendor will be notified to provide an identical hard copy of submitted bid, with original signatures.***

# Registering for DemandStar



We are pleased to announce our membership in the DemandStar network. DemandStar is an online marketplace that connects our suppliers directly to the bids, quotes and RFPs that matter to them.

DemandStar is open and accessible to all businesses and provides instant access to our solicitations. By registering for your complimentary DemandStar account, you will receive:

- **Instant** access to bids, quotes and RFPs
- **Automatic** notifications, right to you inbox, of bids that match the commodity codes you select
- The ability to **quickly view** the contractual terms and scope of work
- All the **forms and documents** you need in one place
- Access to **more government bids** in neighboring cities, counties and states

**It's EASY!** Get started with these 3 easy steps!

## 1 REGISTER

Go to:  
<https://www.demandstar.com/registration>

### Create an Account with DemandStar

You are one step away from picking your free government agency

Email Address

Company Name

I accept the DemandStar [Terms of Use](#) and [Privacy Policy](#)

**Next**



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206.940.0305

## 2 CHOOSE YOUR FREE AGENCY

Type in the name of the government agency you'd like to add, for example "City of Metropolis" in the Search Box

## 3 CHECK OUT

Check out with your **FREE AGENCY** Registration by clicking "Skip for now" on the page where it gives you options to add additional counties and States

### ← Choose Your Free Agency

Receive full access to the government agency of your choice and receive advance notifications of new opportunities.

City of Metropolis ✕

Narrow down your search by selecting a state and county.

<b>State</b>	<b>County</b>
Select State ▼	Select County ▼

- City of Metropiolis – Board of Commisioners
- City of Metropolis Purchasing
- Metropolis Technical College

You have chosen **Metropolis Technical College** as your free agency.  
Add additional government agencies below for \$25 per County,  
Statewide and National subscriptions available.

My Subscriptions  [0]

**Nation (0)**

**States (0)**

**Counties (0)**

		Your Current Rate
<b>Total</b>	(0 subscriptions)	<b>\$0/year</b>

**Proceed to Checkout**

**Skip for Now**

**SIGN UP**

Visit [www.demandstar.com](http://www.demandstar.com)



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206.940.0305

# Responding to an Electronic Bid

5 Step Instructions

## Step 1

Many governments are moving toward requiring bid responses electronically. Here are the steps to respond to a bid Electronically.

- Click on the solicitation name

The screenshot shows a web interface with a navigation bar at the top containing tabs for 'Dashboard', 'Bids', 'Quotes', 'Coming Soon! Activities', 'Coming Soon! Messages', and 'Responses'. Below the navigation bar is a large orange arrow pointing right with the word 'Bids' inside it. To the right of this arrow is a 'Sort By' dropdown menu set to 'Due Date'. Below these elements is a table of bid entries. A red arrow points to the first entry in the table.

ID	Broadcast	Due	Planholders	Watch
TSEBIDVINO24JAN01			3	Active
City of Fort Pierce - Purchasing Department, Fort Pierce, AZ				
ID:TSEBIDVINO24JAN01-6-2020/al	Broadcast: 1/24/2020	Due: 3/1/2020	Planholders: 3	Watch
AA-BB-CC-DD-EE				Active
agency2.0, Texas, FL				
ID:EBID-001-946-00-0-2020/A0	Broadcast: 2/4/2020	Due: 2/29/2020	Planholders: 0	Watch
TESTBID				Active
agency2.0, Texas, FL				

## Step 2

Once you are in the solicitation, you will see the Bid Details page that is standard for all solicitations

- When you are ready to submit your bid, click on “Submit E-Bid Proposal”

**TESTBID**

**Bid Details**

Agency Name: Agency 01  
Bid Number: 18101240  
Bid Date: 11/01/2022 2:40 PM Eastern  
Bid Opening: 11/01/2022 11:00 PM Eastern  
Bid Status: Bid Status Test

**Scope of Work**

SCOPE: 18101240

**Documents**

Filename	Type	Date Modified	Status
18101240	Attachment	02/04/2022	Complete

**Distribution Info**

Bid Bond: None  
Plan (Assignment): None  
E-bidding: Submit  
Distributed By: DemandStar  
Distribution Method: Distribution Method  
Distribution CP/State: Bid Item Group/Info associated with  
Project Estimated Budget: \$100,000.00  
Distribution Notes: None

**Publications**

View Log/Id

**Pre-Bid Conference**

No Pre-Bid Conference Data Found

**Commodity Code**

000-000-0000 - Services

**Submit E-Bid Proposal**

## Step 3

Enter information requested page-by-page and you can see what will come next via the menu bar on the left under “E-Bid Progress”

**Enter “0” as your bid (proposal) amount.**

(As cost proposals remain confidential until after contract award (if any), Columbus Consolidated Government will not consider proposed costs, fees, revenues, etc., that are entered directly into DemandStar.)

**DEMANDSTAR**

**E-Bid Response**

**Contact Information**

Company Name: Capital Construction Corporation  
Address 1: 1000 Main Street  
Address 2: Suite 100  
City: Pittsburgh  
Country: United States of America  
State/Province: Pennsylvania  
Country: PA  
Postal Code: 15202-1212  
Phone Number: 412-555-1212  
Extension: 1234  
Bid Amount: 0.00  
Alternate Bid Amount: Alternate Bid Amount  
Notes: For the full contract

**E-Bid Progress**

- Contact Information
- Documents Upload
- Review Bid

## Step 4

After you click NEXT on the Contract Information page, you will be directed to enter the documents required.

Create one (1) file containing **only** the required documents listed on the "Electronic Proposal Submission Checklist" page of the specifications and upload using the "Bidder Response ALL Documents" function.

**NOTE: Do not enter information using the "Supplemental Documents" function.**

*Due to file size limitations, please do not include the City's specification document in your uploaded response as this information is already on file. Font and page limitations may also apply.*

**BEST PRACTICE TIP:** In some instances, multiple addenda may be issued for a solicitation. To avoid having to re-upload your firm's response file multiple times, it is **recommended** that vendors upload within five (5) business days of the due date. The City posts all documents, to include addenda, on the Finance Department Bid Opportunities web page: <https://www.columbusga.gov/finance-2/bid-opportunities>. Vendors are encouraged to check the page often to ensure all addenda have been received.

## Step 5

Review Your E-Bid Response, and if everything is correct, then press "Submit Response"

You are done! And the government to which you've submitted this will download your responses and documents and see the day and time upon which you submitted your proposal.

# ATTACHMENT A



## TECHNICAL SPECIFICATIONS

FOR THE CONSTRUCTION OF

### GALLOPS SENIOR CENTER ROOF PROJECT COLUMBUS, GEORGIA

PROJECT ADDRESS: 1212 15TH ST, COLUMBUS, GA 31901

OWNER: COLUMBUS CONSOLIDATED GOVERNMENT  
602 11TH AVENUE, BLDG. A  
COLUMBUS, GA 31902-1340

CONSULTANT: MERIK, INC.  
P.O. Box 1060  
BYRON, GA 31008  
MR. JODY USRY  
JUSRY@MERIKINC.COM

MERIK No.: PROJECT No. 24CCGU22RR366

DATE: JANUARY 30, 2026  
(ISSUED FOR BID)

## SECTION 000110 - TABLE OF CONTENTS

### SPECIFICATIONS

<u>00 00 00</u>	<u>Introductory Requirements</u>
000101	Title Page
000110	Table of Contents
000115	List of Drawing Sheets
007200	General Conditions
<u>01 00 00</u>	<u>General Requirements</u>
011100	Summary of Work
012300	Price and Payment Procedures
013000	Project Management and Coordination
017000	Contract Close-out
017410	Contractor Warranty and Work Forms
<u>02 00 00</u>	<u>Existing Conditions</u>
022529	Existing Roof System Moisture Assessment
024000	Demolition
<u>03 00 00</u>	<u>Concrete</u>
035216	Lightweight Insulating Concrete (LWIC)
<u>06 00 00</u>	<u>Wood, Plastics and Composites</u>
061000	Rough Carpentry
061516	Wood Roof Deck Rehabilitation
<u>07 00 00</u>	<u>Thermal and Moisture Protection</u>
073100	Asphalt Shingle Roofing
075423	TPO Thermoplastic Membrane Roofing
076000	Flashing and Sheet Metal
079200	Sealants and Caulking
<u>09 00 00</u>	<u>Finishes</u>
099100	Exterior Painting
099653	Elastomeric Coating

### DRAWINGS

See Section 000115

**SECTION 000115 – LIST OF DRAWING SHEETS**

DRAWINGS

A000	Cover Sheet
A001	Project Information
A100	Roof Plan
A150	Wind Uplift Plan
A200	Tapered LWIC Plan
A300	Details - Typical
A301	Details – Asphalt Shingle
A302	Details – Asphalt Shingle
A303	Details – TPO
A304	Details – TPO
A305	Details – Misc.

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract and other Division 01-48 Specification Sections, and drawing diagrams apply to this Section.

1.02 INTENT AND INTERPRETATION OF THE CONTRACT DOCUMENTS

- A. The intent of these specifications is to describe the materials and methods of construction required for the performance of the work.
- B. Where discrepancies exist in the contract documents, the more stringent requirement shall apply. Refer to contract documents for appropriate procedure to obtain clarifications.

1.03 DEFINITIONS

- A. The term "Owner" is Columbus Consolidated Government and includes the Owners' authorized representative.
- B. The terms "Consultant" and "Owners Representative" refer to Merik, Inc.
- C. The term "Contractor" as used herein shall apply to the Proposer awarded a Contract to provide Work for this project. The term "Contractor" refers to the Contractor or the Contractors authorized representative for the project.
- D. The "Contract" is the entire agreement between the Owner and Contractor which consists of the Contract Documents. The Contract only includes the Owner and the Contractor and can only be changed by written Change Order signed by both parties.
- E. The term "Contract Documents" refers to the written construction contract or proposal, any required bonds, specific conditions of the contract, project Specifications, project Drawings, contract Change Orders, Owner accepted unit prices, and Owner accepted alternates.
- F. The term "Defective Work" refers to materials or products that do not meet the specific requirements of the Contract Documents including their installation and performance.
- G. The term "Project" is the entire body of work identified by the Contract Documents.
- H. The term "Project Manual" identifies all written Contract Documents provided by the Owner and Consultant to be used by the contractor to perform the Work of this Project.
- I. The term "Specifications" identifies the portion of the Contract Documents that identify, in writing, the standards of quality and performance for the products, materials, systems, and workmanship required to meet the Contract requirements for the Work of this project.
- J. The term "Work" identifies the activities required by the Contract Documents for the Project. This includes all labor, materials, equipment, and other items and services needed by the Contractor to meet the requirements of the Contract for the Project.

1.04 OWNER REPRESENTATIVE STATUS

- A. The Owner's Representative shall have general Rights of Inspection of the work and is the agent of the Owner in all matters pertaining to the work as provided in the Contract Documents.
  - B. The Owner's Representative has the authority to stop work whenever such stoppage may be necessary to ensure the proper execution of the contract and shall have authority to reject any and all materials, whether worked or unworked, if such materials are not in accordance with the plans and specifications.
- 1.05 VERIFICATION OF DIMENSIONS AND ELEVATIONS
- A. Dimensions and elevations indicated on the drawings in reference to existing structures or utilities are the best available data obtainable but are not guaranteed by the Owner's Representative and the Owner's Representative will not be responsible for their accuracy.
  - B. Before proposing on any work dependent upon the data involved, the Contractor shall field check and verify all dimensions, grades, lines, levels or other conditions of limitations at the site to avoid construction errors.
  - C. If any work is performed by the Contractor or any of his/her sub-contractors prior to adequate verification or applicable data, any resulting extra cost for adjustment of work as required to conform to existing limitations, shall be assumed by the Contractor without reimbursement or compensation by the Owner.
- 1.06 RESPONSIBILITY FOR MEASUREMENTS AND QUANTITIES
- A. The bidding Contractor shall be solely responsible for all accuracy of all measurements and for estimating the material quantities required to satisfy these specifications.
- 1.07 PROTECTION
- A. The Contractor shall use every available precaution to provide for the safety of property Owner, visitors to the site, and all connected with the work under the specification.
  - B. Existing facilities shall remain operating during the period of construction. All access roadways must remain open to traffic unless otherwise permitted.
  - C. In those areas where fluid or liquid materials will be raised to the roof area, a protective covering shall be placed from the base of the wall extending up and over the top edge of the roof. This coverage shall be wide enough to assure that the exterior walls do not become stained or soiled during roofing operations.
  - D. Barricades shall be erected to fence off all construction areas from operations personnel.
- 1.08 HOUSEKEEPING
- A. Keep materials neat and orderly.
  - B. Remove scrap, waste and debris from project area.
- 1.09 CONDITION OF SITE
- A. The bidders shall visit the site before submitting their bids and determine the field conditions affecting their work. In considering the bids, the Owner will assume that the

bidders are aware of all items, pertinent to their work and have made allowance for same in their bids.

#### 1.10 INSPECTION

- A. Where the drawings or specifications require the inspection and approval of any work in progress by the Owner's Representative, the Contractor shall give that Representative ample notice to allow for scheduling the inspection, which shall be made promptly to avoid delay of work. If work has progressed without the required inspections or approval by the Representative, it shall be uncovered for inspection at the Contractor's expense.
- B. Uncovering of work not originally inspected, or uncovering questioned work may be ordered by the Owner's Representative and it shall be done by the Contractor. If examination proves such work to be incorrectly done or not done in accordance with the plans and specifications, the Contractor shall bear all cost of the reexamination. If the work is proven correctly installed, all such expense shall be borne by the Owner.
- C. The roofing contractor shall notify building Owner, in writing of any defects in the substrate, and work shall not proceed until defects have been corrected.
- D. Do not install new roofing until all unsatisfactory conditions are corrected. Beginning work constitutes acceptance of conditions.
- E. Check projections, curbs, and substrates for inadequate anchorage, foreign material, moisture, or unevenness that would prevent quality and execution of new roofing system.
- F. Start of work by the roofing contractor shall imply approval of substrates and site conditions; and no claim in this respect will be considered valid in case of failure of the roofing components within the guarantee period.
- G. In the event that such core cuts disclose any deficiency in materials, or soundness of construction, the Contractor shall, at his/her own expense, apply additional materials or otherwise correct the deficiencies to the satisfaction of the Owner's Representative.
- H. Noncompliance with the terms of this specification and ensuing contract can result in either the cancellation of the contract, or complete replacement of the defective areas at the Contractor's expense. In the event of cancellation, the Owner will not be obligated to compensate the Contractor for any work undertaken in a defective manner.
- I. Damages caused by water infiltration resulting from the failure of the Contractor to secure each day's work in a weather tight manner, will be corrected at the Contractor's expense. Included as damages will be all labor costs incurred by the Owner as a result of such water infiltration.
- J. The Owner will require the Owner's Representative to examine the work in progress, as well as upon completion, in order to ascertain the extent to which the materials and procedures conform to the requirements of these specifications and to the published instructions of the Manufacturer.
- K. The authorized Owner's Representative shall be responsible for:
  - 1. Keeping the Owner informed on a periodic basis as to the progress and quality of the work;

2. Calling to the attention of the Contractor those matters he/she considers to be in violation of the contract requirements;
  3. Reporting to the Owner any failure or refusal of the Contractor to correct unacceptable practices;
  4. Conducting preliminary and subsequent job-site meetings with the Contractor's official job representative;
  5. Rendering any other inspection services which the Owner may designate; and
  6. Certifying, after completion of the work, the extent to which the Contractor has complied with these specifications as well as to the published instructions of the Manufacturing Company.
- L. The presence and activities of the Owner's Representative shall in no way relieve the Contractor of his/her contractual responsibilities.

#### 1.11 SAFETY PRECAUTIONS

- A. All Owners' safety rules shall be adhered to in the execution of this work. Adequate protection shall be provided, to prevent burns and skin irritation, in accordance with safety requirements.
- B. Safety Requirements
1. TORCHES OR ANY TYPE OF OPEN FLAME IS NOT PERMITTED ON THIS PROJECT.
  2. All application, material handling, and associated equipment shall conform to and be operated in conformance with OSHA safety requirements.
  3. Comply with federal, state, local and Owner fire and safety requirements.
  4. Advise Owner whenever work is expected to be hazardous to Owner's employees and/or operations.
  5. Maintain proper fire extinguisher within easy access whenever power tools are being used.
  6. ALL SAFETY REQUIREMENTS OF THE OWNER MUST BE FOLLOWED. NO EXCEPTIONS WILL BE PERMITTED. SAFETY ORIENTATION MEETING REQUIRED PRIOR TO PERFORMING ANY WORK.
  7. THE CONTRACTOR SHALL "HOLD HARMLESS" THE DESIGN PROFESSIONAL AGAINST ANY LITIGATION ARISING FROM ANY ACCIDENTS DURING THE COURSE OF THE CONTRACT.
- C. The Contractor shall be responsible for guarding against fires, and shall provide suitable fire extinguishers conveniently located at the site.
- D. Competent operators shall be in attendance at all times equipment is in use. Materials shall be stored neatly in areas designated by the Owner and dispersed so as to present a minimum fire hazard.
- E. Loads placed on the roof at any point shall not exceed the safe load for which the roof is designed.
- F. Contractor shall conform to requirements as designated by the United States Federal Government (O.S.H.A.). Contractor shall abide by all regulations as outlined in the O.S.H.A. handbook and shall have a handbook on location at all times.

- G. Contractors hereby acknowledged that they and their workers have undergone Safety Training and shall at all times act in compliance with all NRCA recommended safety compliance rules and regulations.
  - H. The Contractor shall properly notify all employees of conditions relating to roof areas with very poor condition and which will be worked on. After such notification, the Contractor must take all necessary precautions to ensure the safety of his/her employees as well as the building personnel.
- 1.12 ROOF TRAFFIC
- A. After work on roof is started, no traffic will be permitted on the roof other than that necessary for the roofing application and inspection.
    - 1. Materials shall not be piled on the roof to the extent that design live loads are exceeded.
- 1.13 PRODUCT DELIVERY, STORAGE, AND HANDLING
- A. Proper storage on or off the site shall be the responsibility of the roofing contractor.
  - B. Refer to the specified requirements of Sections 01-48 of this project manual.
- 1.14 WORK SEQUENCE
- A. Once work is started on a roof or section, it shall continue without undue delay until that section is completed before starting another. The installation of flashings shall follow application of the roofing immediately.
  - B. Coordinate sequence of roofing work with Owner prior to start of work.
- 1.15 MISCELLANEOUS UTILITIES
- A. Electrical power will be furnished by the Owner for small tools only. All connections to the electrical system will be furnished by the Contractor.
  - B. The Owner will furnish potable water. Any connections to the water system shall be the responsibility of the Contractor.
  - C. At the completion of the work, or when the above connections are no longer required, the Contractor shall remove all connections and leave the facilities in a condition at least as satisfactory as prior to the commencement of his/her work.
  - D. The Contractor will provide toilet facilities.
    - 1. The Contractor will be responsible for supplying a portable toilet on the job-site.
    - 2. The Contractor's personnel are not permitted to enter the building without proper authorization from the Owner or Owner's Representative.
- 1.16 SITE SAFETY
- A. The Owner requires the Contractor to take all steps necessary to ensure the safety of people on the project property in areas adjacent to the Contractor's work areas. The safety of all people in or around the project site is expected to be the Contractor's highest priority at all times.
  - B. This includes, but is not limited to the following;
    - 1. Preventing access to the work area.

2. Limiting access to areas adjacent to the work area. Use of safety mechanism such as warning signs, safety cones, safety fences, safety flags, etc.

1.17 CHANGES OR EXTRA WORK

- A. The Owner may, without invalidating the original contract, order such changes or additions as may from time to time be deemed desirable. In so doing, the contract price shall be adjusted, as stated below, with all work being done under the conditions of the original contract except for such adjustments in extension of time as may be acceptable to the Owner. The value of such extra work shall be determined in one of the following ways:
  1. By firm price adjustment.
  2. By cost plus with a guaranteed maximum.
  3. By cost with a fixed fee.
  4. By unit cost.
- B. If agreement is reached that the extra cost shall be handled as per methods 2, 3, or 4, the Contractor shall keep and compile a correct amount of the cost together with such vouchers, etc., as may be necessary to substantiate same for presentation to the Owner.
- C. The Owner's Representative shall have authority to make minor job changes or additions as may be necessary to expedite the job providing such changes do not involve additional material cost.
- D. No major change or addition shall be made except upon receipt by the Contractor of a signed order from the Owner authorizing such a change. No claims for an extra to the contract price shall be valid unless so authorized.

1.18 CORRECTION OF WORK PRIOR TO FINAL PAYMENT

- A. The Contractor shall promptly remove any work that does not meet the requirements of the plans and specifications or is incorrectly installed or otherwise disapproved by the Owner or the Owner's Representative as failing to meet the intent of the plans and specifications. The Contractor shall promptly replace any such work without expense to the Owner and shall bear the cost of making good all work of other contractors, or the Owner, destroyed or damaged by such removal or replacement.

1.19 DEDUCTION FOR UNCORRECTED WORK

- A. If the Owner deems it unacceptable to have the Contractor correct work that has been incorrectly done, a deduction from the contract price shall be agreed upon therefore. Such a deduction from the contract price shall in no way affect the Contractor's responsibility for defects that may occur nor his/her ability for correcting them, and damage caused by them.

1.20 CORRECTION OF WORK AFTER FINAL PAYMENT

- A. The Contractor shall provide the specified warranties for this project in order to address deficiencies in the work of this project after the Owner makes final payment to the Contractor.

1.21 LIENS

- A. The Contractor shall furnish the Owner with a release in full of all liens arising out of this contract or in lieu thereof, and receipts in full for all materials and labor on the job. In either case, the Contractor shall furnish an affidavit that the liens or receipts include all the labor and material for which a lien could be filed. In lieu of the above, the Contractor may at his/her option furnish a bond to indemnify the Owner against all hazards of liens. Neither part nor final payment shall in any way release the Contractor from the above obligation and in the event that part or full payment has been made and any lien remains un-discharged, the Contractor shall refund to the Owner the necessary funds to discharge such a lien including all cost and attorney's fees.

#### 1.22 JOB CONDITIONS

- A. There is NO SMOKING allowed on the project property, and the Contractor shall be responsible for enforcement of this job rule at all times with his/her personnel.
- B. Ladders: Any ladders used on this project must be in good condition. The ladder must also be secured at the roofline at all times while in use. All ladders must be O.S.H.A. approved.
- C. No drugs or alcoholic beverages are permitted on the grounds.
- D. The Contractor shall place necessary barriers and/or protection around or under all work areas where his/her operations involve risk of injury to plant personnel.
- E. The Contractor will also protect the building structure from damage in the process of the job. In the event that damage does occur to any property or equipment, or the Owner's work in process, notification must be made within two (2) working days of the incidents to the Owner and Owner's Representative.
- F. During the progress of the job, if waste material and rubbish are found or damage resulting from the Contractor's operations is found, or the Contractor does not comply with the requirement by keeping the premises free of accumulations and correct the damage, it shall be the Owner's prerogative to hire personnel to do so; and the cost of this work will be deducted from the balance due the Contractor.
- G. The Contractor is responsible for protecting all materials from the elements. If any material becomes wet, it cannot be installed and must be replaced at the Contractor's expense. NOTE: Roofing materials must be covered with waterproof tarps at the end of each workday. Plastic wrappers supplied by the manufacturer are not acceptable substitutes for tarps. The Owner's Representative will reject any covering method or material that does not adequately protect roofing materials.
- H. Anyone guilty of willful destruction or unlawful removal of Owner's property will be dismissed from the job and is subject to prosecution by law.
- I. The Contractor must verify that all materials can be installed to accommodate the building design, governing codes and regulations, and the manufacturer's current recommendations. In the event of a conflict the more stringent shall govern.
- J. The Contractor will ensure that all substrates are clean, dry, sound, smooth, and free of dirt, debris, and other contamination before any materials are supplied.

#### 1.23 WORKMANSHIP

- A. All materials will be securely fastened and placed in a watertight, neat and workmanlike manner. All workmen shall be thoroughly experienced in the particular

class or work upon which they are employed. All work shall be done in accordance with these specifications and shall meet the approval of the Owner or Owner's Representative. The Contractor's representative or job supervisor shall have a complete copy of specifications and drawings on the job-site at all times.

- B. Contractor shall plan and conduct the operations of the work so that each section started on one day is complete and thoroughly protected before the close of work for that day.

#### 1.24 WORK HOURS AND DAYS

- A. When the Contract is awarded, the Contractor will contact the Owner's Representative to arrange the work schedule and the hours of the day that the workers may be on the building.

#### 1.25 COMPLIANCE WITH LAWS

- A. The Contractor shall give notices, pay all fees, permits and comply with all laws, ordinances, rules and regulations bearing on the conduct of work.

#### 1.26 OWNER'S RULES

- A. The Contractor and all his/her personnel/agent(s) shall abide by all rules created by the Owner.
- B. The Contractor must contact the Owner's Representative for specific information regarding the rules governing all operations of the project.

#### 1.27 ANTI-DISCRIMINATION IN EMPLOYMENT

- A. Contractors and subcontractors shall not discriminate against any employees or applicant for employment, to be employed in performance of his/her contract, with respect to his/her hire, tenure, terms, conditions or privileges of employment because of his/her race, color, gender, sexual preference, religion, national origin, or ancestry.

#### 1.28 FINAL INSPECTION

- A. Upon completion of the installation, an inspection shall be made by a representative of the roofing manufacturer to ascertain that the roofing system has been installed according to the roofing system warrantor's published specifications and details. The warranty will be issued upon approval of the installation and payment for all materials and fees.

#### 1.29 ADJUSTMENT AND REPAIR

- A. Any roofing damaged or misapplication shall be repaired or replaced as designated by the building Owner and roofing system warrantor. Repairs or replacement will be made by the contractor at no expense to building Owner.

#### 1.30 DISCREPANCIES AND ADDENDA

- A. Should a Bidder find any discrepancies in the Drawings and Specifications, or should he be in doubt as to their meaning, he/she shall notify the Owner's Representative at once, who will send a written Addendum to all Bidders concerned. Oral instructions or decisions, unless confirmed by Addenda, will not be considered valid, legal or binding.

- B. No extras will be authorized because of the Contractor's failure to include work called for in the Addenda in his/her bid.
  - C. It shall be the responsibility of all Bidders to call to the Owner's Representative's attention at the pre bid meeting, any discrepancies which may exist between or with any of the contract documents, or any questions which may arise as to their true meaning.
  - D. Modifications to the specifications (if necessary) will be followed by an addendum; no verbal discussions or agreements shall be recognized.
- 1.31 TERMINATION BY THE OWNER FOR CAUSE
- A. The Owner may terminate the Contract and finish the work by whatever reasonable method he/she deems necessary if the Contractor:
    - 1. Persistently or repeatedly refuses to supply specified materials or to provide enough skilled workers to ensure the project will be completed within the time period indicated on his/her Bid form;
    - 2. Is guilty of substantial breach of any provision of the project documents.
- 1.32 TAXES
- A. Contractor must comply with all state, federal and local taxes. The Contractor shall accept sole and exclusive responsibility for any and all state and federal taxes with respect to Social Security, unemployment benefits, withholding taxes and sales taxes.
- 1.33 BUILDING PERMITS
- A. The acquisition of the applicable permits and associated costs to obtain said permits will be the responsibility of the successful Contractor.
- 1.34 JOB COORDINATION
- A. Contractor is responsible for daily communication with the Owner or Owner's Representative relating to areas of roof work in order that the Owner may adequately protect tenant's personal belongings, and the people themselves against possible damage or injury. Contractor is also responsible for policing and protecting areas involving removal and replacement of roof projections, defective substrates or other work involving substrates penetration.
  - B. Seventy-two hours prior to starting of the project and/or delivery of materials, the Contractor shall notify the designated Owner's Representative.
- 1.35 CLEAN-UP
- A. Accumulated debris shall be removed periodically to assure maximum safety and sanitation at all times. At completion of work, the Contractor shall remove all excess material and debris from the site and leave all roof surfaces free from accumulations of dirt, debris and other extraneous materials. The Contractor shall also remove any and all drippage of fluid materials from the face of the buildings, floor, window, ladders and other finished surfaces.
- 1.36 SUPERINTENDENT
- A. The Contractor shall keep a competent non-working, English language speaking superintendent, satisfactory to the Owner and Owner's Representative, on the job at

all times when work is in progress. The superintendent shall not be changed without notifying the Owner and the Owner's Representative.

- B. The superintendent shall attend all meetings beginning with the pre-installation meeting.
- C. The superintendent shall represent the Contractor in his/her absence and all directions and instructions given to the superintendent shall be as binding as if given directly to the Contractor.
- D. The superintendent shall be responsible for the conduct of all the Contractor's employees on the premises and shall promptly take necessary measures to correct any abuses called to his/her attention by the Owner.

#### 1.37 ACCEPTABILITY OF COMPLETED WORK

- A. The acceptability of completed roofing work will be based on its conformance to the contract requirement.
- B. The Owner and Owner's rep are not obligated to accept non-conforming work, and such non-conforming work may be rejected.
  - 1. The rejected work shall be promptly replaced or corrected in a manner and by methods approved by the Owner's rep at the Contractor's expense.
- C. The Owner's rep will instruct the Contractor's foreman and work crew on the proper methods of installation of the roofing system, and will follow-up on a regular basis to inspect the work being done.
- D. Any deficiencies from the specified work noted by the Owner's rep will be immediately reported to the Owner, along with recommended corrective actions necessary.
- E. The Owner's rep will not act in a supervisory capacity, and will not be responsible for the Contractor's errors or omissions.

END OF SECTION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Extent of Work: The Work includes reroofing and related repairs throughout all roof areas of the facility.
- B. Base Bid: At the low-slope roof areas, the work consists of demolition of selected existing roofing materials, inspection and repair of exposed substrates and roof decks, removal of loose aggregate from the existing built-up roofing, application of tapered Lightweight Insulating Concrete (LWIC) and installation of a new 20-year warranty fully-adhered fleeceback TPO roof system. At the steep-slope roof areas, the work consists of demolition of the existing roof shingle, inspection and repair of exposed substrates and roof decks, and installation of a 40-year warranty laminated asphalt shingle system over synthetic underlayment. The Base Bid includes additional miscellaneous scope of work items including sealant and sheet metal installation and elastomeric coating application to masonry above roof areas.
  - 1. Section 024000 - Demolition
  - 2. Section 022529 - Existing Roof System Moisture Assessment
  - 3. Section 035216 - Lightweight Insulating Concrete (LWIC)
  - 4. Section 061000 – Rough Carpentry
  - 5. Section 061516 - Wood Roof Deck Rehabilitation
  - 6. Section 073100 – Asphalt Shingle Roofing
  - 7. Section 075423 – TPO Thermoplastic Roofing
  - 8. Section 076000 - Flashing and Sheet Metal
  - 9. Section 079200 – Sealants and Caulking
  - 10. Section 099100 – Exterior Painting
  - 11. Section 099653 – Elastomeric Coating
- C. Alternate Bid: Refer to Section 012300.
- D. Applicable standards and code requirements
  - 1. IBC – International Building Code, with Georgia Amendments
  - 2. IECC – International Energy Conservation Code
  - 3. OSHA – Occupational Safety and Health Administration
  - 4. ASTM – ASTM International (formerly American Society for Testing and Materials)
  - 5. ANSI – American National Standards Institute
  - 6. SMACNA – Sheet Metal Air Conditioning Contractors National Association, Inc.
  - 7. NRCA – National Roofing Contractors Association

1.2 RELATED SECTIONS

- A. Section 007200 – General Conditions
- B. Section 012300 - Price and Payment Procedures
- C. Section 013000 – Project Management and Coordination
- D. Section 017000 – Contract Closeout
- E. Section 017410 – Contractor Warranty

1.3 CONTRACTOR QUALIFICATIONS: Prior to contract award, the apparent low bidder shall furnish proof that he meets the following qualifications:

- A. The Contractor shall have been in business under the present company name for a minimum of five (5) years and shall NOT have been judged in default on construction contract within that time. Contractor shall be licensed to do business in the State of Georgia.
- B. The Contractor and/or sub-contractor(s) shall have completed at least three (3) projects of similar scope, size, and complexity. These projects shall be governmental, institutional, or commercial work (NOT Residential) involving reroofing and sheet metal work.
- C. The Contractor's Superintendent shall have at least five (5) years experience as Superintendent on projects of similar scope and complexity as this project and shall have been the Superintendent on at least one facility that includes work comparable to this project. Contractor's Foreman shall be present at the pre-construction meeting and shall be present FULL TIME at the job site for the duration of the project.
- D. Any sub-contractor for the work as described above shall meet these same qualifications. The apparent low bidder shall submit a list of qualified sub-contractors with proof of insurance certificates and copy of their respective commercial license within 10 calendar days of written Notice to Proceed.
- E. The Contractor and all sub-contractors shall pay all sales; consumer, use and other similar taxes required by law and shall pay any state, municipal and/or county business taxes, if any, as well as applicable municipal, county or other Authority Having Jurisdiction (AHJ) permit fees.

1.4 QUALITY ASSURANCE

- A. Roof System shall be UL Class A listed and meet the wind uplift requirements of ASCE-7 and FM 1-90.
- B. The Contractor shall obtain permits as required in the construction of the specified scope of work. The Contractor shall obtain review of the construction drawings by a licensed Architect or Design Professional when required by State authorities.
- C. Pre-construction conference: Prior to the start of work, a conference to be attended by all affected parties shall be held at the jobsite with the intent of coordinating activities to minimize disruptions to the building tenants. The Superintendent, roofing foreman and sheet metal foreman shall be present.
  - 1. The conference will not be held unless the Superintendent and Foremen are present. If the installation Superintendent and Foremen are different from those who attended the preconstruction conference, a new preconstruction conference will be held prior to the start of work. The cost for each additional conference is \$2,000 and shall be paid by the Contractor via deductive change order.

- D. Inspection: Upon completion of the installation, an inspection shall be made by the Owner's representative to ascertain that the materials have been installed according to approved specifications and details. The inspection shall be scheduled only after receipt, by the Design Professional, of the Contractor's completed punch list. Upon approval of the project, the required warranties shall be issued. Work judged unsatisfactory requiring a second final inspection shall be charged to the Contractor at \$2,000 per inspection.

#### 1.5 WARRANTY

- A. Refer to Section 017410.

#### 1.6 SITE CONDITIONS

- A. Tear off, disruptive noises and use of solvated adhesives shall not interfere with use of the building.

#### 1.7 DEFINITIONS

- A. Contractor is the business entity providing all labor, materials, equipment, and services to complete the Work as specified in the Contract Documents.
- B. Ponding water shall be considered to occur when free water remains on the roof longer than 48 hours.

#### 1.8 BASE BID SCOPE OF WORK

##### A. General

1. The Contractor shall provide a written disaster relief plan designating their agent for emergency response management. The responder will be a company operating in good standing with the State of Georgia DOAS. Refer to Section 013000 Part 1.
2. Contractor shall be responsible for protecting the existing adjacent roof areas that are trafficked over for executing this work.
3. Provide protection for interior spaces below work areas and ensure roof work, penetrations, fasteners, etc. do not damage existing ceiling fixtures, finishes and other appurtenances.

##### B. Section 022529 – Existing Roof System Moisture Assessment

1. Provide third-party moisture survey of all low slope roof sections to be recovered.

##### C. Section 024000 - Demolition

1. At low-slope roof areas, remove the existing loose gravel and prepare the surface of the existing BUR roof for installation of the new roof system.
  - a. Provide third-party roof moisture survey following removal of loose gravel and prior to installation of the LWIC and remove wet roofing materials based on the results of the moisture survey (match existing materials and comply with new roof system and LWIC manufacturer requirements).
  - b. Where exposed, inspect existing decking; replace defective decking on a unit cost basis.
  - c. Abandon existing internally piped roof drains except those within the mechanical screenwall area. Plug drain outlets and fill drain bodies with insulation flush with existing roof surface.
  - d. Maintain existing internally piped roof drains within the mechanical screenwall area.

2. At steep-slope roof areas remove and replace existing asphalt composition shingles with new laminated architectural asphalt shingles over synthetic underlayment.
    - a. Inspect and replace damaged roof decking prior to installation of asphalt shingle system.  
Replace defective decking on a unit cost basis
  3. Remove the existing sheet metal perimeter, drainage and penetration flashings, including copings, expansion joint caps, counter flashings, pitch pans, metal edge, scuppers, conductor heads, gutters and downspouts, etc.
  4. Inspect and remove existing damaged blocking and nailers at roof edges, roof dividers/expansion joints, curbs, equipment, or other locations.
  5. Remove existing roof accessories, including expansion joint membranes and flashings, ridge caps, multi-port HVAC penetrations, etc.
  6. Adjust conduits, curbs, stacks, gas piping, etc. as necessary to accommodate new roofing elevations.
- D. Section 035216 – Lightweight Insulating Concrete (LWIC)
1. Install a base layer of cellular lightweight insulating concrete (LWIC) nominal 2” thick over the prepared existing roof surface with tapered embedded EPS insulation in the LWIC to provide slope to drain per the thicknesses indicated on the Drawings.
  2. Provide wood nailer stop/screed at perimeter of LWIC at edge conditions, drain sumps, etc. as required to accommodate existing conditions and manufacturer requirements.
  3. At abandoned curbs to remain, slope LWIC to top of curbs to allow installation of roofing continuous from field and over curbs and plywood installed over openings.
- E. Section 061000 – Rough Carpentry
1. Install new wood nailers equal in thickness to the height of the new roof system.
  2. Raise existing curbs at RTUs, curbs, skylights, and similar to 8-inches minimum above new roof surface. HVAC and Mechanical work to be performed by a Contractor licensed by the State for non-restricted commercial work.
  3. Install wood nailers as required on the top of parapet walls to receive sheet metal coping/edge metal.
  4. Install replacement wood nailers and blocking at damaged areas.
- F. Section 073100 – Asphalt Shingle Roofing
1. Install new asphalt shingles, synthetic underlayment and associated accessories to match existing and as required to facilitate installation of the low-slope roof system as shown on the Drawings and described herein.
  2. Provide through-deck ridge vents at shingle roof areas.
  3. Provide through-deck roof edge vent with self-adhering membrane leak barrier strip.
  4. Provide self-adhering subflashing for asphalt shingle roof areas at valleys, roof edges, roof transitions, vent perimeters, and other areas where indicated on the drawings.

5. At high-slope mansard screenwall, inspect and repair damaged sheathing, provide self-adhering membrane underlayment over sheathing, provide two-piece sheet metal receiver with removable counterflashing skirt at base of wall, and attach asphalt shingles as required by the shingle manufacturer for high-slope mansard conditions.
  6. Provide two-piece prefinished sheet metal drainage edge with removable lower skirt flashing at interface between low-slope and steep-slope roof areas. Provide self-adhering underlayment at transition and termination of the shingle roofing, extended up the face of nailers and lapped by the TPO roofing.
- G. Section 075423 – TPO Thermoplastic Membrane Roofing
1. Abate wet thermal insulation and roofing at all wet areas as indicated on Section 02 2529. Match existing materials and comply with new roof system manufacturer requirements.
  2. Prepare all substrates for new roof membrane system installation, in accordance with new membrane manufacturer technical recommendations for specified warranty, including but not limited to removal of loose mineral granules and other materials and residues not acceptable for adhesion of new thermoplastic membrane roofing system.
  3. Provide any warranting manufacturer required third party pull testing in accordance with thermoplastic membrane roofing system specified requirements.
  4. Install standard color, fully-adhered, 115 mil (nominal 60 mil exclusive of backing) TPO fleeceback thermoplastic roof membrane and all membrane flashings and accessories as specified and shown in the construction drawings and specified herein.
  5. Install new roof membrane curb flashings, base flashings, and penetration flashings.
  6. Install liquid-applied flashings/custom flashings at low flashing height conditions per roofing manufacturer requirements as required for warranty coverage.
  7. Picture frame motorized RTUs with roofing manufacturer's premium walkway/protection pad. Install walkway protection pad at roof access points, at the base of roof ladders, roof hatches, and downspout discharges. Provide protection pad between roof access points and other access points, ladders, and motorized RTUs to provide continuous pathway.
  8. Roof drains and subsurface downspout discharge locations to remain:
    - a. Inspect and water test all roof drains and subsurface downspout discharge to remain to confirm they are watertight and functioning properly (notify Owner's representative of any damaged or improperly functioning drainage features prior to roofing those areas).
    - b. Inspect and secure drain bodies, boots and couplings below the deck as required.
  9. At existing internally piped roof drains to remain, reuse existing drains, clean drain bowl and clamping rings, and replace missing or damaged hardware as required, or install retrofit roof drains at existing drain locations (Contractor's Option).
  10. Replace sheet metal perimeter, drainage, and flashing components, including copings, metal edge, counterflashings, trim, gutters downspouts and conductor heads, etc. Refer to Section 076000.
  11. Coordinate and flash new replacement HVAC unit with Owner's HVAC contractor.
    - a. All HVAC and related piping work shall be performed by a third-party mechanical contractor licensed by the State for non-restricted commercial work.

12. Install sloped LWIC or tapered polyisocyanurate insulation crickets or saddles between drainage points and on the upslope side of curbs and similar roof conditions that would block the flow of water and hold water.
13. Install sumps at existing primary drains and scuppers (do not install sumps at overflow drains or scuppers).
14. Extend roof membrane up and over backside of mansard screenwall lapping self-adhering underlayment and install new shop-fabricated prefinished sheet metal coping or prefabricated factory edge metal (Contractor's Option).
15. Where thermoplastic roofing interfaces with continuing asphalt shingle roofing upslope, extend TPO roofing min. 36" upslope and hold back shingles 8".

H. Section 076000 - Flashing and Sheet Metal

1. General: Sheet metal expansion joint covers, copings, edge metal, counter flashing, pitch pans, scupper sleeves, gutters/downspouts, throughwall flashings, etc. shall be fabricated as specified and shown in the construction drawings and per SMACNA requirements otherwise, and where applicable, meet ANSI/SPRI requirements.
2. Install perimeter and penetration sheet metal flashing materials.
3. Replace sheet metal copings, edge metal, counterflashing and trim.
4. At counterflashing conditions, provide two-piece counterflashing consisting of pre-finished sheet metal receiver with lower pre-finished sheet metal counterflashing skirt attached to the receiver.
5. Provide watertight sheet metal rain collars over pitch pockets/pitch pans.
6. Install new pillow block supports under conduit, gas, pipe and condensate lines.
7. Plumb condensate lines to nearest drain, gutter, throughwall-scupper or downspout leader, or off the building at a location approved by the Owner.
8. At sheet metal copings and edge metal provide continuous, watertight underlayment consisting of roof flashing membrane or self-adhering flashing membrane.
9. Provide pre-fabricated side entry portal covers for HVAC line hoods at existing HVAC/condensing units, with concrete pad over roofing protection course under units.
10. Replace sheet metal gutter and downspouts at locations indicated on the drawings and specified herein. Provide prefinished sheet metal gutter and downspouts (maximum downspout elbow angle 75 degrees). Provide concrete splashblocks at downspout discharge locations.

I. Section 079200 - Sealants and Caulking

1. Install the specified sealant at locations indicated on the construction drawings and as specified herein.
2. Seal exposed non-gasketed fasteners, rivets, and other wall or flashing penetrations and fasteners above the roofing.

3. Install pre-formed silicone seals at terminations of sheet metal copings that abut other components.
- J. Section 099100 – Exterior Painting
1. Prep, prime and paint steel components within the roof work areas, including equipment supports, roof hatch frames and covers, steel vent/stacks, curb covers, etc.
  2. Repaint fixtures, fasteners, tie-backs and other steel items above the roof areas and attached to the roof structure that are presently painted; repaint downspout boots at grade where present.
- K. Section 099653 – Elastomeric Coating
1. Apply clear, breathable, silicone-based elastomeric coating to masonry walls above roofing and at locations indicated on the drawings and herein.
  2. Prior to applying the coating, clean the wall surfaces, repair missing or damaged mortar joints, and seal all joints, cracks, voids, penetrations and wall-mounted fixtures with sealant compatible with the coating.

## PART 2 - PRODUCTS

### 2.1 APPROVED PRODUCTS

- A. Subject to compliance with the specified requirements, products of the following manufacturers are approved.
- B. Section 035216 – Lightweight Insulating Concrete (LWIC)
1. Siplast; 14911 Quorum Dr., Suite 600 Dallas, TX 75254, 1.800.922.8800 [www.siplast.com](http://www.siplast.com)
  2. Aerix Industries, 7020 Snowdrift Rd., Allentown PA 18106, 804-740-6772.
  3. Elastizell Corporation of America, P.O. Box 1462, Ann Arbor MI 48106, (734) 761-6900.
- C. Section 073100 – Asphalt Single Roofing
1. GAF Materials Corporation, 1361 Alps Road, Wayne, NJ 07470, Tel. 800-766-3411, [www.gaf.com](http://www.gaf.com)
  2. Owens Corning Corp., 1 Owens Corning Pkwy., Toledo, OH 43604, telephone 800-438-7465, [www.owenscorning.com](http://www.owenscorning.com)
  3. CertainTeed Corporation, 20 Moores Road, Malvern, PA 19355, telephone 800-233-8990, [www.certainteed.com](http://www.certainteed.com)
- D. Section 075423 - TPO Thermoplastic Roofing
1. Carlisle Syntec, PO Box 7000, Carlisle, PA 17013, Tel. 800-479-6832, [www.carlisesyntec.com](http://www.carlisesyntec.com)
  2. Siplast; 1000 Rochelle Blvd., Irving TX 75062, +1 (469) 995-2200, 1.800.922.8800 [www.siplast.com](http://www.siplast.com)

3. Johns Manville Corporation, PO Box 5108, Denver, CO 80217, Tel 303-978-2000
4. GAF Materials Corporation, 1361 Alps Road, Wayne, NJ 07470, Tel. 800-766-3411, [www.gaf.com](http://www.gaf.com)
5. Elevate (formerly Firestone Building Products), 250 West 96th Street, Indianapolis, IN, 46260, Tel. 800-428-4442

E. Section 076000 – Flashing and Sheet Metal

1. Expansion joint covers, copings, counter flashing, pitch pans, scupper sleeves, gutters/downspouts, throughwall flashings, etc. shall be fabricated as specified and shown in the construction drawings and per SMACNA requirements otherwise, and where applicable, meet ANSI/SPRI requirements.

F. Section 079200 – Sealants and Caulking

1. Sika/Master Builders Solutions, Inc., 201 Polito Avenue, Lyndhurst, NJ, 07071 Tel: 201-933-8800, fax: 201-804-1076.
2. Tremco, Inc., 3735 Green Road Beachwood, OH 44122, Tel: 216-292-5000, fax: 216-766-5543.
3. GE / Momentive Performance Materials, 260 Hudson River Road Waterford, NY 12188. Web Site [www.siliconeforbuilding.com](http://www.siliconeforbuilding.com)
4. Dow Silicones Corporation, Corporate Center, 2200 W. Salzburg Rd., PO Box 994 Auburn MI 48611, Tel. 800-248-2481 [www.dowcorning.com](http://www.dowcorning.com)
5. Pecora Corporation, 165 Wambold Road, Harleysville, PA 19438, Tel. 800-523-6688, [www.pecora.com](http://www.pecora.com)

G. Section 099100 – Exterior Painting

1. Benjamin Moore & Company, 101 Paragon Drive, Montvale, NJ 07645 Tel: 201-573-9600 Fax: 201-573-9046, [www.benjaminmoore.com](http://www.benjaminmoore.com)
2. PPG Architectural Coatings, One PPG Place, Pittsburgh PA 15272, [www.ppgac.com](http://www.ppgac.com), (800) 441-9695.
3. Sherwin Williams Company, 101 Prospect Avenue, Cleveland, OH 44115, Tel. 800-524-5979, [www.sherwin-williams.com](http://www.sherwin-williams.com) .

H. Section 099653 – Elastomeric Coating

1. GE / Momentive Performance Materials, 260 Hudson River Road Waterford, NY 12188. Web Site [www.siliconeforbuilding.com](http://www.siliconeforbuilding.com)

PART 3 - EXECUTION

3.1 EXAMINATION

3.2 PREPARATION

3.3 APPLICATION

3.4 OTHER ITEMS

3.5 PROTECTION

3.6 ADJUSTING AND CLEANING

3.7 FINAL INSPECTION

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Base Bid scope of work
- B. Alternate bid scope of work
- C. Unit Prices and Allowances
- D. Verification of Unit Price and Allowance Work
- E. Pay request submittals

1.02 RELATED SECTIONS

- A. PROPOSAL FORM
- B. Section 011100 - SUMMARY OF WORK
- C. Section 013000 - PROJECT MANAGEMENT AND COORDINATION
- D. Section 017000 - CONTRACT CLOSEOUT: Contract warranties, bonds, manufacturer's certificates, and closeout submittals

1.03 BASE BID

- A. As specified in Section 011100.

1.04 ALTERNATES - NONE

1.05 UNIT PRICES

- A. Unit Price No. 1 – Replacement of Existing Wood Blocking and/or Nailers
  - 1. Description: Removal and replacement of deteriorated and/or damaged wood blocking and/or nailers; refer to Section 024000 Demolition and 061000 Rough Carpentry.
  - 2. Unit of Measurement: Price per board foot (BF) of blocking and/or nailers based on board feet of blocking and/or nailers removed.
  - 3. Work for this Unit Price shall be performed in accordance with the requirements of these Technical Specifications and other Contract Documents.
  - 4. Contractor to determine need for additional work in conjunction with this Unit Price and include in the Unit Price.
- B. Unit Price No. 2 – Replacement of Existing Wood Decking
  - 1. Description: Removal and replacement of existing wood deck materials due to deterioration and/or damage; refer to Sections 024000 Demolition and 061516 Wood Roof Deck Rehabilitation.
  - 2. Unit of Measurement: Price per square foot (SF) of roofing materials based on survey of existing roofing materials removed.
  - 3. Work for this Unit Price shall be performed in accordance with the requirements of these Technical Specifications and other Contract Documents.
  - 4. Contractor to determine need for additional work in conjunction with this Unit Price and include in the Unit Price.

- C. A Change Order or Construction Directive is required to proceed with work to be compensated at unit prices. The Contractor shall have the quantity of work verified throughout the project. Only work that is verified by the Owners Rep, Design Professional or the Construction Observer is to be listed on Change Orders. The Contractor shall have unit price items laid out in an organized manner for verification and shall show the locations of work on construction drawings included in the project manual.

#### 1.06 ALLOWANCES

- A. N/A

#### 1.07 VERIFICATION OF UNIT PRICE AND ALLOWANCE WORK

- A. The Contractor shall follow the procedure outlined for submittal of the items and quantities of work.
  - 1. A daily log shall be completed showing each item of unit price and allowance work. Notation shall be made each day whether work was done or not.
  - 2. Photographs shall be taken of each item of work documenting the specific item being repaired or replaced. For example, two wood nailers being replaced will be documented by two photographs.
  - 3. The location of each item of work will be indicated on a construction drawing. At the Owner's request, the Contractor will deconstruct the work to allow the Design Professional to verify the work by visual inspection. The Contractor will be compensated for the cost of verification when the work has been observed to have been correctly completed. Work not verified to be correctly completed will be corrected at no cost to the Owner.
  - 4. The records will be delivered to the Design Professional by the close of business each week.

#### 1.08 PAY REQUEST SUBMITTALS

- A. The Contractor shall submit each pay application using the AIA G702 unless directed otherwise by the Owner.
- B. The Contractor shall include all submittal items required by the Owner with each application for progress payments. The list of required items shall be discussed during the preconstruction meeting. Typical items include:
  - 1. Construction Schedule revised to the current period.
  - 2. Payment application form required by the Owner.
  - 3. Continuation Sheet showing the elements of the Work and the amount of completion.
  - 4. Unit Price and Allowance work showing the item, quantity and location on the project manual construction drawing, revised to the current period.
  - 5. Affidavits as required.
- C. All sums received by the Contractor for any part or parts of the work furnished or performed by a Subcontractor shall be paid promptly to the latter by Contractor and while in the hands of the Contractor shall constitute trust funds held for the use and benefit of Owner. Contractor shall

submit with payment requests lien releases from material suppliers which state that suppliers have been paid for materials supplied to the project. Payment requests may be delayed if not received in a timely manner.

- D. If payments are to be made on account of materials or equipment not incorporated in the work, but delivered and suitably stored at the Site, or at such other location agreed upon in writing, such payments shall be conditioned upon submission by Contractor of bills of sale or other documents satisfactory to the Owner establishing Owner's title to such materials or equipment or otherwise protecting Owner's interest therein, including the prepayment of applicable insurance and transportation to the Site.
- E. Final payment of retainage shall not be made by the Owner until all subcontractor invoices are paid by the Contractor.

#### PART 2 – PRODUCTS

2.01 NOT USED

#### PART 3 – EXECUTION

3.01 NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Submittal procedures
- B. Construction progress schedules
- C. Proposed products list
- D. Shop drawings
- E. Product data
- F. Samples
- G. Manufacturer's installation instructions
- H. Manufacturer's certificates
- I. Schedule of values
- J. Definitions
- K. Periodic jobsite management meetings
- L. Use of the premises.
- M. Temporary facilities and controls
- N. Contractor project supervision
- O. Emergency Leak Response
- P. Correction of Observed Deficiencies
- Q. Storage and Protection
- R. Testing
- S. Experience Modification Factor
- T. Hazardous Waste Removal Records.

1.02 RELATED SECTIONS

- A. Section 017000 - Contract Closeout: Contract warranties, bonds, manufacturer's certificates, asbestos disposal and closeout submittals

1.03 SUBMITTALS

- A. General
  - 1. Refer to the Bid Form for items to be included as bid submittals. Failure to follow the Owner's requirements may result in the bid being termed non-responsive.

2. Preconstruction submittals shall be made in PDF electronic format. The Contractor will include all submittal items in a single transmittal unless otherwise approved by the Design Professional. Individual cut sheets will be combined into one pdf document. The pdf shall be in an editable form to allow the Design Professional's approval and comments.
  3. Close-out submittal documents shall be as described in Section 017000 and the preconstruction minutes. The closeout procedure shall comply with the Owner's requirements.
- B. Transmit each submittal with a transmittal form. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
  - C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate.
  - D. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
  - E. Schedule submittals to expedite the Project, and deliver to the Design Professional. Coordinate submission of related items.
  - F. For each submittal for review, allow 10 working days excluding delivery time to and from the Contractor.
  - G. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
  - H. Provide space for Contractor and Design Professional review stamps.
  - I. Revise and resubmit, identify all changes made since previous submission.
  - J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with provisions.
  - K. The required submittal items are listed below.

ITEM	COMMENTS
<b>Section 011100, General Requirements</b>	
Schedules of values	
Construction schedule	
Contractor Intent to Warrant	Per Section 017410
MSDS Sheets maintained at jobsite	
Contractor Safety Plan	
Reference list of similar projects to the specified scope of work.	
Emergency Leak Response Contact	Per Section 013000 Part 1
Work sequence plan	Per Section 013000 Part 1
<b>Section 024000 Demolition</b>	
Landfill and transport records showing disposal of materials	Close-out documents

<b>Section 035216 Lightweight Insulating Concrete (LWIC)</b>	
Manufacturer approved applicator letter	
Manufacturer product data sheets	
Manufacturer installation instructions	
<b>Section 061000 Rough Carpentry</b>	
Product technical data	
<b>061516 Wood Roof Deck Rehabilitation</b>	
Product technical data	
<b>073100 Asphalt Shingle Roofing</b>	
Manufacturer factory certified/ credentialed letter indicating approval to provide specified warranty and system	
Manufacturer system/product letter	
Manufacturer product data sheets	
Manufacturer installation instructions	
Manufacturer warranty specimen	
Shingle product data	
Underlayment product data	
Self-adhering flashing product data	
Fastener product data	
<b>Section 075423 TPO Thermoplastic Membrane Roofing</b>	
Manufacturer approved applicator letter	
Manufacturer spec review and intent to warrant letter	
Manufacturer system/product letter	
Manufacturer product data sheets	
Manufacturer installation instructions	
Manufacturer warranty specimen	
Insulation / Cover board product data	
Insulation adhesive product data	
Wind uplift attachment layout (fasteners and adhesives)	
Tapered insulation layout drawing	
Fastener product data	
<b>Section 076000 Sheet Metal Flashing</b>	
Sheet metal product data	
Sheet metal color chart	
ANSI/SPRI ES-1 certification letter	
<b>Section 079200 Sealant</b>	
Sealant Product Data Sheets	
Accessory Product Data Sheets	
Color charts	
<b>Section 099100 Painting</b>	

Product data sheet primer	
Product data sheet finish/int. coat	
Color Charts	
<b>Section 099653 Elastomeric Coating</b>	
Manufacturer approved applicator letter	
Manufacturer warranty specimen	
Manufacturer installation instructions	
Product data sheets	
Accessory Sealant Data Sheets	
Accessories	
Color chart (where applicable)	

1.04 CONSTRUCTION PROGRESS SCHEDULES

A. Description

1. To assure adequate planning and execution of the work so as to complete the project within the time period allowed in the Contract and to assist the Design Professional in evaluating work progress.
2. "Day" used throughout the Contract shall mean "Consecutive Calendar Days" unless otherwise stated.

B. Schedule Adherence

1. Should any activity not be completed within 7 days after the scheduled completion date, Owner shall have the right to order the Contractor to expedite completion of work by whatever means the Owner deems appropriate and necessary without additional expense.
2. Should any activity be 14 or more days behind schedule, the Owner shall have the right to complete the activity or to have the activity completed by whatever means the Owner deems appropriate and necessary.
3. Any costs incurred by the Owner in connection with expedition of the construction activity under this article shall be reimbursed to the Owner by the Contractor. This may take the form of deductions from payments due Contractor.
4. Failure by the Owner to exercise the option to either order the Contractor to expedite any activity or to expedite an activity by other means shall not be considered precedent setting for any other activity.

C. Schedule

1. Within 10 days after receipt of the Notice of Intent to Award, the Contractor shall submit one reproducible and two prints of the construction schedule to the Design Professional. Revise and resubmit as required.
2. Submit revised schedules with each application for payment, identifying changes since previous version.

3. Submit a computer generated horizontal bar chart with separate line for each section of Work, identifying first work day each week.
4. Schedule and execute work to prevent leaks and traffic on unprotected completed work sections. Do not disrupt activities in the occupied building spaces.

#### 1.05 PROPOSED PRODUCTS LIST

- A. Provide submittal data of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model, or catalog designation, and reference standards.

#### 1.06 SHOP DRAWINGS

- A. Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by Design Professional.
- B. Shop Drawings: Submit for review. After review, produce copies and distribute in accordance with the SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 017000 - CONTRACT CLOSEOUT.
- C. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- D. The Contractor will provide a construction drawing indicating the sequence of work from area to area. The start point and flow of work, section by section, will be indicated on the drawing. The drawing will be updated with each pay application.

#### 1.07 PRODUCT DATA

- A. Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Design Professional.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this Project.
- C. Indicate Product utility and electrical characteristics, utility connect requirements and location of utility outlets for service for functional equipment and appliances.
- D. After review distribute in accordance with Submittal Procedures article above and provide copies for record documents described in Section 017000 - CONTRACT CLOSEOUT.

#### 1.08 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- B. Submit samples of finishes from the full range of manufacturer's standard colors, textures, and patterns for Design Professional selection.

#### 1.09 MANUFACTURER INSTALLATION INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting and finishing, to Design Professional in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

#### 1.10 MANUFACTURER CERTIFICATES

- A. When specified in individual specification sections, submit certification by manufacturer to Design Professional, in quantities specified in Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Design Professional.

#### 1.11 SCHEDULE OF VALUES

- A. Contractor shall use the current AIA G703 unless directed otherwise by the Owner's construction requirements.
- B. Prior to the start of work, submit in column format a complete description of work with the individual items listed, the quantity of each item, unit cost, total cost, quantity to date and extended to date cost. The schedule of values shall be prepared with each pay request and submitted for Design Professional's review and approval.
- C. The schedule of values shall equal the contract amount dollar value and shall be adjusted when change orders are approved.
- D. The schedule of values shall be broken down to include each technical section in the construction documents. Each section shall include a cost for materials and a cost for installation.

#### 1.12 DEFINITIONS

- A. Wherever the term Design Professional appears in these specifications, it shall be construed to refer to Merik, Incorporated, Building Envelope Consultants, 3225 Shallowford Rd., Suite 820, Marietta, GA 30062.

#### 1.13 PERIODIC JOBSITE MANAGEMENT MEETINGS

- A. At the direction of the Design Professional, the project will require periodic meetings at the jobsite to coordinate the work, review job progress and resolve unforeseen issues of construction. The Contractor shall have the project manager and the job Superintendent present at each meeting. The project manager for subcontractors shall attend as required.
  - 1. Prebid meeting shall be held with the Owner and prospective bidders at the jobsite.
  - 2. The preconstruction meeting shall be scheduled with the Owner, Contractor's project manager, superintendent/foreman and subcontractor project managers prior to the start of work. The meeting shall be held at the jobsite after the review of submittals.

3. Operations and Control meetings shall be held at agreed intervals with the Owner, Contractor and Design Professional in attendance. The meetings shall be at the jobsite.

#### 1.14 USE OF THE PREMISES

- A. Before beginning work, the Contractor shall secure approval from the Building Owner's Representative for the following:
  1. Areas permitted for personnel parking.
  2. Access to the site.
  3. Areas permitted for storage of materials and debris.
  4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.
- B. Interior stairs or elevators may not be used for removing debris or delivering materials, except as authorized by the building superintendent.

#### 1.15 TEMPORARY FACILITIES AND CONTROLS

- A. Description
  1. Contractor shall provide for temporary facilities and controls required for the performance of the project except as otherwise noted. Such items include, but are not necessarily limited to, utilities such as heat, water, electricity and telephone; sanitary facilities; contractor's facilities; and enclosures such as tarpaulins, barricades, and canopies.
  2. All equipment furnished by Contractor shall comply with all pertinent safety requirements. The Contractor shall immediately correct equipment and procedures that have been indicated as unsafe working conditions. The Contractor will reimburse the Owner for the cost of correcting unsafe working conditions that are not corrected within 24 hours from notice.
  3. Ladders, planks, hoists, and all similar items furnished by individual trades in the execution of their own portions of the work are not part of this Section.
  4. All temporary facilities will be subject to the Owner's approval.
- B. Product Handling
  1. The Contractor shall exercise all means necessary to maintain temporary facilities and controls in proper and safe condition throughout the progress of the project.
  2. All required connections to existing utility systems shall be made with minimum disruption. If disruption of existing service is required, notice shall be given to the Owner and connections shall not be made without Owner's approval. If necessary, Contractor shall provide for alternate temporary service.
  3. If the required utility is not available from the Owner, the Contractor shall provide for alternate temporary service for the duration of the project.
- C. Electricity
  1. Owner will furnish electricity to the Contractor during this project only at available electrical outlets located on the exterior of the building. Any additional electrical

requirements required by the Contractor shall be provided by the Contractor at no additional cost to the Owner.

2. All wiring needed to facilitate construction of the project shall be temporary in nature and shall be furnished and installed by the Contractor at no additional cost to the Owner. Upon completion of the work, the Contractor shall remove all such temporary wiring and restore service to its original condition at no additional cost to the Owner.

D. Water

1. The Owner will furnish water required for construction through available hose bibs. Any additional water requirements by the Contractor shall be provided by the Contractor at no additional cost to the Owner.

E. Telephone

1. The project Superintendent will be required to have a working mobile phone during the course of the work. Such costs shall be included in the Base Bid.

F. Sanitary Facilities

1. Contractor shall provide toilet and washroom facilities at the project site at no additional cost to the Owner. The use of the facility's toilet and/or washroom facilities is not approved.

G. Enclosures

1. Contractor shall furnish, install and maintain for the duration of the project, all scaffolds, ladders, tarpaulins, barricades, warning signs, platforms, bridges, canopies, steps, and other temporary construction required to properly facilitate completion of the project in compliance with all safety and other regulations.
2. Contractor shall provide all necessary safeguards to warn and prevent pedestrians and Owner's personnel from being exposed to dangers or hazards created by this project.

H. Signs

1. No signs or advertising of any kind shall be allowed on the project site unless approved in advance by Owner.

I. Construction Aids

1. A disposal chute shall be constructed by Contractor to prevent damage to buildings and grounds. Disposal chute shall be enclosed-type and shall be located such that demolition debris will be discharged from the roof at the designated staging area directly into disposal vehicles or containers.
2. Contractor shall provide for debris removal services and containers. Placement and servicing of containers shall be coordinated with the Owner.
3. Residue and debris from all operations shall not be allowed to accumulate on the project site. Debris shall be removed and properly disposed of daily in accordance with all Federal, state and local regulations.

4. Dust, dirt and debris created by project construction shall be properly contained or controlled by the Contractor. Method(s) of control shall be approved by the Design Professional.

J. Parking

1. Contractor's construction vehicles shall enter the project site and park in areas as directed by the Owner. The Contractor shall be responsible for coordination of traffic by his subcontractors, suppliers, etc., so as not to disrupt ongoing operations of the Owner.

K. Field Office

1. The Contractor may not provide his own Field Office.

L. Ventilation

1. Provide, as required, facilities to maintain specific storage conditions as described within this Specification and as recommended by the material's manufacturer for use in construction.
2. Provide adequate ventilation of enclosed areas to prevent the accumulation of fumes, vapors, and gases.

M. Connects and Disconnects

1. In the event it is necessary to disconnect any electrical wiring or connections, plumbing lines or other building services, notify the Owner. Contractor shall not disconnect or connect services unless authorized by Owner.
2. Modification of existing service piping, wiring and duct work required in connection with the lifting, removal or relocation of roof-mounted equipment shall be accomplished by the Contractor as part of his Contract.
3. The Owner shall be responsible for disconnecting and re-connecting communication and security wiring that may cross the work areas where construction operations are to be conducted. Such work shall be coordinated with the appropriate facility personnel. It is a requirement that the facility personnel be notified immediately to re-connect this wiring. Contractor shall take appropriate measures to protect wiring while re-roofing operations are underway. Any damage to such lines/wiring during construction operations shall be repaired by the Owner and any costs for such work shall be borne by the Contractor.

1.16 CONTRACTOR PROJECT SUPERVISION

- A. Contractor shall provide full-time daily supervision of the Work. To comply with the Contractor's Safety Plan the crew supervisor shall speak English clearly and understand English clearly. No change in the foreman or Superintendent shall be allowed unless approved in writing by the Design Professional. No work shall take place without the Supervisor on site. In addition to the foreman responsible for management of the crew, there shall be a full time Superintendent on the site. The Superintendent shall be a senior employee speaking for the Contractor at all meetings.

1.17 EMERGENCY LEAK RESPONSE

- A. During construction, the Contractor shall provide the necessary personnel and equipment to stop leakage into the structure within 4 hours of notification that a leak is occurring. A contact person for the Contractor shall be designated to be available on 24 hours, 7 day per week basis to

coordinate the emergency response. Emergency phone numbers for the contact person will be provided to the Owners Representative and Design Professional. The contact person shall not be changed without prior approval by the Design Professional.

- B. The Owner's Representative shall prepare a complete listing of all damages that result from water entry.
- C. The Contractor shall provide a written disaster relief plan designating their agent for emergency response management. The responder will be a company operating in good standing with the State of Georgia DOAS. Refer to: <http://www.usg.edu/publicsafety/documents/Pre-Qualified-Vendors.pdf> Such companies include, listed in alphabetical order:

BELFOR  
24 Hour Contact: 800-472-0030  
[www.belfor.com](http://www.belfor.com)

EPIC Response  
24 Hour Contact – Atlanta Area: 770-516-3491  
24 Hour Contact – Toll Free: 877-277-4647  
[www.epicresponse.com](http://www.epicresponse.com)

Full Circle Restoration  
24 Hour Contact: 770-232-9797  
24 Hour Toll-Free Hotline: 877-238-5524  
[www.fullcyclerestoration.com](http://www.fullcyclerestoration.com)

Parker-Young Construction  
24 Hour Contact: 888-303-9288  
[www.parkeryoung.com](http://www.parkeryoung.com)

Nivek Services, Inc.  
24 Hour Contact: 866-977-3791  
Office: 678-454-3791  
[www.nivek247.com](http://www.nivek247.com)

North Ridge Restoration, LLC  
24 Hour Contact: 770-751-6500  
[www.northridgerestoration.com](http://www.northridgerestoration.com)

Rolyn Companies, Inc.  
24 Hour Contact: 800-808-1553  
[www.rolyncopmanies.com](http://www.rolyncopmanies.com)

Universal Restoration Services  
24 Hour Contact: 866-877-8979  
[www.4universal.com](http://www.4universal.com)

- D. The Contractor shall maintain at the jobsite a leak reaction kit including all material necessary for emergency leak response. The kit will include items such as 1 roll clear polyethylene, duct tape, 1 case sealant, caulk gun, razor knife, etc. The kit will be removed from the jobsite at the completion of work.

#### 1.18 CORRECTION OF OBSERVED DEFICIENCIES

- A. The Contractor shall correct deficiencies noted during the construction observation in no more than five days from receipt of the written notice.

#### 1.19 STORAGE AND PROTECTION

##### A. Protection

1. Limit size of work sections to safeguard adjacent materials, structures, etc., and to minimize dust and noise.
2. Protect existing facilities from damage during work. Do not overload existing paving, curbs, sidewalks, etc. with vehicle traffic. Do not overload new or existing construction with demolition debris, equipment, etc.
3. Protect existing facilities from fire as a result of construction operations. Contractor shall provide suitable and adequate fire extinguishers conveniently located at work areas, storage areas and at areas or equipment where an open flame is being used. Competent operators shall be in attendance at all times and shall be properly trained or instructed in fire protection.

4. At each location where an open flame is used, Contractor shall provide a watchman with a suitable fire extinguisher.
5. Walls, windows, roof edges, etc., hoists, and staging areas shall be protected using canvas tarpaulins. Plastic or felt will not be acceptable.
6. Plywood, minimum  $\frac{3}{4}$ " thick, or other suitable materials shall be used to protect roof areas from damage that may be caused by concentrated equipment loads and foot traffic.
7. Construction traffic shall be confined to work areas. Contractor shall be responsible for leaks that develop in traffic areas during and after project completion.
8. Self-supporting ramps shall be used where expansion joints, area dividers, etc. are to be crossed.
9. Contractor shall protect interior operations from adverse weather during roofing.
10. The Contractor will be held liable for any damages to the building, building contents, its occupancy, grounds or landscaping resulting from work under the Contract. In the event of damage, Contractor will restore property to a condition equivalent to that at the time the project started.
11. The Contractor shall keep existing drainage facilities and associated leaders clear of debris and construction materials during the work. The Contractor will be required to use elastomeric plugs to protect leaders during demolition and construction operations.
12. Prior to the start of construction operations, the Contractor shall provide facility personnel with plastic bags/tarps which will be used by facility personnel to protect televisions, computers, and other associated equipment during the period of time that construction operations are occurring. Bags/tarps shall be provided a minimum of one week prior to the start of construction operations. Costs for providing such materials shall included in the Base Bid. Note: Contractor will still be required to provide any other additional protection to interior items as may be deemed necessary to comply with the requirements of the Contract Documents.

B. Material Protection

1. Products shall be transported by methods which avoid damage. Damaged material shall be subject to rejection by the Design Professional.
2. Store materials off of the ground covered with tarps. Factory-applied wrappings are not acceptable.
3. Wet materials shall be removed from the project site.

C. Storage

1. Contractor shall be responsible for proper storage of equipment, materials and devices furnished by himself and/or his subcontractors and suppliers.
2. To the maximum extent possible, the Contractor shall not store combustible or flammable materials inside the facility.
3. All storage areas are subject to approval by the Owner or his authorized representative.

1.20 TESTING

- A. The Contractor shall pay for the cost of testing mockups, work during construction and finished work prior to close-out. Include in the base bid the amount for testing as specified in each Technical Section. Special inspections, not required in the project technical sections, shall be paid by the Owner.

1.21 EXPERIENCE MODIFICATION FACTOR

- A. The Contractor shall submit their Experience Modification Certificate based on the most current edition of the Experience Rating Manual published by the National Council of Compensation Insurance (NCCI). The certificate shall be prepared by an insurance provider approved by the State of Georgia and shall cover the preceding year. The certificate is required to be listed in the name of the Contractor providing all labor, materials, equipment and services to complete the Work as specified in the Contract Documents.
  - 1. The Contractor shall have a Workers Compensation Experience Rating experience modification factor (NCCI) of 1.1 or less.

1.22 HAZARDOUS WASTE REMOVAL RECORDS

- A. Submit a copy of the Contractor hazardous materials abatement license or subcontractor's abatement license when the scope of work requires hazardous materials abatement.
- B. Submit statement from a qualified supervisor the removal of ACM will not produce friable materials and will be in accordance with State and Federal requirements.
- C. Submit a copy of the "Asbestos Notification Requirements for Demolition & Renovation / Abatement Projects" form sent to the Georgia Environmental Protection Division.
- D. Refer to Section 017000 for Contract Close-out Document requirements.

1.22 MATERIAL FINISH AND COLOR

- A. Finishes and colors of new materials to match original or adjacent undisturbed finishes as applicable. Submit proposed finishes and colors of all materials to Owner for review and approval prior to installation.

PART 2 – PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

END OF SECTION

## PART 1 - GENERAL

### 1.01 SECTION INCLUDES

- A. Close-out procedures
- B. Cleaning
- C. Adjusting
- D. Project record documents
- E. Warranties
- F. Hazardous Materials Abatement Records

### 1.02 RELATED SECTIONS

- A. Section 013000 - Submittals
- B. Section 017410 - Contractor Warranty Form

### 1.03 CLOSEOUT PROCEDURES

#### A. Substantial Completion

1. The Contractor shall submit written certification to the Owner when the project or designated portion of the project is substantially complete. A list of major items to be completed or corrected shall be stated.
2. The Owner will make an inspection within ten (10) days after receipt of certification and issue a Certificate of Substantial Completion containing:
  - a. The Date of Substantial Completion.
  - b. The Contractor's list of items to be completed or corrected and any amendments by the Owner or Design Professional.
  - c. The time to be allowed for the Contractor to complete or correct listed items.
  - d. The time and the date Owner will assume possession of the work or designated portion thereof.
  - e. The signatures of the Owner, Design Professional and Contractor.
3. The Contractor shall then complete or correct those items so listed within the designated time and inform the Owner upon completion.
4. Should the Owner determine that the work is not substantially complete, the Owner shall immediately notify the Contractor in writing stating reasons. The Contractor shall then complete the work and send a second written notice to the Owner certifying that the project, or designated portion thereof, is substantially complete. The Owner will re-inspect the work within ten (10) days after receipt of certification.

#### B. Final Inspection

1. The Contractor shall submit written certification to the Owner that:
  - a. The Contract Documents have been reviewed.

- b. Work has been completed in accordance with the Contract Documents.
- c. The project has been inspected for compliance with the Contract Documents.
- d. The project is ready for final inspection.

2. The Owner will make a final inspection within ten (10) days after receipt of certification.
3. Should the Owner determine that the work is finally complete in accordance with the requirements of the Contract Documents, the Owner will request that the Contractor submit the appropriate project closeout documentation.
4. Should the Owner determine that the work is not finally complete, the Owner will immediately notify the Contractor in writing stating reasons. The Contractor shall then take immediate measures to remedy the stated deficiencies and send an additional written notice to the Owner certifying that the work is complete. The Owner will re-inspect the work within ten (10) days after receipt of certification.

C. Re-Inspection Costs

1. Should the Owner be required to perform additional inspections due to noncompliance of work with the certifications of the Contractor, the Contractor shall compensate the Owner for such additional services. Such costs will be deducted from final payment to the Contractor.

D. Final Application for Payment

1. The Contractor shall submit final application for payment in accordance with the specifications.
2. The Owner will issue a final certificate in accordance with the specification.

E. The final pay request from the Contractor shall include the following items:

1. Manufacturer's Warranty
2. Finish Warranty on Sheet Metal
3. Contractor's warranty
4. Signed Consultant Punch List completion statement
5. Non-Influence Affidavit (General Conditions)
6. Statutory Affidavit (General Conditions or AIA G706)
7. Consent of Surety Company to final payment (AIA G707)
8. Disposal records for non hazardous materials tear off and debris
9. Hazardous materials custody documents, transit documents and disposal receipt documents

1.04 CLEANING

A. Description

1. To maintain the buildings and site in a clean condition throughout the duration of the project. The Contractor shall comply with all requirements for cleanliness described in other sections of these Specifications.
2. The Contractor shall provide all required manpower, material and equipment to maintain the specified standard of cleanliness.
3. Contractor shall use only those materials and equipment which are compatible with the surface being cleaned as recommended by the manufacturer or approved by the Design Professional .

B. Progress Cleaning

1. Stored items shall be kept in an orderly arrangement allowing maximum access and shall not impede drainage or traffic.
2. Scrap, debris, waste material and other items shall not be allowed to accumulate and shall be removed from the work areas on a daily basis.
3. Contractor shall protect new installed materials from dirt and debris during the demolition of the remainder of the work. Areas with new installed materials shall be kept clean and free of debris during the duration of the work.
4. Contractor shall provide storage containers for all items awaiting removal from the site. Storage containers shall be approved by the Design Professional.
5. The Contractor shall conduct daily inspections to insure that the requirements for cleanliness are met.
6. Work may be stopped or delayed by the Owner should the Contractor fail to take appropriate measures to clean the site on a daily basis. Extensions to the project completion date for such delays will not be approved.
7. The Contractor shall inspect all arrangements of materials stored on the project site on a weekly minimum basis and shall service all arrangements in accordance with the requirements of Item A1 of this section.

C. Final Cleaning

1. Except as specifically provided otherwise, "clean" shall be interpreted as meaning the level of cleanliness generally attainable by skilled cleaners using commercially available building maintenance equipment and materials.
2. All tools, equipment, materials, scrap, debris and waste shall be removed from the project site and a final progress cleaning conducted in accordance with this Section.
3. Unless otherwise directed by the Design Professional, the Contractor shall clean all adjacent areas on the site and completely remove all resultant debris.
4. The Contractor shall clean out all drains and associated leaders of any debris prior to final acceptance by the Owner. Such work shall be performed at no additional cost to the Owner. Note: In the event that the Contractor fails to use appropriate methods to keep drains clear of debris during construction operations, the Design Professional may require that a water test and/or a video inspection of the leaders be performed to

evaluate the condition of drain leaders. Such costs for such evaluations and subsequent corrective measures shall be borne by the Contractor at no additional cost to the Owner.

5. Restore grass or planted areas by filling ruts, raking, seeding, planting, sodding, and fertilizing. Sweep paved areas.
6. Contractor shall visibly inspect all exterior surfaces and remove all traces of dirt, waste materials, smudges, splashed materials and other foreign matter. The Design Professional may require that light sandblasting or other cleaning be performed at no cost to the Owner. If such cleaning is required, the Contractor shall take all necessary precautions to prevent damage to adjacent materials, property and vegetation.

#### 1.05 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

#### 1.06 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
  1. Drawings
  2. Specifications
  3. Addenda
  4. Change Orders and other modifications to the Contract
  5. Reviewed Shop Drawings, Product Data, and Samples
  6. Manufacturer's instruction for assembly, installation, and adjusting
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
  1. Manufacturer's name and product model and number
  2. Product substitutions or alternates utilized
  3. Changes made by Addenda and modifications
- F. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
  1. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
  2. Field changes of dimension and detail.

3. Details not on original Contract drawings.

1.07 WARRANTIES

- A. Execute and assemble transferable warranty documents from Subcontractors, Suppliers, and Manufacturers.
- B. Submit warranty prior to final Application for Payment.
- C. At no additional cost to the Owner, install a plastic laminated 8 ½ inch x 11 inch sign with all warranty information at the interior side of the building access. The sign shall provide information on the roof system and the Manufacturer and Contractor warranty data.

1.08 HAZARDOUS MATERIALS ABATEMENT RECORDS

- A. General: Furnish two copies of documents prior to application for final payment.
  1. Daily project log from licensed Abatement Contractor where friable asbestos containing materials (ACM) removal is required.
  2. Daily record from air monitoring company where friable materials removal is required.
  3. Waste shipment record certification signed by Transporter and Waste Disposal Site acknowledging receipt of materials. This record is required for all ACM disposal.

PART 2 - PRODUCTS

2.01 NOT USED

PART 3 - EXECUTION

3.01 NOT USED

END OF SECTION

CONTRACTOR WARRANTY FORM

PROJECT: \_\_\_\_\_

LOCATION: \_\_\_\_\_

OWNER: \_\_\_\_\_

We, \_\_\_\_\_,  
(Company Name)

Contractor for the above-referenced project, do hereby warrant that all labor and materials furnished and work performed are in accord with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective workmanship for a period of \_\_\_\_\_ years from Date of Substantial Completion. This warranty commences on

\_\_\_\_\_  
(Dates of Substantial Completion affixed by Owner)

and expires on \_\_\_\_\_.  
(Expiration Date)

Should defects develop during the warranty period due to defective workmanship, the affected materials, including adjacent work damaged as a result of the sited defective workmanship, shall be made good by the undersigned at no expense to the Owner. The Owner will give Contractor written notice of defective work and Contractor agrees to respond within 24 hours. Should Contractor fail to correct defective work within 60 days after receiving written notice, the Owner may, at his option, correct defects and charge Contractor costs for such correction. Contractor agrees to pay such charges upon the Owner's demand.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner, Acts of God, Civil Disobedience or defects in the structure.

Scope of work is limited to: \_\_\_\_\_

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

Contractor of Record: \_\_\_\_\_  
(Company Name)

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

Subcontractor: \_\_\_\_\_  
(Company Name)

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

End of Contractor Warranty Form

<b>Section</b>	<b>Description</b>	<b>Warranty Term, years</b>
035216	LWIC Contractor	5
073100	Asphalt Shingle Roofing Manufacturer	40 min.
073100	Asphalt Shingle Roofing Contractor	5
075423	Roofing Manufacturer	20
075423	Roofing Contractor	5
076000	Sheet Metal and Flashing Contractor	5
079200	Sealant Manufacturer	5 (urethane); 20 (silicone)
079200	Sealant Contractor	5
099100	Painting Manufacturer, material warranty	Standard
099100	Paint Contractor	5
099653	Elastomeric Coating Manufacturer	5
099653	Elastomeric Coating Installer	5

**CONTRACTOR BID SUBMITTAL FORM**

Include with the bid and bid submittals. Failure to include this document may result in the bid being judged non-responsive.

List the manufacturer for each specified scope of work. The listed manufacturer will not be changed unless the material becomes unavailable thru no fault of the bidder.

<b>Specification Section</b>	<b>Manufacturer</b>

List any subcontractor to be utilized in the specified scope of work is the bid is accepted and awarded. The listed Subcontractor will not be changed unless the company becomes unavailable thru no fault of the bidder.

<b>Specification Section</b>	<b>Subcontractor Name and Phone</b>

The bidder agrees and accepts the above statements and submits the following statement of Bidder's qualifications for consideration of the Owner.

\_\_\_\_\_ (Authorized signature of Contractor)  
\_\_\_\_\_ (Printed Name and Title)  
\_\_\_\_\_ (Firm Name)  
\_\_\_\_\_ (Date)

**CONTRACTOR CHANGE ORDER PROPOSAL**

Submission of a change order proposal shall include a complete breakdown of all expense and cost itemized to include the following:

**1. Material**

\_\_\_\_\_ units at a unit cost of \$ \_\_\_\_\_  
\_\_\_\_\_ units at a unit cost of \$ \_\_\_\_\_  
\_\_\_\_\_ units at a unit cost of \$ \_\_\_\_\_  
\_\_\_\_\_ % sales tax \$ \_\_\_\_\_  
  
Total Material \$ \_\_\_\_\_

**2. Labor**

\_\_\_\_\_ hours labor at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_  
\_\_\_\_\_ hours labor at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_  
\_\_\_\_\_ hours labor at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_  
  
Total Material \$ \_\_\_\_\_

**3. Equipment**

\_\_\_\_\_ hrs. \_\_\_\_\_ at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_  
\_\_\_\_\_ hrs. \_\_\_\_\_ at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_  
\_\_\_\_\_ hrs. \_\_\_\_\_ at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_

**4. Total direct cost:**

Materials \$ \_\_\_\_\_  
Labor \$ \_\_\_\_\_  
Equipment \$ \_\_\_\_\_  
  
Grand total direct cost \$ \_\_\_\_\_  
  
Plus \_\_\_\_\_ % overhead and profit \$ \_\_\_\_\_  
  
Total cost for General Contractor \$ \_\_\_\_\_  
  
Plus \_\_\_\_\_ % for O&H for General Contractor \$ \_\_\_\_\_  
  
**5. TOTAL CHANGE ORDER PROPOSAL** \$ \_\_\_\_\_

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



## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. General

1. The Contractor is responsible to verify all field conditions that may affect their bid.

#### B. This Section includes the following:

1. Roof system moisture assessment.
2. Refer to Division 01 specification section "Summary of Work" for specific work to be included in the Base Bid. Coordinate Base Bid work summary with the requirements of Division 01 specification sections "Unit Prices" and "Alternates".

### 1.2 RELATED DOCUMENTS

- #### A.
- Project drawings, diagrams, key plans, and general provisions of the Contract including General and Supplementary Conditions and other Division 01-48 Specification Sections, apply to this Section.

### 1.3 THIRD PARTY MOISTURE ASSESSMENT WORK

- #### A.
- Contractor to provide third party moisture survey to identify currently wet roof system materials to be replaced by Unit Price.
1. The third-party moisture survey shall be in strict compliance with ASTM D7954, Standard Practice for Moisture Surveying of Roofing and Waterproofing Systems Using Non-Destructive Electrical Impedance Scanners.
  2. The third-party moisture survey will be used to define the extent of additional wet abatement work.
  3. Contractor to provide painted outlines of suspected wet areas on the existing roof surface.
  4. Wet insulation and roofing more than 12-inches outside the painted lines will be paid on a unit cost basis. Refer to Section 01 2300 – Price and Payment Procedures

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION (NOT USED)

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. General

1. The Contractor is responsible to verify all field conditions that may affect their bid.
2. Demolition requires that all materials that affect the work specified in other technical sections be removed and/or prepared for the specified work.

#### B. Test cuts indicate the following:

1. Low-Slope: The existing roof assembly is gravel surfaced asphalt BUR on ½" wood fiber, over 1" polyisocyanurate insulation, on rosin paper over wood decking.
2. Steep-Slope: The existing roof assembly is asphalt composition shingles over felt underlayment over wood decking.

#### C. Base Bid scope of work items.

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

#### D. Hazardous Materials

1. All materials tested indicated negative as asbestos containing material (ACM).
2. Added scope of work items may contain hazardous materials that were not identified in the construction documents. It is required the Contractor be experienced regarding ACM and other hazardous materials and recognize when work must be stopped to allow for proper removal, handling, and disposal.

### 1.2 RELATED SECTIONS

#### A. Base Bid

1. Section 012300 - Price and Payment Procedures
2. Section 022529 - Existing Roof System Moisture Assessment
3. Section 035216 - Lightweight Insulating Concrete (LWIC)
4. Section 061000 – Rough Carpentry
5. Section 061516 - Wood Roof Deck Rehabilitation
6. Section 073100 – Asphalt Shingle Roofing
7. Section 075423 – TPO Thermoplastic Roofing
8. Section 076000 - Flashing and Sheet Metal
9. Section 079200 – Sealants and Caulking
10. Section 099100 – Exterior Painting

11. Section 099653 – Elastomeric Coating

1.3 DEFINITIONS

- A. Remove: Remove and legally dispose of items except those indicated to be reinstalled.
- B. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations.

1.4 SUBMITTALS

- A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.
- B. Landfill records indicating receipt and acceptance of all wastes by a landfill facility licensed to accept hazardous wastes (as required) are required at the close of the project.
- C. Refer to Section 028200 Part 1 ASBESTOS REMEDIATION for additional requirements.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: The Contractor is solely responsible for complying with all relevant requirements of governing authorities. Comply with governing Federal EPA and State EPD notification regulations before starting roof demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
  - 1. The Contractor is not entitled to rely upon the services of the Design Professional as a competent person for the purposes of hazardous waste removal. Conduct demolition so that Owner's operations will not be disrupted. Provide not less than 48 hours' notice to Owner of activities that will affect Owner's operations.
- B. All demolition work shall comply with the requirements of NFPA 241, 2000 Edition "Standard for Safeguarding Construction, Alteration and Demolition Operations".
- C. Only qualified employees shall be involved in any asbestos repairs, maintenance, or removal. All unqualified employees shall be protected from exposure to asbestos fibers by isolating and controlling access to all affected areas during asbestos work. All tasks involving the disturbance of asbestos containing material will be conducted only after appropriate work controls have been identified and implemented. A qualified supervisor shall be available at asbestos controlled work sites during all activities. The Qualified Asbestos Supervisor shall be an employee of the Contractor or Subcontractor as required.

1.6 SCHEDULING

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

1.7 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.

## PART 2 - PRODUCTS

2.1 RECYCLE MATERIALS: not used.

### 2.2 GRAVEL REMOVAL AND BUR PREPARATION

A. Wet vac system to remove non-embedded dirt, gravel and rock leaving the roof in a clean condition for installation of new roofing materials.

1. RK Hydrovac, Piqua, OH, 888-493-7682, [www.rkhydrovac.com](http://www.rkhydrovac.com)
2. Adler Companies, 95 Firmenich Way, Newark, NJ 07114, 866-766-3822, [www.adlervac.com](http://www.adlervac.com)
3. Sunbelt Vacuum Services, 2551 S Good Latimer Expressway, Dallas, TX 75315, 800-203-9053, [www.sunbestvacuumservice.com](http://www.sunbestvacuumservice.com)

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Inspect substrates and conditions under which the work of this section will be performed and verify that construction operations may properly commence. Do not proceed with the work until unsatisfactory conditions have been resolved fully.

### 3.2 PREPARATION

A. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

B. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.

1. Protect existing site improvements, appurtenances, and landscaping to remain.

C. Protect the interior of the building from dust and debris resulting from tear off of the existing materials. An observer will be put inside the building to assure debris is properly contained. When debris is noted, work shall be stopped until suitable protection measures can be taken.

D. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around and below selective demolition area and to and from occupied portions of building. Orange barricade fencing is required at egress doors, around staging areas, and ground level work areas.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.

4. Cover and protect furniture, furnishings, and equipment.

E. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.

### 3.3 POLLUTION CONTROLS

A. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas. Remove debris from roof of building by chute, or other covered device that will convey debris to grade level. Maintain dust covers and water sprays to keep dust spread to a minimum. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before start of selective demolition.

### 3.4 DEMOLITION

A. General

1. Removal, handling, temporary storage, and disposal shall be done in full compliance with State and Federal regulations.

2. Dispose of all demolished items and materials promptly. On site storage of removed items is prohibited.

3. Contractor shall provide all refuse containment resulting from demolition work, and refrain from using any on-site, existing refuse container.

4. Where removal of roof membrane and insulation materials are required, back out the existing fasteners and plates. Do not rip fasteners from the roof deck or cause damage to the roof deck during the demolition process.

B. Demolish and remove the existing roof components as specified. Use methods required to complete Work within limitations of governing regulations.

1. Refer to Part 1.1. and following.

C. Demolition of roof drains, gutters, collector boxes, scuppers and downspouts shall be coordinated with the installation of the new components. The Contractor shall have controlled drainage installed at all times. Uncontrolled drainage is non-conforming work and subject to notification of the deficiency.

D. Removal of gravel surfacing on BUR roofing systems that are being recovered by new roofing insulation and membrane will require that the existing roof surfaces are clean and properly prepared.

1. The prepared BUR roof shall comply with the membrane manufacturer's requirements. It shall have loose rock removed and dirt and contaminants removed. Surfaces that are not level shall be planed using a spud bar.

2. Newly installed insulation board shall have a minimum of 75% of its adhesive solidly adhered to the substrate. Adhesion shall be tested by inserting a pry bar below the cured insulation and lifting the edges of the board. Any board with more than 25% of its insulation adhesive not solidly adhered to the BUR shall be termed failure. Failed areas shall be removed and replaced with new roofing materials.

### 3.5 UTILITY SERVICES AND ELECTRICAL/MECHANICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
  - 1. Refer to Section 011100 Summary of Work.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Building maintenance engineer will arrange to shut off services/systems, when possible, upon request of Contractor.
  - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  - 3. Disconnect, demolish, and remove plumbing, and HVAC systems, equipment, and components indicated to be removed.
    - a. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove; when appropriate, reinstall, reconnect, and make equipment operational.
- C. The Contractor shall provide all electrical disconnects and reconnects. All electrical taps must be accessible. All fans must have a service switch or disconnect. Install new exterior electric connection on curbed units where the electric conduit penetrates the curb without a junction box.
- D. Replace damaged disconnects as required. Extend the electrical, gas and freon lines as required. Install exterior connection boxes thru the sidewalls of curbed units. Install new foam insulation to replace damaged or missing insulation.
- E. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.

### 3.6 ADJUSTING AND CLEANING

- A. Sweep and remove chips, shavings, and dust from roof on a daily basis during installation period. Leave installed work clean, free from grease, finger marks and stains.
- B. Upon completion of installation, remove scraps and debris from project site. Clean adjoining building surfaces where stains have resulted from the Work.
- C. Replace damaged landscape and grass areas with landscape treatments comparable to the existing materials. Damaged grass shall be replaced with sod of the same variety unless otherwise agreed by the Owner.

### 3.7 PROTECTION

- A. Provide protection as required to assure the completed work of this section will be without damage or deterioration at date of substantial completion.

- B. Take suitable precaution to protect adjoining building surfaces from damage. Overlay adjoining roof surfaces with 1/2-inch plywood and other necessary protection during installation of metal roofing. Cover side walls of the building with plastic or canvas tarps.
- C. Protect landscape and planted areas from damage.

### 3.8 FINAL INSPECTION

- A. Upon completion of the scope of work an inspection shall be made by the Owner's Representative to ascertain that the Work has been installed according to the manufacturers published requirements. Observed defects shall be corrected as required to secure the manufacturer's warranty.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The project plans, details and general Contract requirements apply to this Section.

1.2 SUMMARY

A. Items Included:

1. Cellular lightweight insulating concrete (LWIC) roof substrate system.

B. Related Sections

1. Section 012300 - Price and Payment Procedures
2. Section 024000 - Demolition
3. Section 022529 - Existing Roof System Moisture Assessment
4. Section 061000 – Rough Carpentry
5. Section 061516 - Wood Roof Deck Rehabilitation
6. Section 075423 – TPO Thermoplastic Roofing
7. Section 076000 - Flashing and Sheet Metal
8. Section 079200 – Sealants and Caulking
9. Section 099100 – Exterior Painting
10. Section 099653 – Elastomeric Coating

C. Base Bid

1. Install a base layer of cellular lightweight insulating concrete (LWIC) nominal 2" thick over the prepared existing roof surface with tapered embedded EPS insulation in the LWIC to provide slope to drain per the thicknesses indicated on the Drawings.
1. Provide wood nailer stop/screed at perimeter of LWIC at edge conditions, drain sumps, etc. as required to accommodate existing conditions and manufacturer requirements.
2. At abandoned curbs to remain, slope LWIC to top of curbs to allow installation of roofing continuous from field and over curbs and plywood installed over openings.
3. Provide structural engineering review and confirmation of acceptability of the existing structure and roof deck systems to receive the LWIC system.

1.3 REFERENCES

- B. References in these specifications to standards, test methods and codes, are implied to mean the latest edition of each such standard adopted. The following is an abbreviated list of associations, institutions, and societies which may be used as references throughout this specification section.

1. ASTM: ASTM International (formerly the American Society for Testing and Materials)

2. FM: Factory Mutual Engineering and Research
3. NRCA: National Roofing Contractors Association
4. OSHA: Occupational Safety and Health Administration
5. SMACNA: Sheet Metal and Air Conditioning Contractors National Association
6. UL: Underwriters Laboratories

#### 1.4 PREINSTALLATION MEETINGS

##### A. Pre-installation Conference at Jobsite.

1. Hold a meeting with the Owner, Owner's Representative, Architect/Engineer, Lightweight Insulating Concrete Applicator, Lightweight Insulating Concrete Manufacturer's Representative, and other applicable trades to discuss the means and methods related to roofing installation. The Lightweight Insulating Concrete Applicator shall examine the substrate that will receive the specified lightweight insulating concrete roof deck and confirm its suitability for attachment of the specified system.

#### 1.5 SUBMITTAL OF ALTERNATE SYSTEMS

##### A. Submit lightweight insulating concrete systems to be considered as equal to the specified system no less than 10 days prior to bid date. Primary lightweight insulating concrete systems which have been reviewed and accepted as equals to the specified system will be listed in an addendum prior to bid date; only then will equals be accepted at bidding. Submittals shall include the following:

1. Submit manufacturer's instructions for proper placement of the proposed lightweight insulating concrete roof insulation system.
2. Evidence that the roof configuration has been tested by an accredited independent testing agency to meet the design wind load pressures.
3. Submit documentation confirming that the specific expanded polystyrene proposed for use on this project is approved by an accredited independent testing agency to meet the design wind load pressure in conjunction with the proposed lightweight insulating concrete system.
4. Submit a letter from the supplier of the proposed lightweight insulating concrete system confirming that the expanded polystyrene used as a component in the lightweight insulating concrete system is to be furnished by the supplier of the proposed lightweight insulating concrete system.
5. Submit shop drawings including a roof plan, roof slopes, and thickness of insulation.
6. Submit a sample copy of the roof system guarantee covering the proposed lightweight insulating concrete system and roof membrane system.

#### 1.6 INFORMATIONAL SUBMITTALS

##### A. Qualification Data:

1. Installer: Applicator shall have a minimum of two (2) years of experience in successfully installing the same or similar roofing materials and be certified in writing by the roofing materials manufacturer to install the primary roofing products.
2. Manufacturer: Primary lightweight insulating concrete products shall be supplied by a single manufacturer which has been successfully producing the specified types of primary products for not less than ten (10) years with a consistent composition for a minimum of five (5) years. The manufacturer shall provide direct trained company personnel to attend necessary job meetings and perform periodic inspections as necessary.

##### B. System Qualification:

1. Intent To Warrant Letter: Submit a letter from the roof membrane manufacturer confirming the intention to issue the roof system guarantee covering the proposed lightweight insulating concrete system and roof membrane system at project completion.

## 1.7 QUALITY ASSURANCE

### A. Manufacturer Qualifications:

1. Evidence of exterior fire-test exposure by an approved third-party testing agency in accordance with ASTM E108 or UL 790 guidelines.
  - a. Class A
2. Evidence by an approved third-party testing agency that the roof configuration has been tested in conjunction with the specified lightweight insulating concrete system to meet the following specified wind uplift design.
  - a. Class 1, 1-90 windstorm construction.

## 1.8 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in the supplier's original unopened packages, fully identified as to manufacturer, brand or other identifying data and bearing the proper Underwriters Laboratories label.
- B. Store all bagged products in a dry location until ready for application.
- C. Expanded polystyrene board must not be stored in areas of standing water prior to application but can be exposed to rainwater before application. Boards must be clean and free from foreign substances.

## 1.9 FIELD CONDITIONS

### A. Environmental Requirements

1. Precipitation: Do not apply materials during precipitation or in the event there is a probability of precipitation during application. Take adequate precautions to ensure that materials and building interiors are protected from possible moisture damage or contamination.
2. Temperature Restrictions: When air temperatures of 40°F (4.4°C) or above are predicted to occur within the first 24 hours after placement, normal mixing and application procedures may be used. When air temperatures of 32°F to 40°F (0°C - 4.4°C) are predicted to occur within the first 24 hours after placement, the Contractor may opt to increase the Portland cement quantity 15% by weight. Do not install the lightweight insulating concrete system when air temperatures are below 32°F (0°C).

## 1.10 GUARANTEE

- A. Installer Guarantee: Provide Contractor warranty as indicated in Division 1.
- B. Roof System Guarantee: Reference applicable Specification Section for the specified Roof System Guarantee, to be issued by the specified Roof Membrane Manufacturer.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturer: Provide a lightweight insulating concrete roof insulation system incorporating foam concentrate and expanded polystyrene board supplied by the following manufacturer.
  - 1. Basis of Design: Siplast, Inc.
- B. Acceptable Alternate Manufacturers.
  - 1. Aerix Industries, 7020 Snowdrift Rd., Allentown PA 18106, 804-740-6772.
  - 2. Elastizell Corporation of America, P.O. Box 1462, Ann Arbor MI 48106, (734) 761-6900.

### 2.2 SYSTEM COMPONENTS

- A. Portland Cement: Portland cement conforming to Type I, II, or III as defined by ASTM C150.
- B. Foam Concentrate for Slurry Coat: Protein based foam concentrate conforming to ASTM C869 and ASTM C796.
  - 1. Insulcel PB Foam Concentrate by Siplast, Inc., or approved equal.
- C. Expanded Polystyrene Insulation Board (where required): Expanded polystyrene (EPS) insulation board having a nominal density of 1 pcf (16 kg/m<sup>3</sup>) defined as Type I by ASTM C578 and containing approximately 3% open area. Each bundle of board shall be delivered to the job site with clear identification as to manufacturer and shall carry the Factory Mutual approval label and the Underwriter's Laboratories Classified label on each bundle.
  - 1. Insulperm Insulation Board by Siplast, Inc., or approved equal.
- D. Water: Potable water that is clean and free of deleterious amounts of acid, alkali and organic materials.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Ensure that all surfaces to receive lightweight insulating concrete are free of oil, grease, paints/primers, loose mill scale, dirt, or other foreign substances. Where necessary, cleaning or other corrections of surfaces to receive lightweight insulating concrete is the responsibility of the party causing the unacceptable condition of the substrate.
- B. With the roofing contractor present, examine surfaces to receive the roof insulation system and determine that the surfaces are acceptable prior to placement of the lightweight insulating concrete system.

### 3.2 PREPARATION

- A. General: Remove water or any other substance that would interfere with bonding of the lightweight concrete system.

### 3.3 APPLICATION OF LIGHTWEIGHT INSULATING CONCRETE SYSTEM

- A. General: Provide equipment and application procedures conforming to the material supplier's application instructions.

- B. Density for Cellular Foam: Mix Portland cement and pregenerated foam with water to achieve a wet density ranging from 38 to 48 pcf (609 to 769 kg/m<sup>3</sup>), resulting in a minimum dry density of 30 pcf (481 kg/m<sup>3</sup>) and minimum compressive strength of 200 psi (1380 kPa).
- C. Application: Place a 1/8 inch (3 mm) minimum thickness of lightweight insulating concrete slurry coat over the top of the substrate before embedding the specified expanded polystyrene insulation panels (where required) as shown on the drawings. Place a 2" inch (51 mm) minimum thickness of the lightweight insulating concrete over the top of the existing roof and expanded polystyrene insulation panels, where present.
- D. Slope: The intent of the LWIC install is to provide positive slope to designed drainage features.. The installer is to observe the LWIC surface for locations of ponding after rains (or via wetting down the roof surface) and in areas identified the installer is to provide supplemental LWIC and expanded polystyrene insulation to relieve the ponding water areas as practicably as possible.

#### 3.4 FIELD QUALITY CONTROL

- A. Protection: Avoid roof-top traffic over the roof insulation system until one can walk over the surface without creating surface damage.
- B. Compressive Strength Testing: The Owner has the option to select an independent testing laboratory to randomly sample the top placement of insulating concrete to verify the thickness and density, and to secure and test compressive strength cylinders in accordance with ASTM C495. The Owner will be responsible for the cost and engagement of the independent testing laboratory services.
- C. Application Monitoring: Monitor the thickness and wet density of the lightweight insulating concrete at the time of placement to determine conformance to the manufacturer's requirements. Monitor the placement of proper thickness of polystyrene insulation board in accordance with the contract documents.
- D. Fastener Withdrawal Testing: Conduct a base ply fastener pull test 3 or more days following the application of the lightweight insulating concrete to ensure a minimum withdrawal resistance of 40 pounds (18 kg) per fastener.

#### 3.5 PATCHING

- A. Patching: Perform all patching and repairing of insulating concrete using Zono-Patch or other materials approved by the lightweight insulating concrete supplier.

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. General

1. The Contractor is responsible to verify all field conditions that may affect their bid.

#### B. Base Bid

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

#### C. Alternate Bid: See Section 011100 and 012300.

### 1.2 RELATED SECTIONS

#### A. Related sections include:

1. Section 012300 - Price and Payment Procedures
2. Section 024000 – Demolition
3. Section 035216 - Lightweight Insulating Concrete (LWIC)
4. Section 061516– Wood Roof Deck Rehabilitation
5. Section 073100- Asphalt Shingle Roofing
6. Section 075423- TPO Thermoplastic Membrane Roofing
7. Section 076000 - Flashing And Sheet Metal

### 1.3 DEFINITIONS

- A. Remove: Remove and legally dispose of items except those indicated to be reinstalled.
- B. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations.

### 1.4 SUBMITTALS

- A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

### 1.5 QUALITY ASSURANCE

- A. Material installation shall proceed when weather conditions are in accordance with the manufacturer's written application instructions and no precipitation is anticipated. Materials installed during inclement weather conditions shall be subject to removal and replacement at no additional cost to the Owner.
- B. Regulatory Requirements: The contractor is solely responsible for complying with all relevant requirements of governing authorities. Comply with governing EPA notification regulations before starting roof demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

1. The contractor is not entitled to rely upon the services of the Design Professional as a competent person for the purposes of material removal. Conduct Work Area demolition so that Owner's operations will not be disrupted. Provide not less than 48 hours' notice to Owner of activities that will affect Owner's operations.
2. Lumber Standards and Grade Stamps: DOC PS 20, American Softwood Lumber Standard, and inspection agency grade stamps.
3. Construction Panel Standards: DOC PS 1, U.S. Product Standard for Construction, and Industrial Plywood; APA PRP-108.
4. Wood Framing Standards: NFPA House Framing Manual.
5. Preservative Treatment: AWPA C2 for lumber and AWPA C9 for plywood; waterborne pressure treatment. Provide for wood in contact with soil, concrete, masonry, roofing, flashing, dampproofing and waterproofing.

C. Wood products shall be protected in accordance with the manufacturer's written guidelines.

#### 1.6 SCHEDULING

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

### PART 2 - PRODUCTS

#### 2.1 Materials

A. Non-structural light framing and blocking.

1. Nominal 2 x 4 inch and 2 x 6-inch pine, shop pressure treated for above ground contact.
2. Wood framing elements 2 x 4 inches by suitable length: No. 2 grade yellow pine or standard Douglas Fir.

B. Wood Nailers

1. No. 2 grade yellow pine or standard Douglas Fir, pressure treated with waterborne salt preservatives, Wolman Osmose K-33 or approved substitution. Thickness as required to be flush with insulation, width to be six (6) inches.

C. Sheathing

1. Plywood sheathing shall be CD-X Exterior Grade, nominal ½ inch thickness with 4 ply exterior grade plywood roof sheathing in 4 x 8-foot panel size.

D. Fasteners

1. Stainless steel nails shall be annular ring or screw shank, minimum 3/8-inch diameter head, of sufficient length to penetrate through sheathing or 3/4 inch into solid decking. Used for the attachment of sheet metal to wood.
2. Galvanized nails shall be 12d or 16d (11 or 12 gauge) ring shank or screw shank, minimum 3/8 diameter head; length as necessary to penetrate through sheathing or 3/4 inch into solid decking. Used for the attachment of sheet metal to wood.

3. Steel and Wood Fastener: Used to attach components to wood and steel (18 gauge to 24 gauge) substrates. Thread diameter .215, shank diameter .170, head style #3 Philips truss head and corrosion resistant coating CR-10. 3-inch plastic plate used with insulation board. Products manufactured by Olympic Fasteners, Inc., or prior approved substitution. Used in the attachment of wood to wood and wood to decking.

E. Other Items

1. Flexible liner: Minimum 20 mil flexible PVC liner to be used in concealed applications under metal coping and expansion joint covers. Tensile strength MD 2,828, elongation MD 270%, shrinkage 5% max. Lexsuco Water Barrier by GAF or approved substitution.
2. Compressible Insulation: Fiberglass batt insulation shall be a minimum of four inches in thickness.
3. Galvanized steel double shear joist hanger to be used for installation of wood bracing at derelict curbed unit caps.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspect substrates and conditions under which the work of this section will be performed and verify that construction operations may properly commence. Do not proceed with the work until unsatisfactory conditions have been resolved fully.

3.2 PREPERATION

- A. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
  1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
  2. Deck openings resulting from the removal of derelict RTUs shall be covered prior to installation of the roof insulation. Seal all edges to prevent material spills into the building.
    - a. Openings 12 inches in width or smaller shall be covered with 20-gauge galvanized sheet steel, mechanically attached to the deck with fasteners spaced no more than 8 inches OC.
    - b. Openings that exceed 12 inches in width shall be covered with minimum 1/2-inch exterior plywood. Install wood blocking spaced no more than 16 inches OC to support the sheathing. Recess the blocking to allow the sheathing to be flush with the opening. Attach sheathing using galvanized annular nails spaced no more than 8 inches OC.
- B. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.
  1. Protect existing site improvements, appurtenances, and landscaping to remain.
- C. Protect the interior of the building from dust and debris resulting from tear off of the existing materials. An observer will be put inside the building to assure debris is properly contained. When debris is noted, work shall be stopped until suitable protection measures can be taken.

- D. The Contractor is responsible for all electrical and Freon disconnects and reconnects. Coordinate shut down of units with the Owner's Representative before proceeding.

### 3.3 CURBED UNITS

- A. Furnish and install new wood blocking at all roof mounted equipment as required to provide a minimum base flashing height of 8 inches above the roof level. Blocking shall be installed to equipment curbs as required to maintain a full cant face above the roof level and attached to the curb with the appropriate fasteners spaced 12 inches OC maximum.

### 3.4 ROOF TO WALL EXPANSION JOINTS

#### A. General

1. Examine the condition of the existing wood blocking. Remove and replace damaged units taking care to document the quantities. Damage shall be defined as wood that has less than 75 percent of the original fastener withdraw resistance.

#### B. New blocking

1. Install new 2 x 6-inch wood blocking with the first layer fastened to the roof deck. Install subsequent layers fastened to the underlying wood blocking. Attachment shall be maximum 12 inches OC stagger nailed. Horizontal nailers shall be equal in height to the thickness of the roof insulation.
2. Install vertical 2 x 10-inch wood blocking toe nailed to the deck blocking. Bevel cut the top of the blocking to provide positive slope away from the wall.
3. Install wood cant nailed to the deck blocking and vertical wood blocking.

### 3.5 FIELD OF ROOF EXPANSION JOINT

#### A. General

1. Examine the condition of the existing wood blocking. Remove and replace damaged units taking care to document the quantities. Damage shall be defined as wood that has less than 75 percent of the original fastener withdraw resistance.

#### B. New blocking

1. Install new 2 x 6-inch wood blocking with the first layer fastened to the roof deck. Install subsequent layers fastened to the underlying wood blocking. Attachment shall be maximum 12 inches OC stagger nailed. Horizontal nailers shall be equal in height to the thickness of the roof insulation.
2. Install vertical 2 x 10-inch wood blocking toe nailed to the deck blocking. Bevel cut the top of the blocking to provide positive slope. The vertical wood member shall extend a minimum of 8 inches above the finished roof height. Construct joint allowing a minimum 2-inch separation between vertical wood members.
3. Nail treated wood cant at the base of vertical wood blocking on each side of the control joint.
4. Install flexible liner and compressible insulation in the gap between vertical wood blocking.

### 3.6 ADJUSTING AND CLEANING

- A. Sweep and remove chips, shavings, and dust from Work Area on a daily basis during installation period. Leave installed work clean, free from grease, finger marks and stains.
- B. Upon completion of installation, remove scraps and debris from project site. Clean adjoining building surfaces where stains have resulted from the Work.
- C. Replace damaged landscape and grass areas with landscape treatments comparable to the existing materials. Damaged grass shall be replaced with sod of the same variety unless otherwise agreed by the Owner.

### 3.7 PROTECTION

- A. Provide protection as required to assure the completed work of this section will be without damage or deterioration at date of substantial completion.
- B. Take suitable precaution to protect adjoining building surfaces from damage. Overlay adjoining roof surfaces with 1/2-inch plywood and other necessary protection during installation of metal roofing. Cover side walls of the building with plastic or canvas tarps.
- C. Protect landscape and planted areas from damage.

### 3.8 FINAL INSPECTION

- A. Upon completion of the scope of work an inspection shall be made by the Owner's Representative to ascertain that the Work has been installed according to the manufacturers published requirements. Observed defects shall be corrected as required to secure the manufacturer's warranty.

END OF SECTION

## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

- A. Project diagrams, key plans, and general provisions of the Contract, including General and Supplementary Conditions and Division 01-48 Specification Sections, apply to this Section.

### 1.02 SUMMARY

- A. Where existing wood decking and/or wood framing is damaged, deteriorated, or considered inadequate the existing materials should be removed and replaced to match existing and return affected area to its original design and in accordance with current applicable codes.
- B. Coordinate with any specified project Unit Prices and Alternates, where indicated.
- C. Base Bid: Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

### 1.03 DEFINITIONS

- A. Dimension Lumber: Lumber of 2-inches nominal or greater but less than 5-inches nominal in least dimension.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
  - 1. NLGA: National Lumber Grades Authority.
  - 2. SPIB: The Southern Pine Inspection Bureau.
  - 3. WCLIB: West Coast Lumber Inspection Bureau.
- C. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.
- D. Rehabilitation: Where existing wood decking and/or wood framing is damaged, deteriorated, or considered inadequate the existing materials should be removed and replaced to match existing and return affected area to its original design in accordance with current applicable building codes.

### 1.04 SUBMITTALS

- A. Submit list of rehabilitation materials and their proposed application including securement data.
- B. Product Data: Manufacturer literature indicating product specifications, installation instructions, and standard construction details for specified products.
- C. Shop Drawings: Complete shop drawings showing location of proposed repair items with and locations of each item to be used. Include dimensions and configurations.

### 1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience and certified by AITC.
- B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than 10 years of documented experience.

### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Prevent exposure to precipitation during shipping, storage, and installation.
- B. Storage: Do not store directly on ground, or grade. Cover with breathable, water resistant covering.
- C. Handling: Keep materials clean and dry.

## PART 2 - PRODUCTS

### 2.01 WOOD PRODUCTS, GENERAL

- A. Wood fabricated from old growth timber is not permitted.
- B. Regulatory Requirements:
  - 1. Conform to applicable code for fire retardant requirements.
  - 2. Conform to UL (FRD) requirements for applicable code.
- C. Marking: Mark each piece with producer's stamp indicating compliance with specified requirements; for pieces exposed to view in completed construction, submit manufacturer's certificate certifying that products conform to specified requirements in lieu of grade stamping.

### 2.02 WOOD DECKING - PLYWOOD

- A. Plywood Decking:
  - 1. APA Rated Sheathing, span rating in accordance with applicable code, Exterior grade; 1 A interior veneer appearance grade; sanded.
  - 2. DOC PS 1, Exposure 1, C-D Plugged, in thickness indicated or, if not indicated thickness appropriate for the application indicated.
- B. Includes typical nominal lumber sizes including but not limited to 1/2 inch and 2/4 inch thicknesses in typically available 4 by 8 foot boards.

### 2.03 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Refer to specification Section 06 1000 - Rough Carpentry.

### 2.04 ACCESSORIES

- A. Fasteners and Anchors:
  - 1. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
    - a. Ensure fastener material is compatible with all wood products and adjacent materials.
  - 2. Screws:
    - a. Bugle head, hardened steel, power driven type, length three times thickness of decking.
    - b. Hot-dipped galvanized steel for high humidity, wet, and preservative-treated wood locations.
    - c. Provide stainless steel as follows, when needed for material compatibility: ASTM A 153/A of Type 304 stainless steel.
  - 3. Anchors: Toggle bolt type for anchorage to hollow masonry.

- a. Hot-dipped galvanized steel for high humidity, wet, and preservative-treated wood locations.
  4. Bolts:
    - a. Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
    - b. Provide stainless steel as follows, when needed for material compatibility: ASTM A 153/A of Type 304 stainless steel.
  5. Structural Adhesive: Waterproof, air cure type, cartridge dispensed. Provide adhesive designed specifically for structural wood deck component adhesion.
    - a. Products subject to compliance with this specification are non-silicone, structural adhesive products by Chemlink (Buildsecure), Sika, and Dow.
  - B. Sealants: Where needed, comply with applicable requirements in Section 07 9200 - Joint Sealants, and as recommended by sealant manufacturer and manufacturer of substrates for intended application.
- 2.05 ELASTOMERIC UNDERLAYMENT/SEPARATION SHEET
- A. Provide underlayment/separation sheet to protect metal from corrosion/galvanic action due to miscellaneous rough carpentry products.
    1. Mid-States "Quick-Stick" HT.
    2. W R Grace "Ice & Water Shield HT.
    3. Henry "Blueskin PE 200 HT".
    4. Carlisle Coatings and Waterproofing, Inc., "WIP 300HT".
- 2.06 WOOD TREATMENT
- A. Factory-Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
  - B. Fire Retardant Treatment:
    1. Provide fire retardant wood material where required by applicable codes.
    2. Manufacturers:
      - a. Arch Wood Protection, Inc; [www.wolmanizedwood.com](http://www.wolmanizedwood.com).
      - b. Hoover Treated Wood Products, Inc; [www.frtw.com](http://www.frtw.com).
      - c. Osmose, Inc; [www.osmose.com](http://www.osmose.com).
    3. Exterior Type: AWPA U1, Use Category UCFB, Commodity Specification H, chemically treated and pressure impregnated; with maximum flame spread index of 25 when tested in accordance with ASTM E84 and with no evidence of significant combustion when test is extended for an additional 20 minutes both before and after accelerated weathering test performed in accordance with ASTM D2898.
    4. Marking: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
  - C. Preservative Pressure Treatment:
    1. Manufacturers:

- a. Arch Wood Protection, Inc; [www.wolmanizedwood.com](http://www.wolmanizedwood.com).
  - b. Viance, LLC; [www.treatedwood.com](http://www.treatedwood.com).
  - c. Osmose, Inc; [www.osmose.com](http://www.osmose.com).
2. Preservative Pressure Treatment of Plywood Decking: AWPA U1, Use Category UC2 and UC3B, Commodity Specification F using waterborne preservative to 0.25 lb/cu ft retention ( to 4.0 kg/cu m retention).
  3. Marking: Mark each piece with stamp of an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

### PART 3 - EXECUTION

#### 3.01 EXAMINATION

- A. Verify that support framing and installation area is ready to receive decking.
- B. Proceed with installation only after unsatisfactory conditions have been corrected. Installation of materials of this section indicates acceptance of substrates and conditions.

#### 3.02 PREPARATION

- A. Coordinate placement of bearing items.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Provide blocking and framing as indicated and as required to support facing materials, equipment, sheet metal flashings, and specialty items, and trim.
- D. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

#### 3.03 INSTALLATION, PLYWOOD

- A. Install plywood decking perpendicular to framing members with ends staggered over firm bearing.
- B. Allow expansion space at edges and ends.
- C. Attach plywood decking with adhesive and screws.
  1. Use fasteners of appropriate type, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, unless otherwise indicated. Ensure fasteners are installed to provide applicable code required structural integrity.
- D. Cut decking to accommodate penetrations such as pipes, conduits, roof drains, and flanges.
- E. Where preservative-treated roof decking must be cut during erection, apply a field-treatment preservative to comply with AWPA M4.
- F. Anchor wood roof decking, where supported on walls, with bolts as indicated.

- G. Apply joint sealant to seal roof decking at exterior walls at the following locations:
  - 1. Between roof decking and supports located at exterior walls.
  - 2. Between roof decking and exterior walls that butt against underside of roof decking.
  - 3. Between tongues and grooves of roof decking over exterior walls and supports at exterior walls.

3.04 TOLERANCES

- A. Surface Flatness of Decking Without Load: 1/4 inch in 10 feet (2 mm/m) maximum, and 1/2 inch in 30 feet (12 mm / 9 m) maximum.

3.05 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Refer to specification Section 06 1000 - Rough Carpentry.

3.06 ADJUSTING

- A. Repair damaged surfaces and finishes prior to installation of roofing.

END OF SECTION

## PART 1 - GENERAL

### 1.01 SUMMARY

- A. Base Bid – Refer to Section 011100.

### 1.02 RELATED SECTIONS

- A. Section 012300 - Price And Payment Procedures
- B. Section 024000 - Demolition
- C. Section 061000 – Rough Carpentry
- D. Section 061516 - Wood Roof Deck Rehabilitation
- E. Section 075423 – TPO Thermoplastic Roofing
- F. Section 076000 – Flashing and Sheet Metal
- G. Section 079200 – Sealants and Caulking
- H. Section 099100 – Exterior Painting
- I. Section 099653 - Elastomeric Coating

### 1.03 SUBMITTALS

- A. General: Submit two (2) complete sets of documents under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.
- B. Required Contractor Submittal Items.
  - 1. Product data sheets for each material required.
    - a. Roof shingle
    - b. Sealant
    - c. Roofing underlayment
    - d. Self-adhering flashing
    - e. Fasteners
    - f. Through-deck edge vent
  - 2. Samples
    - a. Shingle and underlayment

- b. For selection, submit manufacturer's entire range of shingle colors and textures.
3. Certified letter indicating intent to supply Contractor Warranty from Section 017410 at the completion of work.

#### 1.04 QUALITY ASSURANCE

- A. Fire Resistance: Shingles and accessory materials shall be listed by UL as being approved for fire resistance classification Class A on each shingle bundle.
- B. Installer Qualifications: A company with experience in installation of materials of the type included in this section and having a minimum of five previous installations within the past year, similar in scope to this project. Installer must be factory certified/credentialed installer by the roofing manufacturer.
- C. Pre-construction conference: Prior to the start of work, a conference to be attended by all affected parties shall be held at the jobsite with the intent of coordinating activities to minimize disruptions to the building tenants. Roofing foreman and Sheet metal foreman shall be present.
  1. The conference will not be held unless the Foremen are present. If the installation Foremen are different from those who attended the preconstruction conference, a new preconstruction conference will be held prior to the start of work. The cost for each additional conference is \$1,500 and shall be paid by the Contractor via deductive change order.
- D. Upon completion of the installation, an inspection shall be made by the Owner's representative to ascertain that the materials have been installed according to approved specifications and details. The inspection shall be scheduled only after receipt, by the Design Professional, of the Contractor's completed punch list. Upon approval of the project, the required warranties shall be issued. Work judged unsatisfactory requiring a second final inspection shall be charged to the Contractor at \$1,500 per inspection.
- E. Applicable standards
  1. Standards of ASTM (formerly the American Society for Testing and Materials) as referenced herein.
  2. National Roofing Contractors Association (NRCA) "Roofing and Waterproofing Manual", current edition.
  3. State of Georgia, EPA and local building codes with regard to asbestos abatement shall be included as part of this specification.
  4. Occupational Safety and Health Administration (OSHA) "Interim fall protection guidelines for residential construction", most current standard.
  5. "International Building Code", as published by the International Code Council (ICC) and applicable local and State amendments, current edition adopted by the local authority having jurisdiction.
- F. The application specifications of each material manufacturer's product shall be considered part of this specification and be followed if it is judged to be of higher quality in the completed roof system. In the event of a discrepancy between this specification and the manufacturer's specification, the Design Professional shall be the sole judge as to which procedure to follow. The roofing contractor shall note any discrepancy in their bid documents.

- G. Products or materials containing asbestos are not acceptable for use on the project.
- H. The Contractor shall have a Workers Compensation Experience Rating experience modification factor (NCCI) of 1.1 or less.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Furnish materials wrapped in manufacturer's original packaging
- B. Store materials separated from the ground and in a dry location, protected until installation in accordance with manufacturer's instructions.

1.06 PROJECT CONDITIONS

- A. Substrate: Before starting installation work, complete substrate installation including roof penetrations. Substrate shall be smooth, dry, securely anchored, and free of construction debris.
- B. Follow manufacturer's instructions regarding acceptable weather conditions for installation of shingle products.
- C. Provide suitable protection from water damage during work taking care to make water cut-offs at periods of threatening weather and at the end of each day's work. Provide suitable protection of landscaping surrounding the building during work.
- D. Contractor shall field verify all dimensions. Roof top equipment, features and penetration conditions shown on the roof drawings are representative of the conditions on the building. Contractor shall field verify the existing conditions.

1.07 WARRANTY

- A. Manufacturer's warranty guaranteeing to correct defects and failures in products which may occur during the warranty period, without reducing or otherwise limiting any other rights to correction which the owner may have under the contract documents.
  - 1. Architectural Strip Shingle: minimum 40-year material warranty period.
  - 2. Warranty shall provide enhanced coverage to include:
    - a. Non-prorated coverage for 10 years min.
  - 3. Warranty shall cover wind resistance up to 130 mph for 10 years min.
  - 4. Warranty shall cover algae resistance for 10 years min.
  - 5. Roofing installer must be a factory certified/credentialed installer by the manufacturer.
- B. Provide contractor's labor warranty from Section 017410. The warranty term shall be 5 years correcting leaks and defects resulting from workmanship on all installed materials. Contractor shall respond with correcting action within 24 hours of Owner's call.

1.08 EXTRA MATERIALS

- A. Furnish to the Owner two (2) bundles of each asphalt shingle type and color used in the work.

1.09 SAFETY

- A. Contractor shall follow all current OSHA fall protection guidelines to protect workers from accidental injury while on jobsite. Roofing slide guards, eave guards and/or personal fall arrestors

will be used as required to comply with standards. Immediately notify the Design Professional and Owner of unsafe conditions.

#### 1.10 PRE-INSTALLATION CONFERENCE

- A. All parties involved in work in this section shall attend a conference prior to the commencement of work at a location to be selected by the Design Professional. Installation requirements and coordination of work will be reviewed. Roofing foreman and sheet metal foreman are required to attend.

### PART 2 - PRODUCTS

#### 2.01 ASPHALT SHINGLE MANUFACTURERS

- A. Subject to compliance with the specified requirements, products of the following manufacturers are approved:
1. GAF Materials Corporation, 1361 Alps Road, Wayne, NJ 07470, Tel. 800-766-3411, [www.gaf.com](http://www.gaf.com)
  2. Owens Corning Corp., 1 Owens Corning Pkwy., Toledo, OH 43604, telephone 800-438-7465, [www.owenscorning.com](http://www.owenscorning.com)
  3. CertainTeed Corporation, 20 Moores Road, Malvern, PA 19355, telephone 800-233-8990, [www.certainteed.com](http://www.certainteed.com)

#### 2.02 SHINGLE MATERIALS

- A. General: Conforming to ASTM D3018 Type I - Self-Sealing; ASTM D3462, ASTM D3161 Class F Wind Resistance, ASTM D7158 Class H Wind Resistance, and UL 790 Class A Fire Resistance; glass fiber mat base, ceramic colored UV resistant mineral surface granules across entire face of shingle formulated with mildew resistance.
1. Color: As selected by the Owner, after contract award, from manufacturer's standard colors.
- B. Architectural Strip Shingle: Architectural type with random laminated tabs and random shadow lines. Weight: nominal 300 pounds min. per square (100 square feet).
1. GAF Timberline UHDZ
  2. Owens Corning TruDefinition Duration
  3. CertainTeed Landmark Pro

#### 2.03 OTHER MATERIALS

- A. General: Provide materials from the primary roofing manufacturer or specifically approved by the manufacturer for use with the specified system and as required to meet manufacturer's requirements for the specified warranties.
- B. Roofing Underlayment: Synthetic underlayment shall be manufactured from UV stabilized polymer materials, rolls 48 inches wide min. by 200 feet long min. Rolls meet ASTM D226 and

D4869. Provide UL-listed material approved for use in roofing assembly to achieve specified fire rating. Cap nails required for installation.

1. "Deck-Armor" as manufactured by GAF Corp.
  2. "Deck Defense Roof Underlayment", Owens Corning Corp.
  3. "DiamondDeck" Synthetic Underlayment, CertainTeed Corporation.
- C. Self-Adhering Flashing: Self-adhesive membrane manufactured from elastomeric blend of modified asphalt with polyethylene film intended for use as shingle underlayment. Minimum thickness 40 mils, minimum 36 inch wide rolls. High temperature formulation.
- D. Asphalt Plastic Cement: ASTM D 4586, fibrated asphalt cement, asbestos free.
- E. Shingle Fasteners: Use nails for attachment as required by the manufacturer.
1. Nails: 11 or 12 gage, ring shank, aluminum or hot-dipped galvanized with barbed shanks, minimum 3/8 diameter head; length as necessary to penetrate through sheathing or 3/4 inch into solid decking.
- F. Construction Adhesive / "Liquid Nail": Heavy duty construction adhesive used in exterior and interior applications, manufactured by Macco Adhesives, Glidden Company.
- G. Sealant: Premium grade one part polyurethane or hybrid STPE/STPU non-sag elastomeric sealant meeting Federal Spec. TT-S-00230C, Type II, Class A. Meets ASTM C-920, Type S, Grade NS, Class 50 min. Manufacturers standard color most closely matching existing metal color.
- H. Roof Ventilation Systems:
1. Shingle manufacturer's premium shingle over heat and moisture exhaust strip ridge vent from the primary roofing manufacturer or specifically approved by the manufacturer for use with the specified system and as required to meet manufacturer's requirements for the specified warranties.
  2. Through-deck edge vent: Tapered, shingle-over, crush-resistant strip vent. Acceptable product: GAF Cobra IntakePro Rooftop Intake Vent or equal by shingle manufacturer.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Verify existing site conditions under provisions of Section 017000.
- B. Verify that roof penetrations and plumbing stacks are in place and flashed to deck surface.
- C. Verify roof openings are correctly framed prior to installing work of this section.
- D. Verify deck surfaces are dry and free of ridges, warps, or voids.
- E. Immediately notify the Owner's representative of unacceptable conditions which may affect proper material installation.

### 3.02 PREPARATION

#### A. General

1. Only remove as much of the existing roof system as can be completely covered and sealed by the new roof underlayment at the end of each day's work. Ensure roofing is adequately secured and sealed at the end of each day's work to prevent water intrusion and blow-off.
2. Examine the existing roof underlayment; notify Owner's representative when moisture content of any existing material exceeds 25% of its dry weight. When authorized by Owner replace wet or damaged materials with new like materials of same thickness. Where wet materials are removed examine the condition of roof deck. Replace rotted or deteriorated decking with materials of same construction.
3. Remove projections and debris from substrate before starting installation; lay minimum 24 gauge galvanized sheet metal over minor voids and fasten to substrate.
4. Coordinate shingle installation with flashing and other work integral with shingles.
5. Secure all vent stacks, curbs, and other penetrations to substrate before starting shingle installation.
6. Broom clean deck surfaces under eave protection and underlayment prior to their application.

B. Refer to Section 024000 for additional demolition requirements.

### 3.03 INSTALLATION - SHINGLE UNDERLAYMENT

- A. Roof Slope 4:12 or Greater: Install one layer roofing underlayment perpendicular to slope of roof and lap minimum 4 inches over eave protection using cap nails. Shingle underlayment to shed water. Use only sufficient quantity of cap nails required to hold underlayment in place during application. Underlayment shall have minimum 2 inch head lap and 4 inch end lap.
- B. Weather lap and seal watertight with plastic cement items projecting through or mounted on roof.

### 3.04 INSTALLATION - SHINGLES AND FLASHING

- A. Install shingles in accordance with shingle manufacturer's instructions and NRCA's "The NRCA Steep Roofing Manual," whichever is more restrictive.
1. Lay out work with horizontal and vertical chalk lines.
- B. Flashing: Install the following types of flashing and edge protection, to conform with installation details and instructions of "The NRCA Steep Roofing Manual" and to provide a weather-tight installation:
1. Drip edge: Install on top of the shingle underlayment along the entire length of rakes and below the underlayment along the entire length of eaves. Nail to roof deck with noncorrosive nails 8 inches to 10 inches apart. See section 07600 for drip edge.
  2. Ridge Construction: Utilize manufacturers ridge cap shingles. Install by beginning at the east/south end of the ridge.

3. Pipe vent flashing shall be installed in accordance with the manufacturer's instructions. Attach the base plate to the roof deck with the specified fasteners. Install roof covering to shed water.

C. Asphalt Shingles

1. Install shingles in accordance with "The NRCA Steep Roofing Manual" and shingle manufacturer's installation instructions. Start shingle installation with row of manufacturer's starter shingles placed along the full length of eave and fastened.
2. Pattern: As recommended by the shingle manufacturer for the type of shingles specified. Pattern shall match that of shingles installed on other roof areas of buildings on site unless directed otherwise.
3. Nailing Laminated Shingles
  - a. Drive nails straight and flush with the surface of the shingle. Remove incorrectly driven nails and repair the hole in the shingle with roof cement. Do not nail into or above the factory applied adhesive line.
  - b. Begin nailing from the end closest to the shingle just laid and proceed across. No cutout or end joint shall be closer than 2 inches from a nail in an underlying course. To determine the nail line, add 5/8 inch to the shingle exposure.
  - c. Roof slopes less than 12:12, typical installation: install 4 nails spaced 1 inch and 12 inches from each end.
  - d. Roof slopes 12:12 or greater, install 6 nails per strip. Two nails spaced 1 inch from each end and four nails spaced 12 inches from each end. Install hand tabbed asphalt roof cement at two locations 12 inches from each end.

3.05 ADJUSTING AND CLEANING

- A. Replace shingles broken, torn, excessively scuffed or marred, or otherwise damaged during installation.
- B. Clean-up: Immediately upon completion of all work specified, the roof and jobsite area shall be cleared of all debris resulting from the Work. Temporary protection shall be removed. Proper disposal of all materials shall be the responsibility of the Contractor.
- C. Damage or staining to the building or grounds resulting from the Work shall be cleaned or corrected to the original condition. Replace landscape plantings damaged during construction with comparable size and quality.

3.06 FINAL INSPECTION

- A. Upon completion of the Work an inspection shall be made by the Owner's representative to ascertain that the roofing system has been installed according to the manufacturer's published requirements. Observed defects shall be corrected as required to secure the specified warranty.
- B. Work noted as deficient during the Final Inspection shall be repaired and corrected by the Contractor and made ready for reinspection within 5 working days.

END OF SECTION

## PART I - GENERAL

### 1.01 SUMMARY

#### A. General

1. The contractor shall field verify all conditions.

#### B. Base Bid - Refer to Summary of Work, Base Bid Scope of Work, Section 011100

### 1.02 RELATED SECTIONS

#### A. Related Sections include:

1. Section 012300 - Price and Payment Procedures
2. Section 024000 - Demolition
3. Section 022529 - Existing Roof System Moisture Assessment
4. Section 035216 - Lightweight Insulating Concrete (LWIC)
5. Section 061000 – Rough Carpentry
6. Section 061516 - Wood Roof Deck Rehabilitation
7. Section 073100 – Asphalt Shingle Roofing
8. Section 076000 - Flashing and Sheet Metal
9. Section 079200 – Sealants and Caulking
10. Section 099100 – Exterior Painting
11. Section 099653 – Elastomeric Coating

### 1.03 SUBMITTALS

A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

#### B. Bid submittal

1. Approved Applicator letter from proposed roofing manufacturer.
2. Statement of roofing manufacturer's product and name of the subcontractors the bid is based upon. Manufacturer and subcontractors are not to be changed unless unavailable at no fault of the bidder.

#### C. Required Contractor Submittal Items:

1. Product data sheets for each material required, including:

- a. Thermoplastic single ply membrane.
- b. Caulks, mastics, and sealants
- c. Bonding adhesive
- d. Clad metal flashing
- e. Insulation, including tapered insulation
- f. Insulation adhesive
- g. Cover board
- h. Cover board adhesive
- i. Cover board
- j. Cover board adhesive
- k. Fasteners
- l. Termination bar
- m. Metal accessories

2. Samples: primary roof membrane sample.

3. Shop Drawings: construction details, tapered insulation layout.

4. Written certification from the primary roof system manufacturer that the specification is acceptable and stating their intent to supply the specified warranty at the successful completion of Work.

5. Warranty Specimens:

- a. Sample copy of Manufacturer's specified roofing warranty stating obligations, remedies, limitations, and exclusions of warranty.
- b. Certified letter indicating intent to supply Contractor Warranty from Section 017000 at the completion of work.

6. Schedule of Values, refer to Section 012300.

D. Manufacturer's Safety Data Sheets (SDS) to be maintained by the Contractor at the worksite at all times.

E. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

#### 1.04 QUALITY ASSURANCE

A. Roofing system shall be UL (formerly Underwriters Laboratory Class A listed). The installed system shall comply with the wind uplift requirements of ASCE 7.

B. The Contractor shall be trained and demonstrate proficient experience in the application of the specified materials having installed no less than three projects of similar scope within the past year. The Contractor shall be approved prior to bid date to install the materials of the specified manufacturer. Contractor shall be certified by the manufacturer for the highest warranty level.

C. The Contractor shall have a Workers Compensation Experience Rating experience modification factor (NCCI) of 1.1 or less.

- D. Pre-construction conference: Prior to the start of work, a conference to be attended by all affected parties shall be held at the jobsite with the intent of coordinating activities to minimize disruptions to the building tenants. Roofing foreman and Sheet metal foreman shall be present.
1. The conference will not be held unless the Foremen are present. If the installation Foremen are different from those who attended the preconstruction conference, a new preconstruction conference will be held prior to the start of work. The cost for each additional conference is \$1,100 and shall be paid by the Contractor via deductive change order.
- E. Inspection: Upon completion of the installation, an inspection shall be made by the Owner's representative to ascertain that the materials have been installed according to approved specifications and details. The inspection shall be scheduled only after receipt, by the Design Professional, of the Contractor's completed punch list. Upon approval of the project, the required warranties shall be issued. Work judged unsatisfactory requiring a second final inspection shall be charged to the Contractor at \$1,300 per inspection.
- F. Changes: Contractors are required to bid each listed line item as specified.
- G. Applicable standards:
1. Standards of ASTM International (formerly the American Society for Testing and Materials) as referenced herein.
  2. National Roofing Contractors Association (NRCA) "Roofing and Waterproofing Manual", current edition.
  3. State of Georgia, EPA and local building codes with regard to asbestos abatement shall be included as part of this specification.
  4. Occupational Safety and Health Administration (OSHA) "Interim fall protection guidelines for residential construction", current standard.
  5. "The International Building Code", current edition adopted by the AHJ, as published by the International Code Council, Inc. and applicable local and State amendments.
  6. "Manual of Practice", published by the Construction Specifications Institute (CSI).
  7. ASTM Standard D6878 (current version).
- H. The application specifications of each material manufacturer's product shall be considered part of this specification and be followed if it is judged to be of higher quality in the completed roof system. In the event of a discrepancy between this specification and the manufacturer's specification, the Design Professional shall be the sole judge as to which procedure to follow. The roofing contractor shall contact the Design Professional noting any discrepancy a minimum of three days prior to the bid date.
- I. Products or materials containing asbestos are not acceptable for use on the project.

#### 1.05 WARRANTY

- A. General: Warranty shall be provided at no additional expense to the Owner.
- B. Provide a 20 year manufacturer's non-prorated warranty for single ply roofing system and roof insulation. Warranty shall cover labor and materials to correct leaks and defects encountered

during the warranty period and shall take effect on the date of final completion. Warranty shall not be voided by emergency leak repairs or by ponding water conditions.

- C. Provide contractor's labor warranty from Section 017410. The warranty term shall be 5 years correcting leaks and defects resulting from workmanship on all installed materials. Contractor shall respond with correcting action within 24 hours of Owner's call.

#### 1.06 SITE CONDITIONS

- A. Install roofing in dry weather when ambient temperature is above 40 degrees F.
- B. All roof surfaces shall be free of ponded water, ice, snow and other forms of moisture during installation.
- C. Protective tarps are required to cover materials stored out in the weather. These materials must be on pallets or blocking to raise them a minimum of 4 inches above any ponding water. Packaging labels shall indicate appropriate warnings, storage conditions, lot numbers, and usage instructions.
- D. Contractor shall field verify all dimensions. Roof Top Units (RTU) and penetration conditions shown on the roof drawings are representative of the conditions on the building. Contractor shall field verify the existing conditions.
- E. Bonding adhesive shall be stored in conditions that maintain a minimum temperature of 60 degrees F. With the Owner's permission, adhesive may be stored inside of the heated building or a temporary heated storage area.

#### 1.07 DEFINITIONS

- A. Contractor: The business entity providing all labor, materials, equipment and services to complete the Work as specified in the Contract Documents.
- B. Roofing Terminology: Refer to ASTM D 1079 for definitions of terms related to roofing work not otherwise defined in this Section.
- C. Ponding water shall be considered to occur when free water remains on the roof longer than 48 hours.
- D. Leaks in the roof system shall be considered to occur when free water enters the roof assembly from defects in the waterproofing integrity of the installed roofing materials.

#### 1.08 PRECAUTIONS

- A. Adhesives, primer and caulks as indicated are extremely flammable and/or toxic. Use precautions indicated by manufacturer.
- B. Surfaces to be bonded shall be dry and clean. Suitable surfaces are usually considered to be smooth, solid masonry, wood, metal and cellular insulating concrete that is considered water resistant and accepted for application by membrane manufacturer.
- C. All fasteners shall be installed with depth-sensing screw guns to prevent overdriving.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. General: All material shall be furnished, specified or approved in writing by the membrane manufacturer.
- B. Basis of Design: Carlisle Syntec Sure-Weld TPO.
- C. Available Manufacturers: Subject to compliance with the specified requirements, including UL Class A fire rating for the existing conditions and roof slope, the following manufacturers are approved:
  1. Carlisle Syntec, PO Box 7000, Carlisle, PA 17013, Tel. 800-479-6832, [www.carlisesyntec.com](http://www.carlisesyntec.com)
  2. Siplast; 1000 Rochelle Blvd., Irving TX 75062, +1 (469) 995-2200, 1.800.922.8800 [www.siplast.com](http://www.siplast.com)
  3. GAF Materials Corporation, 1361 Alps Road, Wayne, NJ 07470, Tel. 800-766-3411, [www.gaf.com](http://www.gaf.com)
  4. Johns Manville Corporation, PO Box 5108, Denver, CO 80217, Tel 303-978-2000, [www.jm.com](http://www.jm.com)
  5. Elevate (formerly Firestone Building Products), 250 West 96th Street, Indianapolis, IN 46260, Tel. 800-428-4442
- D. Requests for approved substitutions must be made in writing no later than 10 days prior to bid date. Submit complete product and test data as specified under Submittals for each proposed substitution.

2.02 MEMBRANE: Membrane shall be 0.060 inch nominal thickness exclusive of fleece backing, with bareback or fleeceback backing as specified, scrim-reinforced white, tan or light grey (Owner's option) thermoplastic non-curing single ply, minimum 72.5 in. wide by appropriate length, that meets UL Class A for the as-installed conditions, with the following minimum physical properties:

Table: Physical properties of membrane

Physical Property -----	Test Method -----	Specification -----
Weight, minimum	ASTM D-751	0.43 lbs/sf
Thickness tolerance	ASTM D-751	60 mil nominal (exclusive of fleece backing)
Breaking Strength	ASTM D-751	275 lbs min.
Tear Strength	ASTM D-751	55 lbs min.
Low Temperature Bend	ASTM D-2136	Pass, -40 F (-40C) Pass 1/8 in. mandrel
Shore A Hardness	ASTM D-2240	80 +- 5
Heat Aging	ASTM D-573	7 days maintains 100% @ 200 F of original
Volatility, max. loss	ASTM D-1203A	0.5%
Hydrostatic res., min.	ASTM D-751A	300 psi
Ozone resistance *	ASTM D-1149	no effect 3 ppm @ 30% strain @ 104F: 72 & 2500 hrs.
Emmaqua 3 million lang.	ASTM E-838	no visible surface cracking
Dimensional stability	ASTM D-1204	24 hrs 0.1% @ 129.2 F
Puncture Res., min.	FTM 101 B,	#2031 325 lbs

\* Test performed on non-reinforced material only.

## 2.03 RELATED MATERIALS

- A. Flashing: Flashing shall be same membrane as in 2.02 except for perimeter use of sheet metal Membrane Clad Metal. Unreinforced .055 in. thick membrane shall be supplied for field fabricated vent stacks, pipes and corners or as premolded accessories. Membrane shall be compatible for direct contact with bitumen materials (asphalt and coal tar pitch) or suitable separation shall be provided.
- B. Bonding Adhesive: Membrane manufacturer Bonding Adhesive shall be provided to hold field sheet and flashing in place. Not to be used in the seams.
- C. Perimeter Half Sheets: Not required with fully adhered systems.
- D. All Purpose Sealant: Provided to serve as water cut-off mastic, pitch-pan sealer and as a caulk to seal membrane to metal.
- E. Primer and Solvent: Primer and Solvent are provided for purposes of preparing membrane for hot-air welding.
- F. Seam Caulk: Seam Caulk shall be provided for the purpose of sealing any cut edge of reinforced membrane.
- G. Overnite Seal: Tie-off that are effective in preventing moisture penetration under newly installed membrane shall be made at the end of each workday and when weather threatens.
- H. Fastener Attachment:
  - 1. Steel and Wood Fastener: Used to attach termination bar, insulation and other components to wood and steel (18 - 24 gauge) substrates. Thread diameter .215, shank diameter .170, head style #3 Phillips truss head and corrosion resistant coating CR-10. 3 inch plastic plate used with insulation board. Membrane manufacturer, OMG Roofing Products, phone 800-633-3800, or prior approved substitution
- I. Termination Bar: Used in the exposed attachment of flashing materials. Extruded aluminum bar with formed caulk edge with pre-drilled holes spaced 6 inches OC. Bar size 1/8 inch thick, 1 inch x 10 foot lengths.
- J. Protection pad: Manufactured by the primary roof membrane supplier and used for the protection of roof membrane and base flashing. The approximate size shall be 30 x 30 x 80 mils min.
- K. Retrofit Drains (only as permitted for use in advance by Design Professional): .U-Flow Hercules RetroDrain as manufactured by Olympic Manufacturing Group, phone 800-633-3800. One-piece seamless body manufactured from 11 gauge spun aluminum. 17 inch flange, cast aluminum strainer and clamping ring.
- L. Low-rise Foam Membrane Adhesive: Roof membrane manufacturer's recommended two-part urethane low-rise foam adhesive, FM approved; Basis of Design Carlisle Flexible FAST Adhesive.
- M. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer for intended use.

## 2.04 INSULATION/COVER BOARD MATERIALS

- A. All roof areas unless noted otherwise: Rigid polyisocyanurate foam insulation board with factory bonded fiberglass facers as approved by the membrane manufacturer and manufactured in compliance with ASTM C1289-95. Minimum compressive strength 20 psi, Moisture absorption <1%, dimensional stability 2% maximum linear change when conditioned at 158 F and 97% relative humidity for seven days. UL Class A listed and FM Class 1 approved. Curing time shall be 24 hours minimum, plus an additional 24 hours minimum per 1 inch of thickness at a minimum of 60F degrees before shipment from the manufacturer.
1. Flat insulation size 4 x 8 feet, 1-1/2" min thick – Provide thicknesses as required to provide overall R-value for the insulation assembly of R-25 min.
  2. Tapered insulation sizes as required to achieve required slope
  3. Tapered insulation drain sumps, crickets and saddles shall be 1/2 inch minimum thickness with 1/4 per foot slope
- B. The cover board basis of design is the roofing manufacturer's standard high-density polyisocyanurate cover board, 1/2" thick, min. R-value 2.5.
1. Alternate cover board: "Dens Deck Prime" as manufactured by Georgia Pacific Corporation. Gypsum roof board manufactured as a nonstructural glass mat faced board with water resistant gypsum core for use in commercial roof assemblies. Flexural strength min. 45, flute spanability 2 5/8 inch, water absorption ASTM C473 10.0%, compression 500 psi, flame spread ASTM E84 0.0. 1/2" thickness unless noted otherwise.
- C. Low-rise Foam Insulation Adhesive: "Insta-Stik" one part urethane adhesive as manufactured by, Dow Chemical Corp., 800/800-3626, OlyBond 500 Adhesive as supplied by Olympic Fasteners, 800/633-3800, or the roof membrane manufacturer's prior approved equal.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine all substrates, areas, and conditions under which roofing will be applied, for compliance with requirements. Verify that positive slope to drain exists on each roof area.
- B. Verify that roof openings and penetrations are in place and set and braced and that roof drains are properly clamped into position.
- C. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at roof penetrations and terminations and match the thickness of insulation required.
- D. All roof drains perform properly. Immediately notify the Owner's representative if drainage is deficient before proceeding with work.
- E. All skylight domes and glass are unbroken. Immediately notify the Owner's representative if glass is broken or cracked before proceeding with work.
- F. Do not proceed with installation until unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Clean substrate of dust, debris, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Block off or shut down air intake locations where smoke or odor may be drawn into building ventilation systems during application. Coordinate with the building's representative.
- D. Raise the height of curbed units to a minimum of 8 inches above the finished roof height.

### 3.03 SELECTIVE DEMOLITION

- A. Refer to Section 024000.
- B. TAKE CARE TO REMOVE ONLY AS MUCH OF THE EXISTING ROOF SYSTEM AS CAN BE COMPLETELY COVERED OVER BY INSULATION AND ROOF MEMBRANE IN A WATERTIGHT MANNER BY THE END OF EACH DAY.

### 3.04 GENERAL INSTALLATION REQUIREMENTS

- A. Install single roofing membrane system according to roofing system manufacturer's written instructions and applicable recommendations of NRCA "Roofing and Waterproofing Manual".
- B. Cooperate with inspecting and testing agencies engaged or required to perform services for installing single ply roofing membrane system.
- C. Coordinate installing roofing system components so insulation and roofing plies are not exposed to precipitation or left exposed at the end of the workday or when rain is forecast.
  - 1. Provide cutoffs at end of each day's work to cover exposed insulation with a temporary water tight seal acceptable to the membrane manufacturer. For aggregate-surfaced roofs, spud gravel from the roof area where the tie-in will be made.
  - 2. Complete terminations and base flashing and provide temporary seals to prevent water from entering completed sections of roofing system.
  - 3. Remove and discard temporary seals before beginning work on adjoining roofing.
  - 4. Inspect all roof drains at the completion of work to assure that water flows correctly. Replace all missing or damaged components. Notify the Owner's Representative of any drainage problem conditions prior to the final inspection of the Work.

### 3.05 INSULATION/COVER BOARD SYSTEM APPLICATION

- A. General:
  - 1. Coordinate installing roofing system components so insulation/cover board is not exposed to precipitation or left exposed at the end of the workday.
  - 2. Comply with roofing system manufacturer's written instructions for installing roofing insulation/cover board.
  - 3. Install insulation/cover board under area of roofing to conform to slopes indicated and to Roof Drawings.

- B. Low-slope areas: Install required insulation/cover board materials (base and cover board) in 1 layer with long joints of insulation in continuous straight lines with end joints staggered approximately  $\frac{1}{2}$  the board length between rows, abutting edges and ends between boards. Fill gaps exceeding  $\frac{1}{4}$  inch (6 mm) with insulation.
  - 1. Adhere cover board and insulation over roof area to receive fully adhered roofing using low-rise foam adhesive specifically approved by the roof membrane manufacturer for installation and warranty purposes.
  - 2. For metal deck areas, mechanically fasten the insulation board layer (excluding cover board) in accordance with the manufacturer's requirements.

### 3.06 ROOF MEMBRANE INSTALLATION

- A. General: Install membrane according to roofing system manufacturer's written instructions, starting at low point of roofing system. Terminate field sheets at the base of parapet walls or curbs.
  - 1. Align sheets without stretching. Membrane shall be unrolled on an area to be covered with adjoining rolls of membrane overlapped 2  $\frac{1}{2}$  inches and installed in shingle fashion to shed water.
  - 2. Membrane shall be overlapped and hot-air welded. Detail work and repairs can be done with a hand welder, however, automatic welders are to be used for field seaming.
  - 3. The entire lap must be probed each day soon after it has cooled to verify that the welder set-up is effective. The membrane must be allowed to cool. Cut edges shall be caulked by applying Seam Caulk.
  - 4. The top surface of the membrane shall be kept clean during installation. Any adhesive, bitumen stains or other foreign materials shall be cleaned from the membrane on a daily basis.
- B. Roof membrane is to be completely adhered to the insulation/cover board substrate without voids or wrinkles. Bonding adhesive shall be applied to the top surface of the substrate material and the underside of the roof membrane.
- C. Position membrane rolls so that no longitudinal seam results in the drain valley. Use a full roll centered in the valley line.
- D. Contractor shall use a water-filled, foam covered lawn roller to consistently and evenly press the membrane into the adhesive layer.

### 3.07 BASE FLASHING AND STRIPPING INSTALLATION

- A. Perimeter, drain and other details shall be flashed as shown in Project Drawings. Membrane shall be mechanically fastened 12 inches OC into wood nailers. Each roof section shall be completely sealed; no flashing shall be left in an open condition at the end of work each day.
  - 1. Base Flashing:
    - a. Membrane shall be mechanically fastened into deck. Fastening shall occur at parapet wall, curbs, skylights, expansion joints and any other roof penetrations that exceed 24 inches in dimension.
    - b. Install clad metal flashing fastened into wood nailers with two rows of annular ring nails spaced 4 inches OC. Space metal sections  $\frac{1}{4}$  inches apart. Cover the

gap with 2 inch wide aluminum tape. Install 4 inch wide membrane flashing hot air welded over the joint. Apply tape sealant to the back of the metal and tool the sealant installed at the top of the metal.

2. Install expansion joints using flexible foam pipe and membrane as indicated in the construction drawings.
3. Bonding Adhesive shall be applied to both the substrate and the membrane and allowed to dry to finger touch until it does not string or stick.
4. All flashing shall be mechanically fastened at the top, under or through appropriate counter flashing, with approved fasteners as shown in detail drawings. Laps shall extend a minimum of 2 1/2 in. beyond fasteners onto field sheet.
5. Gravel stop and drip edge stripping shall be hot air welded to roof membrane. Use of self adhesive stripping is not acceptable.
6. Apply the membrane manufacturer's recommended primer to the inside face of metal pitch pans and around the outside of penetrations.

B. Flashing height and termination:

1. Extend flashing under metal fascia to the outside nailer face fastened minimum 12 inch OC.
2. Flashing on walls, parapets and curbed units to extend a minimum of 6 inches above the roof membrane. Install clad metal flashing where the finished flashing height is less than 6 inches.

3.08 ADDITIONAL ITEMS

A. Install walkpad adhered according to the manufacturer's instructions.

1. Install at indications noted on drawings and where required by the roof membrane manufacturer.

3.09 FIELD QUALITY CONTROL

A. Bonding Adhesive: Apply continuous application of bonding adhesive in all instances. Roof membrane and flashing coverage to be 70 square feet per gallon when applied to both surfaces; varies with substrate materials.

1. Membrane shall be fully bonded to the insulation and wrinkles in the sheet caused by lack of adhesion are unacceptable. Any area 100 sf in size that has 5 percent or more un-adhered surface area will be removed and replaced.
2. Bonding adhesive shall be stored in conditions that comply with the manufacturer's requirements. Maintain a minimum temperature of 40F. Storage in cold temperatures may require interior building space (when approved by the Owner), use of hot boxes, or heated trailers.
3. Wrinkles in field seams are unacceptable and shall be cut out and covered by a membrane patch that extends a minimum of six inches beyond the area of damaged material.

- B. Mechanical Fasteners: Used in the attachment of insulation. Verify fastener pattern complies with project-specific fastening patterns provided by the manufacturer per the submittals.
- C. Install the membrane manufacturer's seam caulk at all cut edges of membrane installed in the field of the roof. Seam caulk is not required on vertical cut edge seams.
- D. All flashings, lap seams and tie-off shall be completed and made water tight each day. The Contractor shall probe each seam at the end of work each day. All deficiencies shall be corrected each day before the crew leaves the jobsite.

### 3.10 PROTECTION

- A. Protect completed roof system from damage, the roofing contractor shall coordinate the use of temporary plywood walkways, wood planking and other precautions to protect the roof and other building surfaces from damage.
- B. Correct deficiencies in or remove and replace roof membrane that inspections and test reports indicate does not comply with specified requirements.
- C. Provide a minimum of two (2) fire extinguishers within 20 feet of each open flame and two (2) fire extinguishers within 20 feet of each rooftop location judged by Owner's Fire Safety Representative to be a possible fire danger.

### 3.11 ADJUSTING and CLEANING

- A. Clean-up: Immediately upon completion of all work specified, the roof and jobsite area shall be cleared of all debris resulting from the Work. Temporary protection shall be removed. Proper disposal of all materials shall be the responsibility of the Contractor.
- B. Dirt stains, bitumen, and other stains to the surface of the newly installed roof membrane shall be removed using citrus cleaner or Tide brand detergent recommended by the roof membrane manufacturer. Heavy stains shall be "spot cleaned" with agent recommended by the roof membrane manufacturer prior to use of citrus cleaner. Cleaning shall continue until the Design Professional's acceptance is secured.
- C. Damage or staining to the building or grounds resulting from the Work shall be cleaned or corrected to the original condition. Replace landscape plantings damaged during construction with comparable size and quality.

### 3.12 FINAL INSPECTION

- A. Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Design Professional. Notify Design Professional and Owner 48 hours in advance of the date and time of inspection.

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. General

1. The Contractor shall field verify all conditions that may affect their bid.

#### B. Base Bid

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

#### C. Alternate Bid: See Section 011100 and 012300.

### 1.2 RELATED SECTIONS

#### A. Related Sections include:

1. Section 012300 - Price and Payment Procedures
2. Section 061000 – Rough Carpentry
3. Section 061516 - Wood Roof Deck Rehabilitation
4. Section 073100 – Asphalt Shingle Roofing
5. Section 075423 – TPO Thermoplastic Roofing
6. Section 079200 – Sealants and Caulking
7. Section 099653 – Elastomeric Coating

### 1.3 SUBMITTALS

#### A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

#### B. Required Contractor Submittal Items:

1. Sheet metal supplier's written technical information which demonstrates that materials to be installed comply with contract documents.
2. Manufacturer's standard color chart for selection of finish.
3. Warranty Specimens:
  - a. Sample copy of specified metal finish specified warranty stating obligations, remedies, limitations, and exclusions of warranty.
  - b. Certified letter indicating intent to supply Contractor Warranty from Section 017410 at the completion of work.
4. Provide a certified letter with test results demonstrating compliance with ANSI/SPRI standard ES-1 for coping covers, gravel stop and drip edge sheet metal.

5. Provide a certified letter with test results demonstrating coping covers, gravel stop, and drip edge sheet metal is FM approved per FMG standard 4435 for FM insured buildings.

#### 1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials in unopened boxes or uncut lengths and bundles.
- B. Weatherproof tarpaulins are required to cover materials stored out in the weather. These materials must be on pallets with all plastic wrappers removed to prevent condensation. Packaging labels shall indicate appropriate warnings, storage conditions, lot numbers, and usage instructions.

#### 1.5 DEFINITIONS

- A. The Contractor is the business entity providing all labor, materials, equipment, and services to complete the Work as specified in the Contract Documents.
- B. Leaks shall be considered to occur when free water enters the roof assembly from defects in the waterproofing integrity of the installed roofing materials.

#### 1.6 PROJECT CONDITIONS

- A. Follow manufacturer's instructions regarding acceptable conditions for installation of materials.
- B. Substrate: Before starting installation work, complete substrate installation. Substrate shall be smooth, dry, securely anchored, and free of construction debris.
- C. In reroof applications the Contractor shall investigate all field conditions where sheet metal flashing and wood blocking are required. Where existing wood nailers are in acceptable condition they may be incorporated into the new work. Deteriorated nailers shall be replaced at the Unit Cost established in the bid form. The Contractor is responsible for including all required wood nailers in their bid.

#### 1.7 QUALITY ASSURANCE

- A. All materials to be applied shall be compatible with the interfacing components of the existing building.
- B. The Contractor shall be trained and demonstrate proficient experience in the application of the specified materials. The Contractor shall be approved to install the materials of any manufacturer with a warranty still in effect on roof areas included in this scope of work.
- C. Changes: Contractors are required to bid each listed line item as specified.
- D. The application specifications of each material manufacturer's product shall be considered part of this specification and be followed if it is judged to be of higher quality in the completed roof system. In the event of a discrepancy between this specification and the manufacturer's specification, the Design Professional shall be the sole judge as to which procedure to follow. The contractor shall give written notice to the Design Professional of any discrepancy a minimum of three days prior to the bid date.
- E. Perimeter metal system shall be installed to meet Factory Mutual (FM) Class 1, 1-60 requirements at a minimum.

#### 1.8 APPLICABLE STANDARDS:

- A. Standards of ASTM International, formerly American Society for Testing and Materials, as referenced herein.
- B. National Roofing Contractors Association (NRCA) "Roofing and Waterproofing Manual".

- C. State of Georgia, EPA, and local building codes with regard to asbestos abatement shall be included as part of this specification.
- D. Occupational Safety and Health Administration (OSHA) "Interim fall protection guidelines for residential construction", most current standard.
- E. "The International Building Code", as published by the International Code Congress, Inc., and applicable local and State amendments as adopted by the local Authorities Having Jurisdiction (AHJ).
- F. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) "Architectural Sheet Metal Manual", current edition.

#### 1.9 WARRANTY

- A. General: Warranty shall be provided at no additional expense to the Owner.
- B. Manufacturer's 20-year finish warranty on panels and components finished with minimum 70% Kynar 500 fluoropolymer coating. Warranty from coating Manufacturer and coating Applicator shall cover color retention, adhesion, and freedom from chalking.
- C. Provide Contractor's labor warranty from Section 017410. Term shall be 5 years correcting leaks and defects resulting from workmanship on all installed materials. Contractor shall respond with correcting action within 24 hours of Owner's call.

### PART 2 - PRODUCTS

#### 2.1 GENERAL

- A. General: Provide for expansion and contraction of system components due to air temperature and solar heat gain. Provide systems that will accommodate movement due to temperature change without buckling, failure of seals, undue stress on structural elements, reduction of performance or other detrimental effect. Refer to Fabrication for metal thicknesses.
- B. Expansion joint covers, counter flashing, scuppers, pitch pans, copings and other sheet metal items shall be fabricated as specified and shown in the construction drawings and applicable SMACNA standard.
- C. Refer to roof membrane Specification Sections for additional sheet metal requirements.
- D. Coping covers, gravel stop, and drip edge sheet metal shall be manufactured and tested to demonstrate compliance with ANSI/SPRI standard ES-1.

#### 2.2 SHEET MATERIALS - GENERAL

- A. Provide sheet materials in type, thickness, finish, and locations indicated on Drawings and specified herein. The minimum allowable thicknesses shall be within the ranges indicated below.
- B. Galvanized Steel, Factory Finished: ASTM A653/A653M, with G90/Z275 zinc coating.
  - 1. Thickness: 14 ga/.0785 inch/1.9939 mm.
  - 2. Thickness: 16 ga/.0635 inch/1.6129 mm.
  - 3. Thickness: 18 ga/.0516 inch/1.310 mm.
  - 4. Thickness: 20 ga/.0396 inch/1.005 mm.
  - 5. Thickness: 22 ga/.0336 inch/.853 mm.
  - 6. Thickness: 24 ga/.0276 inch/.701 mm.

7. Finish: Factory applied PVDF (Polyvinylidene Fluoride) coating; superior performance organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
8. Color: As selected by Architect from manufacturer full range.

C. Aluminum, Factory Finished: ASTM B209 (ASTM B209M).

1. Thickness: 12 ga/.08081 inch/2.053 mm.
2. Thickness: 14 ga/.06408 inch/1.628 mm.
3. Thickness: 16 ga/.05082 inch/1.291 mm.
4. Thickness: 18 ga/.04030 inch/1.024 mm.
5. Thickness: 20 ga/.03196 inch/.812 mm.
6. Finish: Factory applied PVDF (Polyvinylidene Fluoride) coating; superior performance organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
7. Color: As selected by Architect from manufacturer full range.

D. Stainless Steel, Mill Finish: ASTM A666, Type 304 alloy, soft temper.

1. Thickness: 18 ga/.050 inch/1.270 mm.
2. Thickness: 20 ga/.0375 inch/.9525 mm.
3. Thickness: 22 ga/.03125 inch/.7937 mm.
4. Thickness: 24 ga/.0235 inch/0.5969 mm
5. Thickness: 26 ga/.0178 inch/0.452 mm.
6. Finish: Type 2B - Mill finish.

## 2.3 EXPANSION JOINT

A. Covers: Tapered to shed water with concealed splice plates, miters, transitions, and end caps.

1. Outside and inside faces to extend a minimum of 2 inches beyond the wood blocking.
2. Metal components fabricated in the specified metal.
  - a. Aluminum, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 0.032 inch thickness.
  - b. Galvanized, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 24 gauge thickness.
3. Cleats shall be fabricated from sheet metal one gauge heavier than the specified cover metal.

B. Miters shall be fabricated with standing seam and cover component parts shall be fabricated with sealed seams. Maximum section length on each side of miter shall be 24 inches.

## 2.4 COUNTER FLASHING

A. Counter flashing: Flashing shall have 3-inch notched end lap and 5-inch flashing face.

1. Metal components fabricated in the specified metal.
  - a. Aluminum, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 0.032 inch thickness.
  - b. Galvanized, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 24 gauge thickness.
2. One piece: fabricated with surface mount attachment.

3. Two-piece: with "snap lock" attachment between receiver and counter flashing with reglet attachment. Fabricate the receiver for 1 ½ inch penetration into masonry joints and 4-inch penetration into concrete block joints where applicable.

## 2.5 THRU WALL SCUPPERS, CONDUCTOR HEADS AND DOWNSPOUTS

- A. Design to be fabricated with roofing manufacturer's clad metal or shop fabricated with single top seam formed with sealant and pop riveted (steel) or soldered (copper). Roof side flange shall be minimum 3-inch width, outside wall flange shall be minimum 2-inch width. Drip edge shall extend a minimum of 3/4 inches beyond the exterior flange. Hemmed metal edges shall be attached and sealed with sealant. Scupper size to be 8 inches wide by 4 inches in height where new scuppers are installed.
  1. Metal components fabricated in the specified metal.
    - a. Aluminum, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 0.032 inch thickness.
    - b. Galvanized, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 24 gauge thickness.

## 2.6 HOT STACKS

- A. Minimum 24-gauge stainless steel or 16 oz. copper. The stack shall be constructed with a 6-inch roof flange and a vertical tube that extends 8 inches above the roof height. The seam between the flange and tube shall be continuously welded and watertight.
- B. Storm Collars: Minimum 24-gauge stainless steel or 16 oz. copper extends a minimum of 1 inch below the top of the pan.

## 2.7 PITCH PANS

- A. The metal components to be electrogalvanized G90 steel in the membrane manufacturer's clad metal. Constructed with 4-inch roof flange and metal top edge hemmed to the inside.
- B. Storm Collars: Minimum 24-gauge stainless steel or 16 oz. copper extends a minimum of 1 inch below the top of the pan.

## 2.8 OTHER MATERIALS

- A. Fasteners: Shall be of compatible material to the sheet metal components to avoid dissimilar metal corrosion.
  1. Used in the attachment of fascia as furnished by the sheet metal manufacturer are corrosion resistant high domed capped with hexagonal head and 5/8-inch bonded washer with EPDM washer seal.
  2. Nails: 1 ¼-inch ring shank galvanized roofing nails.
- B. Epoxy Seam Sealer: 2-part noncorrosive metal seam cementing compound, recommended by metal manufacturer for exterior/interior nonmoving joints including riveted joints.
- C. Metal Accessories: Provide clips, straps, anchoring devices, and similar accessory units as required for installation of work, noncorrosive, size and gauge required for performance. Use materials compatible with fabricated metal to avoid dissimilar metal corrosion.

1. Continuous cleat to be galvanized steel one gauge heavier than fascia metal.
- D. Conductor-Head Guards: 20-gauge bronze mesh or fabricated units, with selvaged edges and noncorrosive fasteners.
- E. Joint Filler: Used as the first component filling pitch pans and for filling cracks, voids, and large openings. Insta-Foam "Froth Pak" two component polyurethane foam Dow Chemical., Joliet, IL. 800/800-FOAM, or approved substitution.
- F. Pourable Sealer: Self-leveling two-part polyurethane for use in pitch pans approved by the Roofing Manufacturer.
- G. Cementitious fill material: One part non shrinking grout. 80 lbs. per bag., coverage at approximately 20 board feet per bag. Used for the purpose of creating a level substrate condition and as the bottom filler in pitch pans. US Gypsum Co., Pyrofil gypsum or approved substitution.
- H. Termination Bar: Used in the exposed attachment of flashing materials.
  1. Inside face of parapet walls: Extruded aluminum bar with formed caulk edge with pre-drilled holes spaced 6 inches OC. Bar size 1/8-inch thick, 1-inch x 10-foot lengths.
- I. Pipe stand: Pillow block pipe stand manufactured from polycarbonate resin use in the support of gas line, condensate line and conduit. Miro Industries, Inc., phone 800/768-6978, or approved substitution.
  1. Model No. 1.5                    2-inch OD or smaller
  2. Model No. 3-R                   4-inch OD or smaller
  3. Model No. 4-RAH               5-inch OD or smaller
- J. Conduit Support: Conduit stand with adjustable support up to 7 inches in height for multiple conduits. Miro Industries, Inc. "2.5 AH or 24 Base Strut", phone 800/768-6978 and Cooper B-Line, Inc. "CB Series or Ce Series" phone 800/6851-7415.
- K. Replacement Roof Debris Screen: Aluminum adjustable drain guard as manufactured by Marathon Roofing Products, phone 800-828-8424.
- L. PVC condensate line: PVC line and fittings shall be Schedule 40 complying with ASTM D1785.
- M. Pre-fabricated side entry portal covers: RPH – VAULT Penetration Protection, RPH, 935 Isom Road, San Antonio, TX 78216, 1 (800) 994-0945
- N. Vent extender: Tubos Vent Extender, prefabricated plumbing vent extension with integral six inch long joint splice sleeve insert in 2, 3, 4 and 5 inch diameters as manufactured by Tubos, Inc. P.O. BOX 4663, CLEARWATER, FL 33758.
- O. Flashing/Subflashing Membrane: To be used under expansion joints covers, copings and similar flashings. Self-adhering polymeric flashing membrane protected by release paper, 40 mil nominal thickness, high-temperature grade. GRACE ICE & WATER SHIELD HT, as manufactured by GCP Applied Technologies, Inc., or equal.

## 2.9 FABRICATION

- A. To the greatest extent practicable, shop fabricate all metal flashing, trim, expansion joints and similar items to comply with profiles and sizes indicated. Comply with industrial standards and the SMACNA "Architectural Sheet Metal Manual."

1. All exposed edges of sheet metal shall be hemmed.
2. Angle the bottom edges of exposed vertical surfaces to form drip edges.

B. EJ Cover and counter flashing sheet metal thicknesses

Face Height	Galvanized Steel	Formed Aluminum	Cold Rolled Copper
Up to 4 inches	26 gauge	.032 inch	16-ounce
4 – 8 inches	24 gauge	.050 inch	16-ounce
8 – 10 inches	22 gauge	.063 inch	20-ounce
10 – 16 inches	20 gauge	.080 inch	N/A

### PART 3 - EXECUTION

#### 3.1 GENERAL

- A. Provide for thermal expansion in all exposed sheet metal work exceeding 15'-0" in running length, except place flashing and trim expansion joints on 10'-0" maximum spacing. Locate expansion joints no closer than 2'-0" from corners and intersections. Conceal fasteners and expansion provisions wherever possible.
- B. To the greatest extent practicable, shop fabricate all metal flashing, trim, expansion joints and similar items to comply with profiles and sizes indicated. Comply with industrial standards and the SMACNA "Architectural Sheet Metal Manual." Install in strict compliance with the manufacturer's printed recommendations, modified only as necessary to adapt the system to special conditions of the work.
- C. No attachment or penetrations through the exposed top surface of sheet metal is allowed. All field cuts and trimming shall be smooth and uniform without jagged edges or burs.
- D. Where sheet metal flashings abut a vertical surface, install protective counterflashing with minimum three (3) inch vertical face and minimum three (3) inch concealed transition. Secure vertical face to the substrate as a surface mount attachment using the appropriate fastener. Apply sealant at the top caulk edge and tool to shed water.

#### 3.2 EXAMINATION

- A. Examine substrate of the entire area to receive new roofing to determine that it is dry, free of debris and other irregularities and meets the material manufacturer's requirements for application of their product.
- B. Prior to the installation, the contractor shall inspect the existing treated wood nailers to determine suitability for attachment of the perimeter metal system. Contractor is responsible for adding new wood nailers as required to construct specified details.
- C. Notify the Owner's representative regarding unsuitable conditions before proceeding with installation. Commencing installation signifies acceptance by Contractor of substrate.

#### 3.3 PREPARATION

- A. Selective Demolition: Removal and disposal in accordance with State and Federal regulations. Refer to Section 024000 for additional demolition requirements.
- B. Make all necessary corrections, repairing or replacing substrate materials, prior to application of flashing and sheet metal. Substrate materials shall be in a suitable condition recommended by the materials manufacturer.

- C. Store existing concrete splash pans from all downspouts for reinstallation beneath new downspouts at the completion of work.
- D. Where the existing sheet metal cap on a curb is cut to install new roofing materials, each corner shall have a new sheet metal corner cap installed. The cap shall be fabricated from the same material as the cover and shall extend a minimum of three inches beyond each side of the corner. Install sealant between the cap and cover and pop rivet the cap to the cover.
- E. The Contractor shall provide all electrical disconnects and reconnects. All electrical taps must be accessible. All fans must have a service switch or disconnect. Install new exterior electric connection on curbed units where the electric conduit penetrates the curb without a junction box.
- F. Extend the electrical, gas and freon lines as required. Install exterior connection boxes thru the sidewalls of curbed units.

### 3.4 EXPANSION JOINT COVERS

- A. Fasteners exposed to public view are not acceptable. Install to shed water towards roof surface. Provide concealed transition between coping covers and other metal or wall elements a minimum of 3 inches. Install sealant and fasten at terminations.
  - 1. Install flexible liner to support fiberglass batt insulation set within the cavity. Install additional liner to shed water that may enter past the metal cover. Do not penetrate the horizontal surface of the liner. Double fold seams to restrict water entry. For inspection purposes, the liner shall extend a minimum of 1 inch beyond the metal cover on the inside and outside face. Cut back the liner to the edge of cover after the final inspection.
  - 2. Install continuous metal cleat fastened maximum 12-inch OC to outside face of expansion joints. Attach other side using high-domed, capped, gasketed fasteners spaced approximately 18 inches OC.
  - 3. Begin installation starting from miters or end walls towards center. Extend curbed joints completely to the edge of each roof section.
  - 4. Turn the cover a minimum of three inches upward onto end walls. Install sealant between cover and end wall substrate. Mechanically attach covers to each end wall using two fasteners of a type appropriate to the wall material.
  - 5. Install counter flashing over the end wall termination.
  - 6. Install concealed splice plates and coping sections allowing 3/8-inch space for cover joints.

### 3.5 COUNTER FLASHING

- A. General: Counter flashing shall cover the terminating edge of base flashing. Where exposed fasteners are used, neoprene gasket is required.
  - 1. Align counter flashing metal so that a level line is kept across masonry walls or curbs.
  - 2. Form outside and inside corners by breaking counter flashing to extend twelve (12) inches onto each side. Install full length sections over corner pieces.
  - 3. Prior to installing counter flashing, remove the protective vinyl film. Lap ends of counter flashing three (3) inches at joints.
  - 4. Install copper counter flashing where the existing substrate is copper.

- B. For surface mounted flashing install compressible elastomeric tape behind receiver to span substrate irregularities. Apply sealant at top edge of metal and tool to shed water.
  - 1. Install fasteners spaced a maximum of 12 inches OC into substrates.
- C. Two-piece reglet attached counterflashing is required at walls above roofs.
  - 1. For reglet cuts where new metal is installed, clean joint and insert receiver to a depth of 1 ½ inches into masonry joints. Install foam backer rod into the joint and apply sealant, tooled to complete closure.
  - 2. Where existing counter flashing is used, carefully bend the metal upwards to allow new base flashing to be installed. Fold metal down and fasten to the substrate with appropriate fasteners spaced no greater than 24-inch OC. Where existing joints is caulked, rake the joint between the wall and receiver and apply sealant tooled to shed water.

### 3.6 THRU WALL SCUPPERS

- A. Where exposed fasteners are used, neoprene gasket is required. For reglet cuts where new metal is installed, clean joint and insert receiver. Install lead wedges into joint and apply sealant into joint tooled to complete closure. For surface mounted flashing install compressible elastomeric tape behind receiver to span substrate irregularities. Apply sealant at top edge of metal and tool to shed water. Joints in metal shall be overlapped 3 inches.
  - 1. Construct the wall opening at the indicated locations.
  - 2. Insert scupper sleeve through wall opening and attach to substrate using required fasteners. Fill the gap between the wall and metal scupper using Insta-Foam joint filler.
  - 3. Install metal flange on outside to attach scupper to wall. Apply silicone sealant and anchor to exterior wall using appropriate fasteners.
  - 4. Install existing conductor head and downspout at locations where scupper is primary drainage for roof area. Where scupper provides emergency drainage, spout shall extend 2 inches, ± 1/2 inch from the wall.

### 3.7 HOT STACK

- A. General application
  - 1. Install wood nailers to picture frame the sheet metal duct.
  - 2. Nail thru the flange to attach the sheet metal flashing to the wood nailers. Center the nails in the flange and space nails no more than 8 inches OC.
  - 3. Install the membrane target patch around the stack extending a minimum of 12 inches beyond the flange. Apply seam sealer at the base of the tube and tool to shed water.
  - 4. Install storm collar, draw band and sealant tooled to shed water.

### 3.8 PITCH PANS

- A. Solvent wipe the top and bottom flanges. Set pans in a full bed of sealant and install strip flashing. Install filler and topping/sealer, sloped to shed water. Install sheet metal storm collar or covering as specified.

3.9 OTHER ITEMS

- A. Install replacement metal roof drain debris screens/strainers at all locations where the existing screen/strainer is plastic, broken or missing.
- B. Extend PVC condensate line to the nearest drainage element, roof drain or exterior gutter. Install new line and fittings as required to provide drainage across the surface of the roof. Raise line on pillow block supports spaced to provide a minimum of 1-inch clearance above the surface of the roof. Provide roof membrane straps to position the supports and prevent shifting.

3.10 PROTECTION

- A. Protect completed roof system from damage, the roofing contractor shall coordinate the use of temporary plywood walkways, wood planking and other precautions to protect the roof from damage by other trades.
- B. Provide two (2) fire extinguishers within 20 feet of each rooftop location judged by Owner's Fire Safety Representative to be a possible fire danger.

3.11 ADJUSTING AND CLEANING

- A. With the Owner's representative present, Contractor shall water test all gutters to demonstrate leak free performance. Any leakage shall be corrected by disassembling the deficient section, applying new sealant and new pop rivet attachment. Retest for leak free performance.
- B. Clean-up: Immediately upon completion of all work specified, the roof and jobsite area shall be cleared of all debris resulting from Work. Temporary protection shall be removed.
- C. Damage or staining to the building or grounds resulting from the Work shall be cleaned or corrected to the original condition. Replace landscape plantings damaged during construction with comparable size and quality.

3.12 FINAL INSPECTION

- A. Upon completion of the scope of work, an inspection shall be made by the Design Professional, to ascertain that the materials have been installed according to the specified requirements. Observed defects shall be corrected as required to secure the specified warranty(s).
- B. Work noted as deficient during Final Inspection shall be repaired and corrected by the applicator and made ready for reinspection within 5 working days.

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. General

1. The Contractor shall field verify all conditions that may affect their bid.

#### B. Base bid

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

#### C. Alternate bid: See Section 011100 and 012300.

### 1.2 RELATED SECTIONS

#### A. Work related in other sections includes:

1. Section 012300 - Price and Payment Procedures
2. Section 02400 - Demolition
3. Section 073100 – Asphalt Shingle Roofing
4. Section 075423 – TPO Thermoplastic Roofing
5. Section 076000 - Flashing and Sheet Metal
6. Section 099100 – Exterior Painting
7. Section 099653 – Elastomeric Coating

### 1.3 SUBMITTALS

#### A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

#### B. Required Contractor Submittal Items:

1. Product data sheets for each material required.
2. Color samples:
  - a. Submit samples of custom color sealant materials matching color sample provided by the Design Professional.
  - b. Samples shall be actual materials or literature depicting actual colors of standard color materials. Design Professional reserves the right to reject work not in conformance with selected colors, based upon samples submitted.
3. Shop Drawings: not required.
4. Certified letter indicating intent to supply Contractor Warranty from Section 017410 at the completion of work.

5. Schedule of Values, refer to Section 013000.
  6. Contractor reference list of no less than three (3) projects of similar scope, successfully completed within the past year.
- C. Adhesion compatibility test results: Submit a letter from sealant manufacturer indicating that adhesion and compatibility testing has been performed on actual samples of building and wall components. The letter shall state that materials are compatible and that adhesion is acceptable. Indicate requirements for primers or special preparation.
- D. Manufacturer's Material Safety Data Sheets (MSDS) to be maintained by the Contractor at the worksite at all times.
- E. Submit proposed substitution a minimum of 10 days prior to bid date.
1. Latest edition of manufacturer's application instructions. Descriptive list of materials proposed and certificate of analysis reporting tested values of physical properties meet or exceed specified materials. Letter signed by manufacturer's corporate officer certifying that system and individual components meet all specification requirements. Make substitution request using the Construction Specifications Institute (CSI) Form 1.5C "Substitution Request (During the Bidding Stage)".

#### 1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in their original unopened containers; display product name, type, grade and mixing instructions.

#### 1.5 JOB CONDITIONS

A. Weather conditions:

1. Install no materials under adverse weather conditions or when temperatures are below or above those recommended by the manufacturer's product data or when substrate moisture content is above manufacturer's recommended level.
2. Proceed with work only when forecast weather conditions are favorable for joint cure and development of high early bond strength. Wherever joint width is affected by ambient temperature variations, install materials only when temperatures are in lower third of manufacturer's recommended installation temperature range.

B. Protection of adjacent surfaces:

1. Protect by applying masking material or manipulating application equipment to keep materials in joint. If masking materials are used, allow no tape to touch cleaned surfaces to receive sealant. Remove tape immediately after caulking, before surface skin begins to form.
2. Remove misapplied materials from surfaces by using solvents and methods recommended by manufacturer.
3. At surfaces from which materials have been removed, restore to original condition and appearance.

#### 1.6 QUALITY ASSURANCE

A. Definitions:

1. Sealant: A weatherproof elastomer used in filling and sealing joints, having properties of adhesion, cohesion, extensibility under tension, compressibility, and recovery; designed to make joints air and watertight. Material is designed generally for application in exterior joints and for joints subject to movement.
2. Caulking compound: A material used in filling joints and seams, having properties of adhesion and cohesion; not required to have extensibility and recovery properties, generally for application in interior joints not subject to movement.
3. Caulk: The process of filling joints, without regard to type of material.
4. Joint failure: A caulked joint exhibiting one or more of the following characteristics:
  - a. Air and/or water leakage
  - b. Migration and/or reversion
  - c. Loss of adhesion
  - d. Loss of cohesion
  - e. Failure to cure
  - f. Discoloration
  - g. Staining of adjacent work
  - h. Development of bubbles, air pockets or voids
5. Contractor: The business entity providing all labor, materials, equipment, and services to complete the Work as specified in the Contract Documents.

B. Standards

1. Standards of ASTM International, formerly American Society for Testing and Materials, as referenced herein.
2. State of Georgia, EPA, and local building codes with regard to asbestos abatement shall be included as part of this specification.
3. Occupational Safety and Health Administration (OSHA) "Interim fall protection guidelines for residential construction", most current standard.
4. "The International Building Code", as published by the International Code Congress, Inc. and applicable local and State amendments, as adopted by local Authorities Having Jurisdiction (AHJ).
5. "Manual of Practice", published by the Construction Specifications Institute (CSI).

1.7 WARRANTIES

- A. Installer's warranty: Warrant work to be watertight and free from defects in materials and workmanship, including joint failure. Refer to Section 017410.
- B. Exterior sealant material warranty: Warrant exterior sealant to be free from defects in materials for a period of five (5) years except for silicone-based products, which shall be twenty (20) years for gun-applied silicone sealants and ten (10) years for preformed silicone sealants.
- C. Warranties shall begin at Date of Substantial Completion

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. General: All material shall be furnished, specified, or approved in writing by the manufacturer.
- B. Available Manufacturers: Subject to compliance with the specified requirements, products of the following manufacturers are approved:
  - 1. Sika/ Master Builder's Solutions 201 Polito Avenue, Lyndhurst, NJ, 07071 Tel: 201-933-8800, fax: 201-804-1076.
  - 2. Tremco, Inc., 3735 Green Road Beachwood, OH 44122, Tel: 216-292-5000, fax: 216-766-5543.
  - 3. Dow Silicones Corporation, Corporate Center, 2200 W. Salzburg Rd., PO Box 994 Auburn MI 48611, Tel. 800-248-2481 [www.dowcorning.com](http://www.dowcorning.com)
  - 4. Pecora Corporation, 165 Wambold Road, Harleysville, PA 19438, Tel. 800-523-6688, [www.pecora.com](http://www.pecora.com)
- C. Requests for approved substitutions must be made in writing no later than 10 days prior to bid date. Submit complete product and test data as specified under Submittals for each proposed substitution.

### 2.2 ONE COMPONENT POLYURETHANE

- A. Sika/MasterBuilders NP1, Sika Sikaflex 15 LM or Tremco Dymonic Smooth.
- B. Characteristics
  - 1. Type: One component moisture curing polyurethane. ASTM C 920, Type X, Grade NS, Class 25, use NT, M, A, G and O. 25% joint movement.
  - 2. Colors: Standard colors as selected by Design Professional.

### 2.3 HYBRID SILYL-TERMINATED (STPE/STPU) SEALANT

- A. Sika/Master Builders Solutions (formerly BASF) MasterSeal NP 100 Hybrid, or approved equal.
- B. Characteristics
  - 1. Type: One-part, low- to medium-modulus silyl-terminated polyether/polyurethane (STPE/STPU) sealant meeting ASTM C920, Type S. Grade NS, min. Class 50.
  - 2. Colors: Standard colors as selected by Design Professional.

### 2.4 MEDIUM MODULUS SILICONE SEALANT

- A. Acceptable products:
  - 1. Dow Silicones Corp., DowSil 795.
  - 2. Pecora Corp., #895
  - 3. Tremco, Inc., Spectrem 2.

B. Characteristics

1. Type: One-part silicone rubber; meeting ASTM C920-94, Type S. Grade NS, Class 50.
2. Colors: Standard colors as selected by Owner/Design Professional.

2.5 LOW MODULUS SILICONE SEALANT

A. Acceptable products:

1. Dow Silicones Corp., DowSil 790.
2. Pecora Corp., #890
3. Tremco, Inc., Spectrem 1.

B. Characteristics

1. Type: One-part silicone rubber; meeting ASTM C920-94, Type S. Grade NS, Class 50/100.
2. Colors: Standard colors as selected by Owner/Design Professional.

2.6 PRE-CURED SEALANTS/PREFORMED SILICONE SEAL

A. Acceptable products:

1. Dow Silicones Corp., Dowsil 123 Silicone Seal, phone 877-732-5268, [www.dowcorning.com](http://www.dowcorning.com)
2. Pecora Corp., Sil-Span
3. Tremco, Inc., Spectrem Simple Seal.

B. Characteristics

1. Type: High strength precured silicone manufactured in the specified profiles. Provide width to provide ½" bondline each side of the joint, with notches and ridges as indicated.
2. Colors: Standard colors as selected by Owner/Design Professional.

2.7 ACCESSORY MATERIALS

A. Joint cleaner: Type recommended by material manufacturer for substrates indicated.

B. Joint primer/sealer: Type recommended by material manufacturer for substrates, conditions and exposures indicated.

C. Bond breaker tape: Plastic tape applied to contact surfaces where bond to substrate or joint filler must be avoided for material performance.

D. Sealant backer rod: Open-cell polyurethane foam; no closed cell or modified closed cell rods allowed. Provide size and shape of rod to control joint depth.

E. Tooling agent: Agent recommended by material manufacturer to ensure contact of material with inner joint faces.

- F. Primer: solvent based surface preparation materials used for priming joints and substrates.

### PART 3 - EXECUTION

#### 3.1 JOB MOCK-UP

- A. Prepare, caulk and finish one mock-up sample of each joint condition.
- B. Sample joints shall be approved by the Design Professional prior to beginning work. Approved, undamaged mock-up joints shall serve as a standard of quality for the remainder of the work.

#### 3.2 JOINT SURFACE PREPARATION

- A. Clean joint surfaces immediately before caulking joints. Remove dirt, insecure coatings, moisture, and other substances that would interfere with bond. Saw cut loose mortar and joint filler removing deficient materials to the substrate.
- B. Etch concrete and masonry joint surfaces to remove excess alkalinity unless material manufacturer's product data indicates that alkalinity does not interfere with bond and performance. Etch with 5% solution of muriatic acid; neutralize with dilute ammonia solution; rinse with clean water and allow to dry before caulking.
- C. Consult the manufacturer where primer is required. Metal surfaces such as copper, stainless steel and galvanized steel typically require use of primer. Kynar paint finished surfaces require use of Primer 733.

#### 3.3 APPLICATION

- A. Comply with caulking material manufacturer's product data, except where more stringent requirements are specified. Install sealant materials prior to the elastomeric wall coating have been applied.
- B. Prime joint surfaces where recommended by material manufacturer. Do not allow primer/sealer to spill or migrate onto adjacent surfaces.
- C. Install backer rod for caulking materials, except where recommended by material manufacturer to be omitted for application indicated.
  - 1. Place backer rod to maintain recommended sealant thickness and profile.
  - 2. Place rod at depth to provide sealant manufacturer's recommended sealant depth.
  - 3. Do not twist rod during installation.
  - 4. Place rod to minimize possibility of extrusion when joint is compressed.
  - 5. Install bond breaker tape in lieu of backer rod for shallow, closed joints and as recommended by manufacturer's product data.
- D. Employ installation techniques that will ensure materials are deposited in uniform, continuous ribbons without gaps or air pockets, with complete wetting of joint bond surfaces. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form slight cove so that joint will not trap moisture and debris.
- E. Do not allow materials to overflow onto adjacent surfaces. Prevent staining of adjacent surfaces.

- F. Remove excess and misplaced materials as work progresses. Clean the adjoining surfaces to remove misplaced materials, without damage to adjacent surfaces or finishes.
- G. Tool joints of non-sag sealant to concave profile and smooth, uniform surface, flush with edges of substrate. Maintain sealant depth-to-width ratio in accord with manufacturer's product data.
- H. Pre-Formed Silicone Seals
  - 1. Clean substrate with two rag solvent wipe, as per joint manufacturer's guidelines.
  - 2. Apply masking tape to each side of joint.
  - 3. Apply a 1/4" diameter bead of bonding adhesive/ sealant to each side of the joint. Minimum bonding area shall be 3/8".
  - 4. Within ten minutes of bonding adhesive/sealant application (prior to detrimental curing or skinning), press extrusion into the sealant wetting the extrusion, substrate and sealant. Apply consistent pressure to joint to ensure uniform contact.
  - 5. Remove masking tape and excess sealant.
  - 6. At horizontal joints intended to weep, adhere preformed seal along top and side edges only, to allow bottom edge to drain.
- I. Exposed Fasteners: Seal heads of exposed fasteners, providing bond overhead and out minimum 3/8" onto adjacent materials.
- J. Cure sealant and caulking compounds in accord with manufacturer's product data to obtain high early bond strength, internal cohesive strength, and surface durability. Protect uncured surfaces from contamination and physical damage.

### 3.4 CAULKING SCHEDULE

- A. Permanently exposed sealants above roofing, not otherwise specified: one-part silicone.
- B. Miscellaneous roofing applications, not otherwise specified: one-part polyurethane.
- C. Exterior vertical expansion joints: low-modulus silicone.
- D. Exterior joints at concrete, masonry, stucco, EIFS, including control joints and other porous surfaces: low-modulus silicone sealant.
- E. Exterior metal-to-metal joints and other non-porous surfaces: medium-modulus silicone sealant.
- F. Exterior joints at substrates to receive non-silicone coatings: Hybrid Silyl-Terminated (STPE/STPU) Sealant for non-silicone coatings or silicone sealant for silicone coating.
- G. Other joints not specified: low-modulus or medium-modulus silicone sealant to suit substrates.

### 3.5 ADJUSTING AND CLEANING

- A. Remove wet primers, patching repair compounds and finish products from tools and equipment with water. Remove dried materials mechanically.
- B. Clean-up: Immediately upon completion of all work specified, the jobsite area shall be cleared of all debris resulting from the Work. Temporary protection shall be removed. Proper disposal of all materials shall be the responsibility of the Contractor.

1. Prior to curing, clean one component polyurethane using warm soapy water.
  2. Prior to curing, clean two component polyurethane using manufacturer's recommended product or xylene.
- C. Damage or staining to the building or grounds resulting from the Work shall be cleaned or corrected to the original condition. Replace landscape plantings damaged during construction with comparable size and quality.

### 3.6 FINAL INSPECTION

- A. Upon completion of the Work an inspection shall be made by the Design Professional to ascertain that the Work has been completed according to the contract documents and the manufacturers published requirements. Observed defects shall be corrected as required to secure the specified warranty (s).
- B. Work noted as deficient during the Final Inspection shall be repaired and corrected by the Contractor and made ready for reinspection within 5 working days.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Base Bid work consists of:

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

B. Alternate Bid: Not Used.

1.2 RELATED SECTIONS

A. Section 024000 –Demolition

B. Section 061000 – Rough Carpentry

C. Section 073100 – Asphalt Shingle Roofing

D. Section 075423 – TPO Thermoplastic Roofing

E. Section 076000 – Flashing and Sheet Metal

F. Section 079200 – Sealants and Caulking

1.3 REFERENCES

A. The Society for Protective Coatings

1. SSPC-SP10 / NACE 2 Near-White Blast Cleaning: When viewed without magnification shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products and other foreign matter of at least 95% of each unit area. Staining shall be limited to no more than 5 percent of each unit area, and may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied coatings. Unit area shall be approximately 3 in. x 3 in. (9 sq. in.).
2. SSPC-SP 12/NACE No. 5, Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating, current edition. This standard describes the use of waterjetting to achieve a defined degree of cleaning of surfaces prior to the application of a protective coating or lining system.
3. SSPC-SP 3, Power Tool Cleaning, current edition. This specification covers the requirements for power tool cleaning of steel surfaces.

1.4 QUALITY ASSURANCE

A. Removal of the existing paint materials shall be the responsibility of the Painting Contractor.

B. All materials shall be mixed, thinned, modified, and applied only as specified by the manufacturer's directions on the container.

C. All materials shall be applied under adequate illumination, evenly spread and smoothly flowed on with the proper type and sizes of brushes, roller covers, bucket grids and spray equipment to avoid runs, sags, holidays, brush-marks, air bubbles and excessive roller stipple.

- D. Remove and protect hardware, accessories, device plates, lighting fixtures, factory finished work, and similar items; or provide ample in-place protection. Upon completion of each space, carefully replace all removed items. This work shall be done only by skilled mechanics using adequate tools that are commensurate with the work to be done.
- E. All coats shall be thoroughly dry before applying succeeding coats.

#### 1.5 SUBMITTALS

- A. General: Submit in electronic format under provisions of Section 013110. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.
- B. Required Contractor Submittal Items
  - 1. Product data sheets for each material required, including product specifications, and mixing and installation instructions for each manufactured product.
  - 2. Warranty Specimens
    - a. Certified letter indicating intent to supply Contractor Warranty.
- C. Submit proposed substitution a minimum of 10 days prior to bid date.
  - 1. Latest edition of manufacturer's application instructions. Descriptive list of materials proposed, and certificate of analysis reporting tested values of physical properties meet or exceed specified materials. Letter signed by manufacturer's corporate officer certifying that system and individual components meet all specification requirements. Make substitution request using the Construction Specifications Institute (CSI) Form "Substitution Request (During the Bidding Stage)".
  - 2. Reference list of no less than 5 completed projects of similar scope and no less than 5 successful projects a minimum of 5 years old with the requested substitution system within 100 miles of the specified project jobsite.
- D. For each type of coating specified, only one brand shall be used throughout project.
- E. Applicable standards: Standards of ASTM International (formerly the American Society for Testing and Materials), as referenced herein.
- F. The Contractor shall be trained and demonstrate proficient experience in the application of the specified materials having installed no less than five projects of similar scope within the past year. The Contractor shall be approved prior to bid date to install the materials of the specified manufacturer.
- G. Pre-construction conference: Prior to the start of work, a conference to be attended by all affected parties shall be held at the jobsite with the intent of coordinating activities to minimize disruptions to the building tenants.
- H. The application specifications of each material manufacturer's product shall be considered part of this specification and be followed if it is judged to be of higher quality in the completed system. In the event of a discrepancy between this specification and the manufacturer's specification, the Design Professional shall be the sole judge as to which procedure to follow.

The Contractor shall give written notice to the Design Professional of any discrepancy a minimum of three days prior to the bid date.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in original factory packaging bearing identification of product, manufacturer, batch number, and expiration date as applicable. Provide Material Safety Data Sheets for each product.
- B. Store product in a location protected from freezing, damage, construction activity, precipitation, and direct sunlight in strict accordance with manufacturer's recommendations.
- C. Condition products to approximately 60 to 70 degrees F (16 to 21 degrees C) for use in accordance with manufacturer's recommendations.
- D. Handle all products with appropriate precautions and care as stated on Material Safety Data Sheet.

#### 1.7 PROJECT CONDITIONS

- A. Perform no coating work when temperature of surrounding air has dropped below 65 degrees F., unless it is rising; and at no time when it has dropped below 50 degrees F.
- B. Prior to application of primer and finish coats, the substrate shall be dry and with-in the manufacturer's application temperature range. The temperatures will not exceed either maximum or minimum temperature range before cure time has expired for recoat.
- C. Protect all adjacent work from contamination due to mixing, handling, and application of preparation and repair products and elastomeric coating.
- D. Provide adequate ventilation for types of materials being applied.
- E. A minimum of 50-foot candles of illumination (at floor level) is required in all areas where painting is in process.

#### 1.8 SEQUENCING

- A. Coordinate sequence of work with other Trades.
- B. Downspouts and other mechanical equipment, electrical access boxes and other wall penetrations shall be installed after painting, or sufficient room shall be provided for application of coating behind equipment.

#### 1.9 WARRANTY

- A. General: Warranty shall be provided at no additional expense to the Owner.
- B. Provide Contractor's labor warranty. The warranty term shall cover correcting deficiencies resulting from workmanship on installed materials. Contractor shall respond with correcting action within 24 hours of Owner's notification. Refer to Section 017410.

## PART 2 - PRODUCTS

### 2.1 PAINT

- A. Ready-mixed in factory-sealed containers. Use materials as delivered, except for minimal thinning only required by temperature and humidity.
- B. Meet or exceed the requirements of applicable Federal Specification Standards, especially in regard to lead content.

### 2.2 MANUFACTURERS

- A. Available manufacturers: Subject to compliance with the specified requirements, products of the following manufacturers are approved:
  - 1. Benjamin Moore & Company, 101 Paragon Drive, Montvale, NJ 07645 Tel: 201-573-9600 Fax: 201-573-9046, [www.benjaminmoore.com](http://www.benjaminmoore.com)
  - 2. Rust-Oleum Corporation, 11 Hawthorn Parkway, Vernon Hills, IL 60061, Tel. 847•367•7700, [www.rustoleum.com](http://www.rustoleum.com),
  - 3. Sherwin Williams Company, 101 Prospect Avenue, Cleveland, OH 44115, Tel. 800-524-5979, [www.sherwin-williams.com](http://www.sherwin-williams.com).
- B. Requests for substitutions prior to the bid will be considered in accordance with provisions of SUBMITTALS 1.5 C.

### 2.3 MATERIALS

- A. Priming coats, intermediate coats and finish coats applied to the same surface shall all be produced by same manufacturer. The standard of quality is based on materials manufactured by Benjamin Moore Paint Company.
- B. Ferrous Metal Surfaces
  - 1. Primer: "Super Spec HP Universal Alkyd Metal Primer" as manufactured by Benjamin Moore & Company, phone 201-573-9600, "HS1573402 or HS1573300" primer as manufactured by Rust-Oleum Corporation Phone: 847•367•7700, [www.rustoleum.com](http://www.rustoleum.com), "KEM Flash Prime" Sherwin Williams Paint.
  - 2. Intermediate/Finish Coat: "Super Spec P20 Rapid Dry Gloss Enamel" as manufactured by Benjamin Moore & Company, phone 201-573-9600, "1500 System Speedy-Dry Alkyd Enamel" as manufactured by Rust-Oleum Corporation Phone: 847•367•7700, [www.rustoleum.com](http://www.rustoleum.com), "Industrial Enamel" as manufactured by Sherwin-Williams, phone 800-524-5979
- C. Wood Surfaces, the standard of quality and Basis of Design is based on materials manufactured by Sherwin Williams Company.
  - 1. First coat: SW Exterior Latex Wood Primer, B42W8041 Series.
  - 2. Second coat: SW A-100 Exterior Latex Satin, A82 Series.
  - 3. Third coat: SW A-100 Exterior Latex Satin, A82 Series.
- D. Rusted Steel Surfaces

1. Rust Inhibitive Primer: "M04 Acrylic Metal Primer" as manufactured by Benjamin Moore & Company.
2. "7400 System" heavy duty rust inhibitive primer as manufactured by Rustoleum.
3. "Steel Spec" rust inhibitive primer as manufactured by Sherwin Williams.

#### 2.4 MISCELLANEOUS MATERIALS

- A. Thinners for various paints: As recommended in type or maximum permissible dilution by manufacturer of paint to be thinned.
- B. Filling compound: Factory pre-mixed and adapted for use on specific surfaces.

#### 2.5 COLORS

- A. Manufacturer's standard color as approved by the Owner. The primer and finish paint shall be a minimum of two shades of difference in color.

#### 2.6 OTHER MATERIALS

- A. All other materials and accessories not specifically described or called for, but which are required for a complete and finished installation for the work of this Section shall be furnished and installed by the Contractor at no additional cost to the Owner. These materials shall be selected by the Contractor, subject to the approved the Design Professional.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Inspect all areas involved in work to establish extent of work, access, and need for protection of surrounding construction, windows, and shrubbery.
- B. Protect all surroundings from primers, patching repair compounds, and finish products including, but not limited to, windows, roofs, walkways, drives, and landscaping.
- C. Conduct all pre-application inspections of site verification with an authorized manufacturer's representative.

#### 3.2 PREPARATION

- A. General
  1. Surfaces shall be clean, dry, and adequately protected from dampness. Washing with water and a mild detergent will usually remove dust and dirt. Allow the surface to dry before painting.
  2. Mechanically remove foreign material that will adversely affect adhesion or appearance of applied coating.
  3. Retouch or refinish painted surfaces damaged by subsequent work.
- B. Concrete surfaces

1. Remove dirt and grease with power washing and scraping equipment. Remove surface irregularities with mechanical abrasion.
- C. Existing metal surfaces
1. Surfaces to be re-painted shall first be thoroughly scrubbed with wire brushes to remove all dirt and loose and peeling paint. Use power equipment when hand equipment is not sufficient.
- D. Inspect substrate joints to ensure no gaps, cracks, or voids greater than 2 mils (0.05 mm); repair gaps, cracks or voids greater than 2 mils (0.05 mm).
- E. Inspect through-wall penetrations, including electrical, lighting, signage, plumbing, HVAC, and fire sprinkler piping for watertight seals. Repair such deficiencies with Crack Preparation Materials.
- F. Remove loose particles, laitance, and other foreign material from the substrate in the area where work will be done.
- 3.3 EXTENT OF COATING APPLICATION
- A. The extent of work is as specified and indicated on the construction drawings.
- 3.4 WARNING LABELS
- A. Prepare a stencil for use to apply a warning label over each of three insulated metal wall panel roof areas. Label shall be "Do not stand on this roof area. Not intended for structural support."
- 3.5 SEALANT APPLICATION
- A. General: Clean joint surfaces immediately before caulking joints. Remove dirt, insecure coatings, moisture, and other substances that would interfere with bond.
- B. Application
1. Comply with caulking material manufacturer's product data, except where more stringent requirements are specified.
  2. Prime joint surfaces where recommended by material manufacturer. Do not allow primer/sealer to spill or migrate onto adjacent surfaces.
  3. Install backer rod for caulking materials, except where recommended by material manufacturer to be omitted for application indicated.
    - a. Place backer rod to maintain recommended sealant thickness and profile.
    - b. Place rod at depth to provide sealant manufacturer's recommended sealant depth.
    - c. Do not twist rod during installation.
    - d. Place rod to minimize possibility of extrusion when joint is compressed.
    - e. Install bond breaker tape in lieu of backer rod for shallow, closed joints and as recommended by manufacturer's product data.
  4. Employ installation techniques that will ensure materials are deposited in uniform, continuous ribbons without gaps or air pockets, with complete wetting of joint bond surfaces. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form slight cove so that joint will not trap moisture and debris.

5. Do not allow materials to overflow onto adjacent surfaces. Prevent staining of adjacent surfaces.
6. Remove excess and misplaced materials as work progresses. Clean the adjoining surfaces to remove misplaced materials, without damage to adjacent surfaces or finishes.
7. Tool joints of non-sag sealant to concave profile and smooth, uniform surface, flush with edges of substrate. Maintain sealant depth-to-width ratio in accord with manufacturer's product data.
8. Cure sealant and caulking compounds in accord with manufacturer's product data to obtain high early bond strength, internal cohesive strength, and surface durability. Protect uncured surfaces from contamination and physical damage.

### 3.6 PRIMER AND PAINT APPLICATION

- A. General: Prepare surfaces and apply paint materials in strict accordance with the manufacturer's published application instructions.
  1. Apply primer the same day wire brushing and surface preparation is done. Do not allow bare metal to remain unprimed for more than 8 hours.
- B. Do not paint
  1. Damp surfaces, during rain or frost, or surfaces likely to freeze within 24 hours of application or on surfaces heated by direct sun.
  2. Bright-plated metal, non-ferrous metal, glass, or surfaces noted or scheduled as not requiring paint.
- C. Surfaces shall be clean, structurally sound, and fully cured. Power wash all surfaces to remove foreign materials and provide a substrate meeting the manufacturer's requirements.
- D. Prime coat and finish coat: Apply a pinhole-free coat.
  1. Application Rate: 200 square feet per gallon to achieve a minimum 3 dry mil dry finish. Application by roller, brush or spray shall be in accord with the manufacturer's instructions.
  2. Apply one coat of finish over the primed substrate. Evenly spread and smoothly flowed on without runs, sags, brush marks, holidays, air bubbles, or excessive stipple, OTHERWISE WORK MUST BE RE-DONE at no additional cost to the Owner.

### 3.7 PAINTING SCHEDULE

- A. All materials shall be painted as follows:
  1. One (1) coat primer, one (1) intermediate coat and one (1) coat finish coat.

### 3.8 ADJUSTING and CLEANING

- A. Remove wet primers, uncured patching repair compounds and wet finish products from tools and equipment with the appropriate thinner recommended by the Manufacturer. Remove dried materials mechanically.

- B. Clean-up: Immediately upon completion of all work specified, the jobsite area shall be cleared of all debris resulting from the Work. Temporary protection shall be removed. Proper disposal of all materials shall be the responsibility of the Contractor.
- C. Damage or staining to the building or grounds resulting from the Work shall be cleaned or corrected to the original condition. Replace landscape plantings damaged during construction with comparable size and quality.

### 3.9 FINAL INSPECTION

- A. Upon completion of the Work an inspection shall be made by the Design Professional to ascertain that the Work has been completed according to the contract documents and the manufacturers published requirements. Observed defects shall be corrected as required to secure the specified warranty (s).
- B. Work noted as deficient during the Final Inspection shall be repaired and corrected by the Contractor and made ready for reinspection within 5 working days.

END OF SECTION

## PART 1 - GENERAL

### 1.01 SUMMARY

#### A. General

1. The contractor shall field verify all conditions.

#### B. Base Bid

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

### 1.02 RELATED SECTIONS

#### A. Refer to the following:

1. Section 012300 - Price and Payment Procedures
2. Section 024000 – Demolition
3. Section 073100 – Asphalt Shingle Roofing
4. Section 075423 – TPO Thermoplastic Roofing
5. Section 076000 - Flashing and Sheet Metal
6. Section 079200 – Sealants and Caulking

### 1.03 REFERENCES

- A. ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers - Tension.
- B. ASTM D 522 - Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
- C. ASTM D 1653 - Standard Test Methods for Water Vapor Transmission of Organic Coating Films.
- D. ASTM D 2240 - Standard Test Method for Rubber Property - Durometer Hardness.
- E. ASTM G 26 - Standard Practice for Operating Light-Exposure Apparatus (Xenon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials.
- F. FS (Federal Specification) TT-C-555B - Coating, Textured (For Interior and Exterior Masonry Surfaces).
- G. "The International Building Code", as published by the International Code Council, and applicable local and State amendments, current edition adopted by local Authorities Having Jurisdiction.

### 1.04 SUBMITTALS

- A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

- B. Required Contractor Submittal Items:
  - 1. Product data sheets for each material required, including: product specifications and mixing and installation instructions for each manufactured product.
  - 2. Warranty Specimens:
    - a. Certified letter indicating intent to supply Contractor Warranty from Section 017410 at the completion of work.
- C. Submit proposed substitution a minimum of 5 days prior to bid date.
  - 1. Latest edition of manufacturer's application instructions. Descriptive list of materials proposed and certificate of analysis reporting tested values of physical properties meet or exceed specified materials. Letter signed by manufacturer's corporate officer certifying that system and individual components meet all specification requirements. Make substitution request using the Construction Specifications Institute (CSI) Form 1.5C "Substitution Request (During the Bidding Stage)".
  - 2. Reference list of no less than 5 completed projects of similar scope and no less than 5 successful projects a minimum of 5 years old with the requested substitution coating system within 100 miles of the specified project jobsite.

#### 1.05 QUALITY ASSURANCE

- A. For each type of coating specified, only one brand shall be used throughout project.
- B. Applicable standards: Standards of ASTM International (formerly the American Society for Testing and Materials), as referenced herein.
- C. The Contractor shall be trained and demonstrate proficient experience in the application of the specified materials having installed no less than five projects of similar scope within the past year. The Contractor shall be approved prior to bid date to install the materials of the specified manufacturer.
- D. The application specifications of each material manufacturer's product shall be considered part of this specification and be followed if it is judged to be of higher quality in the completed work. In the event of a discrepancy between this specification and the manufacturer's specification, the Design Professional shall be the sole judge as to which procedure to follow. The Contractor shall give written notice to the Design Professional of any discrepancy a minimum of three days prior to the bid date.
- E. Preconstruction Field-Adhesion Testing: Perform adhesion per ASTM D3359, Measuring Adhesion by Tape, Method A. Minimum adhesion rating of 4A is required on 0 to 5 scale. In addition, perform the following adhesion testing:
  - 1. After substrate preparation, apply one coat at 6-8 wet mils in an unobtrusive area.
  - 2. While the coating is still wet, embed a 1" x 6" length of mesh screen / piece of gauze into the coating leaving an approximate 2" tab accessible for hand pull. Allow product to become tack-free.
  - 3. Once the first coat is tack-free, apply a second coat at 6-8 wet mils over the mesh screen / gauze. Allow product to cure for 72 hours before performing adhesion testing.
  - 4. Grasp the mesh screen / gauze tab and pull it away from the surface at a 90-degree angle. Pull until it tears cohesively (or releases from the surface) and photograph /

document results. Acceptable adhesion will be evidenced by breaking of coating film. Repair adhesion test area with more coating.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in original factory packaging bearing identification of product, manufacturer, batch number, and expiration date as applicable. Provide Material Safety Data Sheets for each product.
- B. Store product in a location protected from freezing, damage, construction activity, precipitation and direct sunlight in strict accordance with manufacturer's recommendations.
- C. Condition products to approximately 60 to 70 degrees F (16 to 21 degrees C) for use in accordance with manufacturer's recommendations.
- D. Handle all products with appropriate precautions and care as stated on Material Safety Data Sheet.

#### 1.07 PROJECT CONDITIONS

- A. Perform no coating work when temperature of surrounding air has dropped below 45 degrees F., unless it is rising; and at no time when it has dropped below 40 degrees F.
- B. Ensure substrate is dry.
- C. Protect all adjacent work from contamination due to mixing, handling, and application of preparation and repair products and elastomeric coating.

#### 1.08 SEQUENCING

- A. Coordinate sequence of work with other Trades.
- B. Downspouts and other mechanical equipment, electrical access boxes and other wall penetrations shall be installed after application of elastomeric coating, or sufficient room shall be provided for application of elastomeric coating behind equipment.

#### 1.09 WARRANTY

- A. General: Warranty shall be provided at no additional expense to the Owner.
- B. Submit manufacturer's warranty for elastomeric coating, with a performance guarantee against water penetration through film; indicate necessary replacement material supplied at no cost to Owner.
  - 1. Warranty Period: 10 years, labor and material.
- C. Provide Contractor's labor warranty from Section 017410 to cover correcting leaks and defects resulting from workmanship on all installed materials. Contractor shall respond with correcting action within 24 hours of Owner's call.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with the specified requirements, products of the following manufacturers are approved, or approved equal:

1. GE Silicones/Momentive Performance Materials, 260 Hudson River Road Waterford, NY 12188. Web Site [www.siliconeforbuilding.com](http://www.siliconeforbuilding.com)

### 2.02 CLEAR SILICONE ELASTOMERIC COATING

- A. One-component, elastomeric, silicone, high-solids, UV resistant, breathable, translucent coating.
1. Acceptable Product: GE Momentive Optic 3101, Momentive Performance Materials or equal.
- B. Properties: Provide coating complying with the following requirements:
1. Density (lb/gal), WPSTM P 14: 8.17 pounds per gallon (.97 g/ml).
  2. Solids Content, By Volume, WPSTM C 19: 73 percent.
  3. Solids Content, By Weight, WPSTM C 19: 70 percent.
  4. Tack-Free Time, WPSTM E 86: 1 to 2 hours.
  5. Skin-Over Time: <30 minutes.
  6. Viscosity, WPSTM C 560: 5,000 centipoises
  7. Volatile Organic Content (VOC), EPA Method 24: 24 g/L.
- C. Performance Requirements: Provide coating complying with the following requirements:
1. Tensile Strength, ASTM D 412: 121 psi.
  2. Elongation, ASTM D 412: 200 percent.
  3. Vapor Permeance (10 Mils DFT) ASTM E 96 Wet Cup: 18 perms.
  4. Wind Driven Rain Resistance, ASTM D6904: Pass.
- D. Thickness/Approximate Coverage Rates:
1. Minimum Dry Film Thickness: 10 mils total (2 coats)
  2. Two coats required.
- E. Texture: Smooth.
- F. Accessories:
1. Sealant for detailing prior to coating: translucent one-part, neutral cure silicone sealant, complying with ASTM C920, Type S, Grade NS, Class 50, Use A, G, O. Acceptable product: GE Momentive SilGlaze II SCS 2801 translucent silicone sealant.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Inspect all areas involved in work to establish extent of work, access, and need for protection of surrounding construction, windows, and shrubbery.
- B. Protect all surroundings from primers, patching repair compounds, and finish products including, but not limited to, windows, roofs, walkways, drives, and landscaping.

- C. Conduct all pre-application inspections of site verification with an authorized manufacturer's representative.

### 3.02 SURFACE PREPARATION

- A. Protect adjacent work areas and finish surfaces from damage during coating system application.
- B. Ensure that substrate is sound, clean, dry, and free of dust, dirt, oils, grease, laitance, efflorescence, mildew, fungus, biological residues, chemical contaminants, and other contaminants that could prevent proper adhesion.
- C. Clean surface by using high-pressure water-washing. Wash down prepared surfaces and allow to completely dry.
- D. Some stains and surface contaminants may require chemical removal. When chemical cleaners are used, neutralize compounds and fully rinse surface with clean water. Allow surface to dry before proceeding.
- E. Ensure area being repaired is structurally sound and fully cured.
- F. Remove blisters and loose or delaminated areas. Sand or grind edges of previous coating to ensure adhesion and smooth transition to new material. Sand edges to featheredge.
- G. Wash down prepared surfaces and allow to completely dry.
- H. Concrete Surfaces
  - 1. In addition to laitance and contaminants, remove form-release agents or previously applied sealers.
  - 2. Remove form tie wires and repair holes, small voids, and spalls using appropriate repair product approved by coating manufacturer.
  - 3. Abrasive-blast slick, dense concrete surfaces or use primer approved by manufacturer. Test surface for proper adhesion as specified herein.
- I. Brick and Concrete Masonry Unit Surfaces
  - 1. Remove fins and mortar droppings. Ensure mortar joints are sound and free of voids and cracks.
  - 2. Ensure there are no gaps, cracks, or voids greater than 0.8 mm (1/32 inch). Repoint or fill voids with appropriate patching product approved by manufacturer.
  - 3. Apply base coat of primer approved by manufacturer to CMU surfaces.
- J. Plaster and Stucco Surfaces
  - 1. Clean surfaces and remove debonded or delaminated plaster or stucco.
  - 2. Repair with material approved by manufacturer.
  - 3. Allow new plaster or stucco to cure minimum of 14 days at 70 degrees F (21 degrees C) and 50 percent relative humidity or until pH level has reached 10. Allow longer cure times if temperatures are lower or relative humidity is higher.

4. After cleaning and profiling, prime chalky surfaces with primer approved by manufacturer.

K. Exterior Insulation Finish System (EIFS) Surfaces

1. Refasten or re-adhere delaminated or loose expanded polystyrene (EPS) insulation per manufacturer's approved methods.
2. Replace or patch missing or damaged EPS to its original condition.
3. Finish with trowel acrylic finish to match and blend with existing texture.
4. Allow repaired areas to fully cure.
5. Refer to EIFS manufacturer's product data sheet for appropriate repair and procedures.

L. Existing Acrylic Coating Surfaces

1. Sand or grind edges of existing coating to ensure adhesion and smooth transition of new material. Sand edges of area to featheredge.
2. Wash down and allow to completely dry.

M. Chalky Surfaces

1. Treat chalky surfaces, as defined by ASTM D4214, Test Method A, with water cleaning and application of primer approved by coating manufacturer.

- N. The Contractor shall apply a test coating of the submitted product for final approval by the Building Owner. The 2 x 2 foot area shall be installed on the wall at a location convenient for viewing.

3.03 DETAIL PREPARATION

- A. Apply joint sealant where appropriate on support columns and other details. Inspect expansion joints. Ensure there is no deteriorated sealant, adhesion loss, or non-elastomeric caulking in joints. Replace defective sealant with sealant approved by coating manufacturer.
- B. Apply and tool liberal amount of patching compound or form cant bead of sealant approved by coating manufacturer wherever there is change in direction, where two walls abut, and at column and wall intersections.
- C. If movement is anticipated where dissimilar substrates join (for example, stucco and concrete or brick and CMU), properly clean joint and seal with sealant approved by coating manufacturer.
- D. Inspect through-wall penetrations, including electrical, lighting, signage, plumbing, HVAC, and fire-sprinkler piping, for watertight seal. Repair with sealant approved by coating manufacturer.
- E. Inspect flashings, including cap flashing and wall flashing for watertight seal. Repair with sealant approved by coating manufacturer.
- F. Inspect window perimeter joints and mullions and recaulk with sealant approved by coating manufacturer.

- G. Rout flush or shear window surface transitions to concrete or stucco to form 1/4-inch by 1/4-inch joint. Caulk with sealant approved by coating manufacturer. Allow sealant to cure before proceeding.
- H. Apply coat of brush-grade patching compound to stucco and masonry window sills (primed, if required). Create smooth surface that drains away from window.
- I. Cracks smaller than hairline can be bridged with pre-striping of the coating as approved by the manufacturer or using knife-grade or brush-grade patching compounds approved for use with the coating.
- J. All cracks greater than hairline width, approximately 0.8 mm (1/32 inch) must be pre-detailed and sealed. Remove dust and pack with knife-grade patching compound. Bridge crack with brush-grade patching compound. Brush narrow band directly into crack using brush, sponge, or other means to match substrate texture and reduce telegraphing of patches through finish coat. On textured substrates, use texturized patching compound to minimize telegraphing.
- K. Rout out dynamic or moving cracks to minimum of 1/4 inch by 1/4 inch (6 mm by 6 mm), then fill with sealant approved by coating manufacturer. Once sealant is tooled and cured, proceed with crack repair as described previously.
- L. Repair cracks and treat back side of parapets in same manner as exterior walls, terminating at roof counter flashings. If top of parapet wall is exposed masonry, apply coat of patching compound to create smooth, well-draining surface. Recaulking of reglet may be required.

#### 3.04 PRIMING

- A. Use primer only to stabilize existing substrates or coatings that are chalking or friable (powdery) after power washing. Ensure that primer for proper adhesion of coating material can bind existing surfaces or paint. Adhesion testing is specified herein.
- B. Apply primers or block fillers acceptable to coating material manufacturer requirements.
- C. Ensure masonry and other porous surfaces are clean, dry, and free of contaminants.
- D. Pre-treat raked mortar joints with coating by brush and split-face CMU faces with coating and back roll to eliminate pinholes. Apply by working material into pores, crevices, and voids. Apply to dry, cured CMU and mortar only.
- E. Apply coating after primer and block filler have sufficiently dried.
- F. Special substrates, such as insulated wall systems, may require different primer system. Contact coating manufacturer for specific recommendations.

#### 3.05 COATING APPLICATION

- A. General
  - 1. Apply a two-coat application.
  - 2. Apply in two thin coats instead of one heavy coat. Avoid heavy buildups or rundowns.
  - 3. Apply finish coat in pinhole-free continuous membrane for waterproofing integrity.
- B. Brush Application

1. Application by brush is recommended only for small inaccessible areas such as touch-ups.

2. Use nylon brush only.

C. Roller Application

1. Use a 1-1/4 inch (32 mm) nap roller cover (e.g. lamb's wool) unless otherwise recommended by the manufacturer.

2. Completely saturate roller and keep it loaded with coating to build required mils. Never dry roll for touch-up.

3. Roll coating in consistent fanlike pattern to achieve uniform mil thickness.

4. Cross roll to achieve uniform thickness and maintain wet edge. Backroll material in one direction as stroke variations may result in uneven color and texture.

D. Spray Application

1. Use airless spray equipment as recommended by the manufacturer. Suggested equipment characteristics are 3/4 gallon-per minute spray rate, 3,300-psi (22.6 MPa) pump pressure and tip size between 0.031 inch and 0.035 inch. Expect 10 percent spray loss.

2. Porous substrates will require backrolling after spray application to eliminate pinholing.

3.06 ADJUSTING and CLEANING

A. Remove wet primers, patching repair compounds and finish products from tools and equipment with water. Remove dried materials mechanically.

B. Clean-up: Immediately upon completion of all work specified, the jobsite area shall be cleared of all debris resulting from the Work. Temporary protection shall be removed. Proper disposal of all materials shall be the responsibility of the Contractor.

C. Damage or staining to the building or grounds resulting from the Work shall be cleaned or corrected to the original condition. Replace landscape plantings damaged during construction with comparable size and quality.

3.07 FINAL INSPECTION

A. Upon completion of the Work an inspection shall be made by the Design Professional to ascertain that the Work has been completed according to the contract documents and the manufacturers published requirements. Observed defects shall be corrected as required to secure the specified warranty (s).

B. Work noted as deficient during the Final Inspection shall be repaired and corrected by the Contractor and made ready for reinspection within 5 working days.

END OF SECTION

# GALLOPS SENIOR CENTER

## ROOF PROJECT

1212 15TH STREET, COLUMBUS, GA 31901

MERIK, INC.  
 BUILDING CONSTRUCTION CONSULTANTS  
 MERIK PROJECT NO. 24CCGU2RR366  
 01/30/26 - ISSUE FOR BID

3225 SHALLOWFORD ROAD  
 SUITE 520  
 MARIETTA, GA 30062  
 770-565-3016  
 MERIK SOUTH  
 P.O. BOX 1080  
 BYRON, GA 31008  
 478-954-3971



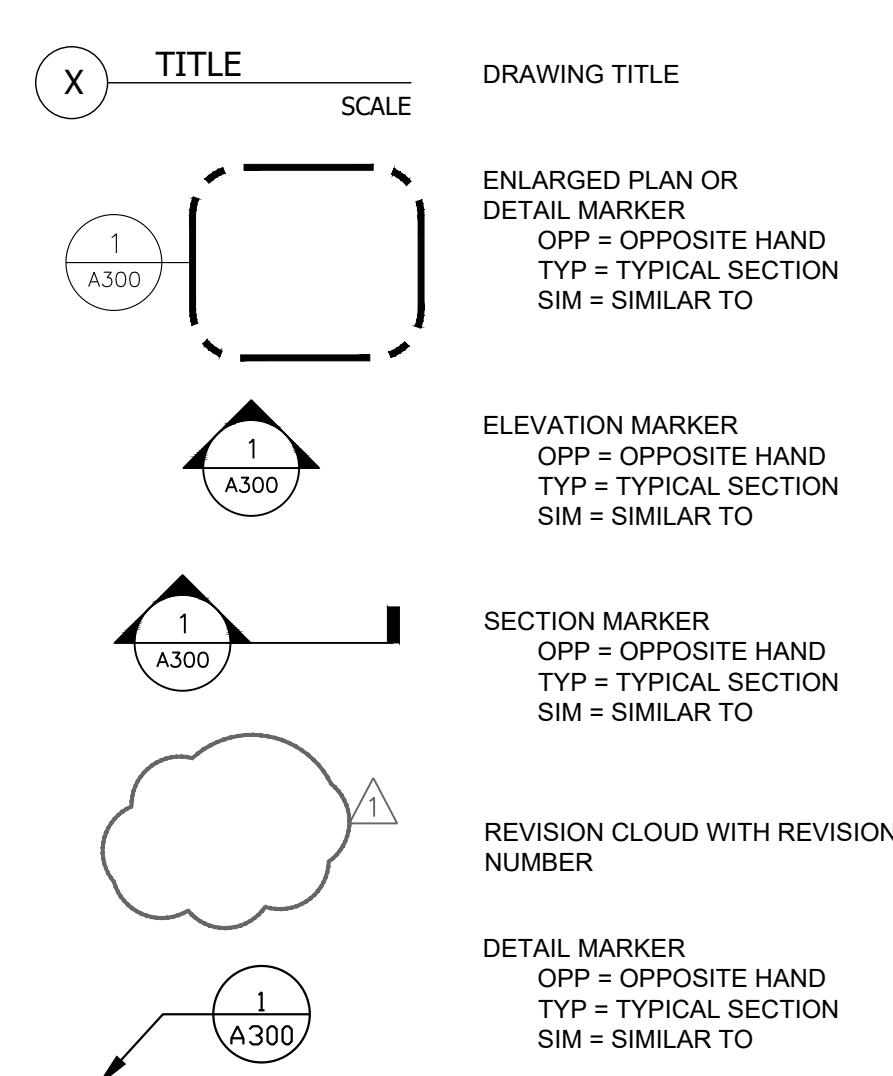
### GENERAL NOTES:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE DESIGN PROFESSIONAL VIA RFI OF ANY ERRORS, OMISSIONS, INCONSISTENCIES, DISCREPANCIES, AND CONFLICTS WITHIN THE DRAWINGS AND SPECIFICATIONS AND FIELD CONDITIONS NO LESS THAN 72 HOURS BEFORE THE BID IS DUE.
- CONTRACTOR IS TO VERIFY LAYOUT AND DIMENSIONS AND ALL CONDITIONS IN THE FIELD WHICH MAY AFFECT THEIR BID.
- THE CONTRACTOR AND SUBCONTRACTORS SHALL BE REQUIRED TO VISIT THE PREMISES TO INSPECT EXISTING CONDITIONS, BECOME FAMILIAR WITH LOCAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND CORRELATE OBSERVATIONS WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ADEQUATE PRECAUTIONS TO PROTECT THE BUILDING OCCUPANTS, MATERIALS AND EXISTING PROPERTY AND FINISHES. EXISTING-TO-REMAIN CONSTRUCTION, MATERIALS OR EQUIPMENT DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO ORIGINAL CONDITION. CONTRACTOR TO DOCUMENT EXISTING CONDITIONS PRIOR TO THE START OF WORK AND SUBMIT RECORDS TO OWNER'S REPRESENTATIVE.
- DRAWINGS ARE INTENDED TO BE PRINTED AT 24x36
- ALL MATERIALS TO BE NEW UNLESS NOTED OTHERWISE.
- DO NOT SCALE DRAWINGS - VERIFY ALL DIMENSIONS IN FIELD

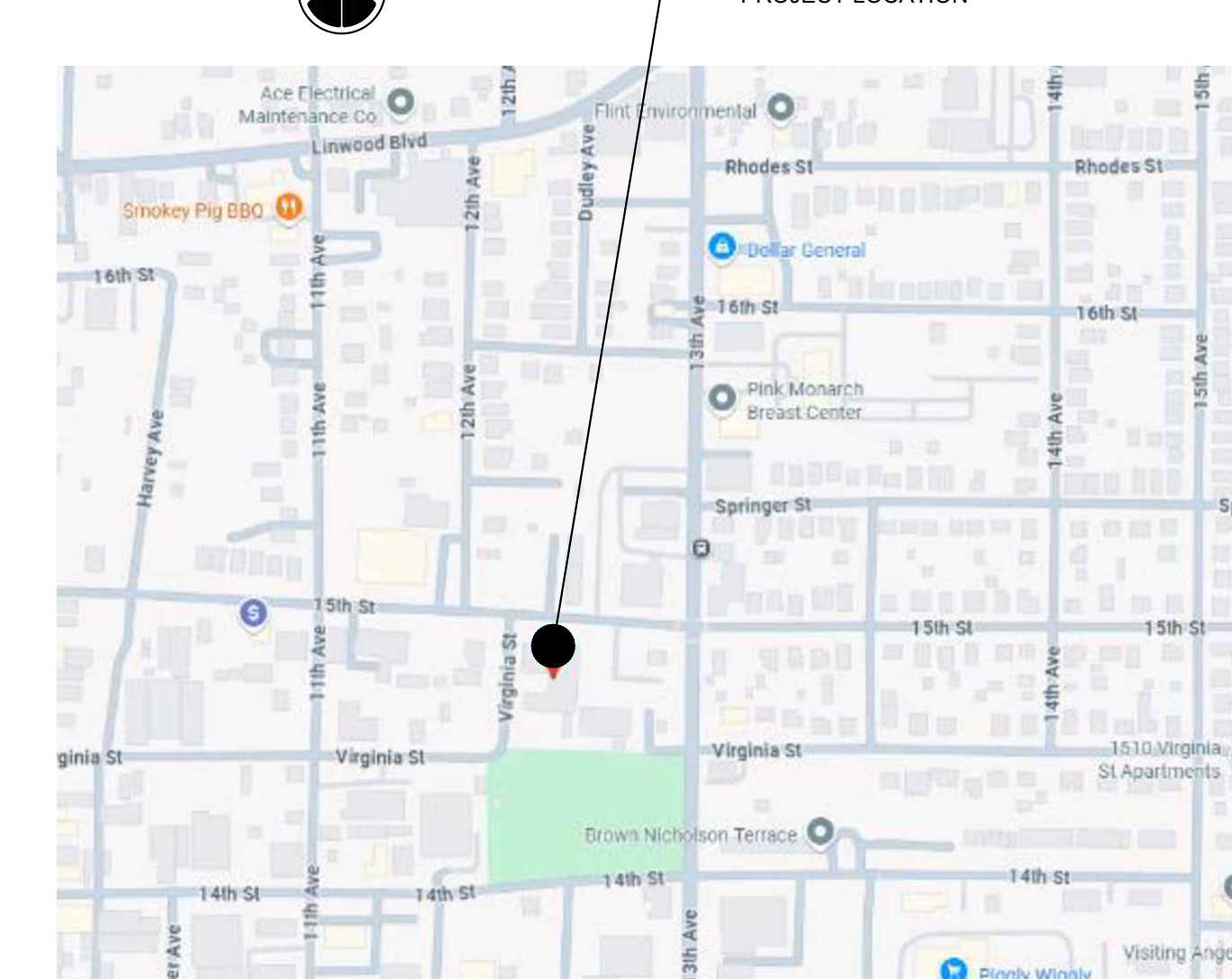
### ABBREVIATIONS:

<b>A</b>		<b>E</b>	<b>EACH</b>	<b>P</b>	
AB	ANCHOR BOLT	EA	EACH	PL	PLATE
ABV	ABOVE	EJ	EXPANSION JOINT	PLYWD	PLYWOOD
ADD	ADDENDUM	EL	ELEVATION	PT	PRESSURE TREATED
ADJ	ADJACENT	ELEC	ELECTRICAL		
AFF	ABOVE FINISHED FLOOR	EQ	EQUAL		
ALT	ALTERNATE	EQUIP	EQUIPMENT	<b>Q</b>	
ANG	ANGLE	EW	EACH WAY	QTY	QUANTITY
APX	APPROXIMATELY				
ASP	ASPHALT	<b>F</b>		<b>R</b>	
ASPS	ASPHALT SHINGLE	FL	FLOOR LEVEL	R	RADIUS
AWB	AIR AND WATER RESISTIVE BARRIER	FTG	FOOTING	RCP	REFLECTED CEILING PLAN
				REF	REFERENCE
<b>B</b>		<b>G</b>		REQ'D	REQUIRED
BD	BOARD	GALV	GALVANIZED	REV	REVISION
BEL	BELOW			RH	RIGHT HAND
BIT	BITUMINOUS	<b>H</b>		<b>S</b>	
BLDG	BUILDING	HOR	HORIZONTAL	SAF	SELF-ADHERING FLASHING
BL	BUILDING LINE			SIM	SIMILAR
BLKG	BLOCKING	<b>I</b>		SPUF	SPRAYED POLYURETHANE FOAM
BM	BEAM	ID	INSIDE DIAMETER	SQ	SQUARE
B.M.	BENCHMARK	IE	INVERT ELEVATION	SS	STAINLESS STEEL
BOT	BOTTOM	IL	INVERT LEVEL	SSM	STANDING SEAM METAL
BPL	BEARING PLATE	IO	INSPECTION OPENING	STD	STANDARD
BTJT	BUTT JOINT	IP	INTERSECTION POINT		
BUR	BUILT-UP ROOFING	<b>J</b>		<b>T</b>	
BW	BOTH WAYS	JT	JOINT	THK	THICK
				TI	TASK ITEM
<b>C</b>		<b>K</b>		TO	TOP OF
CBD	CEMENTITIOUS BOARD	K.J.	KEY JOINT	TS	TUBE STEEL
CF	CUBIC FOOT			TYP	TYPICAL
CIP	CAST IN PLACE	<b>L</b>		<b>U</b>	
CJ	CONTROL JOINT	LWC	LIGHTWEIGHT INSULATING CONCRETE	U/S	UNDER SIDE
CL	CENTER LINE			UNO	UNLESS NOTED OTHERWISE
CMU	CONCRETE MASONRY UNIT	<b>M</b>		<b>V</b>	
CO	CLEAN-OUT	MAX	MAXIMUM	VERT	VERTICAL
CONC	CONCRETE	MFGR	MANUFACTURER	V.I.F.	VERIFY IN FIELD
CONST	CONSTRUCTION	MIN	MINIMUM	<b>W</b>	
CONT	CONTINUOUS	MISC	MISCELLANEOUS	WP	WATER PROOF
CT	CERAMIC TILE	<b>N</b>		WRB	WEATHER RESISTIVE BARRIER
CY	CUBIC YARD	N.I.C.	NOT IN CONTRACT		
		NOM	NOMINAL	<b>SPECIAL CHARACTERS</b>	
<b>D</b>		NTS	NOT TO SCALE	° = DEGREES	
DIA	DIAMETER	<b>O</b>		Ø = DIAMETER	
DIM	DIMENSION	OC	ON CENTER	# = NUMBER	
DN	DIAMETER NOMINAL	OD	OUTSIDE DIAMETER		
DS	DOWNSPOUT	OPT	OPTIONAL		
DWG	DRAWING	OPP	OPPOSITE HAND		
DWG(S)	DRAWING/S				

### SYMBOLS:



### VICINITY MAP



### INDEX OF DRAWINGS

- A000 COVER SHEET
- A001 PROJECT INFORMATION
- A100 ROOF PLAN
- A150 WIND UPLIFT PLAN
- A200 TAPERED LWC PLAN
- A300 DETAILS - TYPICAL
- A301 DETAILS - ASPHALT SHINGLE
- A302 DETAILS - ASPHALT SHINGLE
- A303 DETAILS - TPO
- A304 DETAILS - TPO
- A305 DETAILS - MISC.

### APPLICABLE CODES AND STANDARDS

WORK SHALL BE IN ACCORDANCE WITH THE CURRENT BUILDING CODE FOR THE STATE OF GEORGIA, INCLUDING LOCAL AMENDMENTS. THE PUBLICATIONS LISTED BELOW ARE THE GOVERNING CODES AND STANDARDS AND ARE REFERENCED BY THE BASIC DESIGNATION. IN THE CASE OF CONFLICTING REQUIREMENTS THE BUILDING CODE (IBC) SHALL GOVERN.

- IBC INTERNATIONAL BUILDING CODE, 2018 WITH GEORGIA AMENDMENTS
- IECC INTERNATIONAL ENERGY CONSERVATION CODE, 2015 WITH GEORGIA SUPPLEMENTS AND AMENDMENTS
- OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- ASTM ASTM INTERNATIONAL
- ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
- SMAcNA SHEET METAL & AIR CONDITIONER CONTRACTOR'S NATIONAL ASSOCIATION
- NRCA NATIONAL ROOFING CONTRACTORS ASSOCIATION

ALL DEMOLITION WORK SHALL COMPLY WITH THE REQUIREMENTS OF 2019 NFPA 241, "STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS".

GALLOPS SENIOR CENTER  
 ROOF PROJECT  
 1212 15TH STREET, COLUMBUS, GA 31901

Project: 24CCGU2RR366  
 Drawn: TRM/ Approved: SRG  
 Issues:  
 01/30/2026 issued for Bid

COVER SHEET

A000

**PROJECT NOTES:**

**1. Extent of Work Includes:**

**A. General**

1. The Contractor shall provide a written disaster relief plan designating their agent for emergency response management. The responder will be a company operating in good standing with the State of Georgia DOAS. Refer to Section 013000 Part 1.
2. Contractor shall be responsible for protecting the existing adjacent roof areas that are trafficked over for executing this work.
3. Provide protection for interior spaces below work areas and ensure roof work, penetrations, fasteners, etc. do not damage existing ceiling fixtures, finishes and other appurtenances.

**B. Section 022529 - Existing Roof System Moisture Assessment**

1. Provide third-party moisture survey of all low slope roof sections to be recovered.
2. Execute a moisture scan of all insulated, low slope roof surfaces in this contract for moisture content in accordance with ASTM C1153-97, Standard Practice for Location of Wet Insulation in Roofing Using Infrared Imaging, and, or ASTM D7954/D7954M-15A, Moisture Surveying of Roofing and Waterproofing Systems Using Non-Destructive Electrical Impedance Scanners.
  - a. Mark the boundary of each section of confirmed wet insulation with a solid line using aerosol marking paint, in yellow or a similar high contrast color.
  - b. Confirm anomalies are actually wet.
  - c. Number and catalogue the sections as they are found.
  - d. Measure and plot the sections onto a roof diagram.
  - e. Provide a scaled diagram of all wet found.

**C. Section 024000 - Demolition**

1. At low-slope roof areas, remove the existing loose gravel and prepare the surface of the existing BUR roof for installation of the new roof system.
  - a. Provide third-party roof moisture survey following removal of loose gravel and prior to installation of the LWIC and remove wet roofing materials based on the results of the moisture survey (match existing materials and comply with new roof system and LWIC manufacturer requirements).
    - i) Where exposed, inspect existing decking; replace defective decking on a unit cost basis.
  - b. Abandon existing internally piped roof drains except those within the mechanical screenwall area. Plug drain outlets and fill drain bodies with insulation flush with existing roof surface.
    - i) Maintain existing internally piped roof drains within the mechanical screenwall area.
2. At steep-slope roof areas remove and replace existing asphalt composition shingles with new laminated architectural asphalt shingles over synthetic underlayment.
  - a. Inspect and replace damaged roof decking prior to installation of asphalt shingle system. Replace defective decking on a unit cost basis
3. Remove the existing sheet metal perimeter, drainage and penetration flashings, including copings, expansion joint caps, counter flashings, pitch pans, metal edge, scuppers, conductor heads, gutters and downspouts, etc.
4. Inspect and remove existing damaged blocking and nailers at roof edges, roof dividers/expansion joints, curbs, equipment, or other locations.
5. Remove existing roof accessories, including expansion joint membranes and flashings, ridge caps, multi-port HVAC penetrations, etc.
6. Adjust conduits, curbs, stacks, gas piping, etc. as necessary to accommodate new roofing elevations.

**D. Section 035216 - Lightweight Insulating Concrete (LWIC)**

1. Install a base layer of cellular lightweight insulating concrete (LWIC) nominal 2" thick over the prepared existing roof surface with embedded EPS insulation in the LWIC per the thicknesses indicated on the Drawings.
2. Provide wood nailer stop/screed at perimeter of LWIC at edge conditions, drain sumps, etc. as required to accommodate existing conditions and manufacturer requirements.
3. At abandoned curbs to remain, slope LWIC to top of curbs to allow installation of roofing continuous from field and over curbs and plywood installed over openings.

**E. Section 061000 - Rough Carpentry**

1. Install new wood nailers equal in thickness to the height of the new roof system.
2. Raise existing curbs at RTUs, curbs, skylights, and similar to 8-inches minimum above new roof surface. HVAC and Mechanical work to be performed by a Contractor licensed by the State for non-restricted commercial work.
3. Install wood nailers as required on the top of parapet walls to receive sheet metal coping/edge metal.
4. Install replacement wood nailers and blocking at damaged areas.

**F. Section 073100 - Asphalt Shingle Roofing**

1. Install new asphalt shingles, synthetic underlayment and associated accessories to match existing and as required to facilitate installation of the low-slope roof system as shown on the Drawings and described herein.
2. Provide though-deck ridge vents at shingle roof areas.
3. Provide through-deck roof edge vent with self-adhering membrane leak barrier strip at head wall terminations of shingle roofing sufficient to meet the shingle manufacturer's published attic ventilation air flow requirements.
4. Provide 16" x 8" aluminum undereave intake vents at 10 ft. max. spacing at roof eaves.
5. Provide self-adhering subflashing for asphalt shingle roof areas at valleys, roof edges, roof transitions, vent perimeters, and other areas where indicated on the drawings.
6. At high-slope mansard screenwall, inspect and repair damaged sheathing, provide self-adhering membrane underlayment over sheathing, provide two-piece sheet metal receiver with removable counterflashing skirt at base of wall, and attach asphalt shingles as required by the shingle manufacturer for high-slope mansard conditions.
7. Provide two-piece prefinished sheet metal drainage edge with removable lower skirt flashing at interface between low-slope and steep-slope roof areas. Provide self-adhering underlayment at transition and termination of the shingle roofing, extended up the face of nailers and lapped by the TPO roofing.

**G. Section 075423 - TPO Thermoplastic Membrane Roofing**

1. Abate wet thermal insulation and roofing at all wet areas as indicated on Section 02 2529. Match existing materials and comply with new roof system manufacturer requirements.
2. Prepare all substrates for new roof membrane system installation, in accordance with new membrane manufacturer technical recommendations for specified warranty, including but not limited to removal of loose mineral granules and other materials and residues not acceptable for adhesion of new thermoplastic membrane roofing system.
3. Provide any warranting manufacturer required third party pull testing in accordance with thermoplastic membrane roofing system specified requirements.

4. Install standard color, fully-adhered, 115 mil TPO fleeceback thermoplastic roof membrane and all membrane flashings and accessories as specified and shown in the construction drawings and specified herein. Owner chooses color from stock.

5. Install new roof membrane curb flashings, base flashings, and penetration flashings.
6. Install liquid-applied flashings/custom flashings at low flashing height conditions per roofing manufacturer requirements as required for warranty coverage.

7. Picture frame motorized RTUs with roofing manufacturer's premium walkway/protection pad. Install walkway protection pad at roof access points, at the base of roof ladders, roof hatches, and downspout discharges. Provide protection pad between roof access points and other access points, ladders, and motorized RTUs to provide continuous pathway.

8. Roof drains and subsurface downspout discharge locations to remain:
  - a. Inspect and water test all roof drains and subsurface downspout discharge to remain to confirm they are watertight and functioning properly (notify Owner's representative of any damaged or improperly functioning drainage features prior to roofing those areas).
  - b. Inspect and secure drain bodies, boots and couplings below the deck as required.

9. At existing internally piped roof drains to remain, reuse existing drains, clean drain bowl and clamping rings, and replace missing or damaged hardware as required, or install retrofit roof drains at existing drain locations (Contractor's Option).

10. Replace sheet metal perimeter, drainage, and flashing components, including copings, metal edge, counterflashings, trim, gutters downspouts and conductor heads, etc. Refer to Section 076000.

11. Coordinate and flash new replacement HVAC unit with Owner's HVAC contractor.
  - a. All HVAC and related piping work shall be performed by a third-party mechanical contractor licensed by the State for non-restricted commercial work.

12. Install sloped LWIC or tapered polyisocyanurate insulation crickets or saddles between drainage points and on the upslope side of curbs and similar roof conditions that would block the flow of water and hold water.

13. Install sumps at existing primary drains and scuppers (do not install sumps at overflow drains or scuppers).

14. Extend roof membrane up and over backside of mansard screenwall lapping self-adhering underlayment and install new shop-fabricated prefinished sheet metal coping or prefabricated factory edge metal (Contractor's Option).

15. Where thermoplastic roofing interfaces with continuing asphalt shingle roofing upslope, extend TPO roofing min. 36" upslope and hold back shingles 8".

**H. Section 076000 - Flashing and Sheet Metal**

1. General: Sheet metal expansion joint covers, copings, edge metal, counter flashing, pitch pans, scupper sleeves, gutters/downspouts, throughwall flashings, etc. shall be fabricated as specified and shown in the construction drawings and per SMACNA requirements otherwise, and where applicable, meet ANSI/SPRI requirements.

2. Install perimeter and penetration sheet metal flashing materials.

3. Replace sheet metal copings, edge metal, counterflashing and trim.

4. At counterflashing conditions, provide two-piece counterflashing consisting of pre-finished sheet metal receiver with lower pre-finished sheet metal counterflashing skirt attached to the receiver.

5. Provide watertight sheet metal rain collars over pitch pockets/pitch pans.

6. Install new pillow block supports under conduit, gas, pipe and condensate lines.

7. Plumb condensate lines to nearest drain, gutter, throughwall-scupper or downspout leader, or off the building at a location approved by the Owner.

8. At sheet metal copings and edge metal provide continuous, watertight underlayment consisting of roof flashing membrane or self-adhering flashing membrane.

9. Provide pre-fabricated side entry portal covers for HVAC line hoods at existing HVAC/condensing units, with concrete pad over roofing protection course under units.

10. Replace sheet metal gutter and downspouts at locations indicated on the drawings and specified herein. Provide prefinished sheet metal gutter and downspouts (maximum downspout elbow angle 75 degrees). Provide concrete splashblocks at downspout discharge locations.

**I. Section 079200 - Sealants and Caulking**

1. Install the specified sealant at locations indicated on the construction drawings and as specified herein.

2. Seal exposed non-gasketed fasteners, rivets, and other wall or flashing penetrations and fasteners above the roofing.

3. Install pre-formed silicone seals at terminations of sheet metal copings that abut other components.

**J. Section 099100 - Exterior Painting**

1. Prep, prime and paint steel components within the roof work areas, including equipment supports, roof hatch frames and covers, steel vent/stacks, curb covers, etc.

2. Repaint fixtures, fasteners, tie-backs and other steel items above the roof areas and attached to the roof structure that are presently painted; repaint downspout boots at grade where present.

**K. Section 099653 - Elastomeric Coating**

1. Apply clear, breathable, silicone-based elastomeric coating to masonry walls above roofing and at locations indicated on the drawings and herein.

2. Prior to applying the coating, clean the wall surfaces, repair missing or damaged mortar joints, and seal all joints, cracks, voids, penetrations and wall-mounted fixtures with sealant compatible with the coating.

\* SEE SPECIFICATIONS FOR FULL EXTENT OF WORK.

2. Existing structure to remain. Contractor to verify integrity of existing structure and notify owner if any of the proposed new work will adversely affect the existing structure.

3. Protect from damage existing finish work that is to remain in place. If it becomes damaged during demolition promptly repair damage caused to facilities by demolition.

4. Conduct demolition operations and debris removal to ensure minimum interference with walks, roads, and occupied spaces, and adjacent facilities.

5. Contractor shall verify existing structure prior to submittal of bid and prior to any demolition operations.

6. Contractor to verify all conditions and elements prior to submitting bid.

7. DO NOT SCALE DRAWINGS - VERIFY ALL DIMENSIONS IN FIELD

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**GALLOPS SENIOR CENTER  
ROOF PROJECT**  
1212 15TH STREET, COLUMBUS, GA 31901

Project: 24CCGU22RR366  
Drawn: TRM/ Approved: SRG  
Issues:  
01/30/2026 Issued for Bid

PROJECT  
INFORMATION

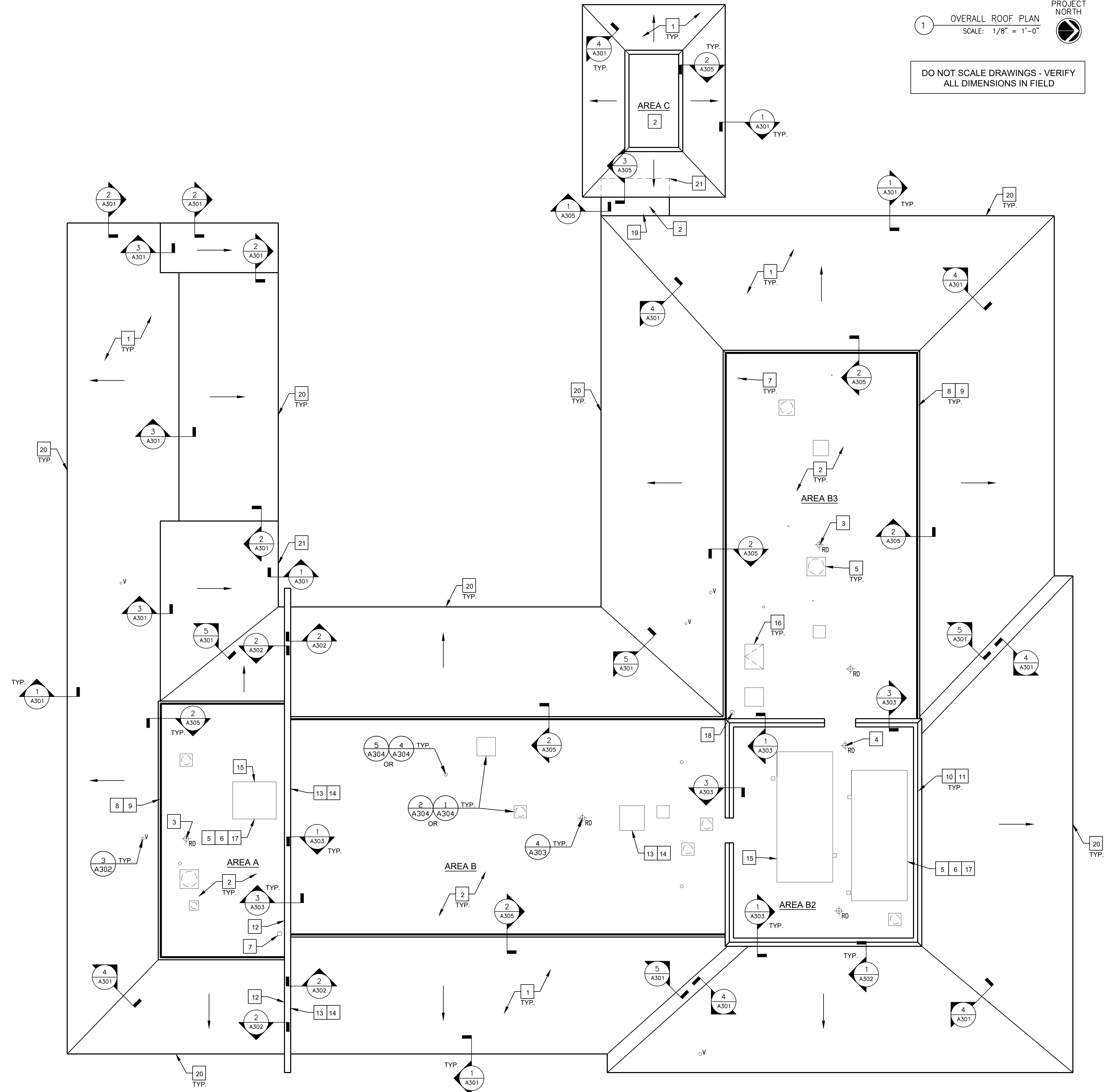
**A001**

**KEY NOTES:**

- 1 At steep-slope roof areas remove and replace existing asphalt composition shingles with new laminated architectural asphalt shingles over synthetic underlayment. Inspect and replace damaged roof decking prior to installation of asphalt shingle system. Provide continuous tough-deck edge vents at shingle roof areas. Provide self-adhering subflashing for asphalt shingle roof areas at valleys, roof edges, roof transitions, vent perimeters, and other areas where indicated on the drawings.
- 2 At low-slope roof areas remove loose aggregate and other incompatible or unsuitable materials from the existing built-up roofing and prepare the surface for application of tapered Lightweight Insulating Concrete (LWIC) and installation of the new TPO roof system. Provide third-party roof moisture survey prior to installation of the LWIC and remove wet roofing materials based on the results of the moisture survey (match existing materials and comply with new roof system and LWIC manufacturer requirements). Fully adhere the TPO Thermoplastic Fleeceback Membrane Roofing system over the LWIC.
- 3 Abandon existing internally piped roof drains except those within the mechanical screenwall area. Plug drain outlets and fill drain bodies with insulation flush with existing roof surface.
- 4 Maintain existing internally piped roof drains within the mechanical screenwall area. Reuse existing drains, clean drain bowl and clamping rings, and replace missing or damaged hardware as required (or install retrofit roof drains at existing drain locations to remain - Contractor's Option).
- 5 Raise existing curbs at RTUS, curbs, skylights, and similar to 8-inches minimum above new roof surface. HVAC and Mechanical work to be performed by a Contractor licensed by the State for non-restricted commercial work.
- 6 Adjust gas lines, conduits and other piping at the roof surface to accommodate new roof surface elevations and provide min. 8" flashing height. Provide new pipe supports for gas lines and similar piping.
- 7 Provide extensions for plumbing stacks and other roof penetrations to provide min. 8" flashing height.
- 8 Provide two-piece prefinished sheet metal drainage edge with removable lower skirt flashing at interface between low-slope and steep-slope roof areas. Provide self-adhering underlayment at transition and termination of the shingle roofing, extended up the face of nailers and lapped by the TPO roofing.
- 9 Provide through-deck roof edge vent with self-adhering membrane leak barrier strip.
- 10 At high-slope mansard screenwall, inspect and repair damaged sheathing, provide self-adhering membrane underlayment over sheathing, provide two-piece sheet metal receiver with removable counterflashing skirt at base of wall, and attach asphalt shingles as required by the shingle manufacturer for high-slope mansard conditions.
- 11 Extend roof membrane up and over backside of mansard screenwall lapping self-adhering underlayment and install new shop-fabricated prefinished sheet metal coping or prefabricated factory edge metal (Contractor's Option).
- 12 Provide prefinished sheet metal coping or prefabricated factory edge metal (Contractor's Option) with self-adhering membrane underlayment at top of parapets.
- 13 Provide two-piece pre-finished sheet metal receiver and counterflashing skirt at base of masonry above roofing.
- 14 Apply clear, breathable, silicone-based elastomeric coating to masonry walls above roofing.
- 15 Picture frame RTUs and motorized equipment with roofing walkway/protection pad. Install walkway protection pad at roof access points, roof hatches, and downspout discharges. Provide protection pad between roof access points and RTUs and motorized units to provide continuous pathway.
- 16 Prep, prime and paint steel components, including equipment supports, roof hatch frames and covers, steel vent/stacks, curb covers, etc. within the roof work areas.
- 17 Install condensate lines as needed to plumb condensate water off the roof surface and into the nearest drain, gutter or draining roof edge.
- 18 Repair and secure hot stack so it is securely and rigidly attached to the structure.
- 19 Where TPO roofing interfaces with continuing asphalt shingle roofing upslope, extend TPO roofing min. 36" upslope and hold back shingles 8".
- 20 Install 16" x 8" aluminum undereave intake vents at 10 ft. max. spacing at underside of eave (typ.).
- 21 Install gutters only at locations indicated.

**LEGEND:**

- |                                 |  |
|---------------------------------|--|
| ROOF DRAIN                      | SLOPE DIRECTION                                      |
| DOWNSPOUT                       | DENOTES LOCATION OF TAPERED INSULATION SYSTEM        |
| RAISED CURB                     | DENOTES NEW TAPERED DRAINAGE SUMP                    |
| CURB MOUNTED EQPM (VENT OR FAN) | DENOTES AREA OF LIKELY WET INSULATION TO BE REPLACED |
| HOT STACK                       |  |
| VENT THROUGH ROOF               |  |
| HATCH                           |  |



1 OVERALL ROOF PLAN  
SCALE: 1/8" = 1'-0"  
PROJECT NORTH

DO NOT SCALE DRAWINGS - VERIFY ALL DIMENSIONS IN FIELD

3225 SHALLOWFORD ROAD  
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**GALLOPS SENIOR CENTER**  
ROOF PROJECT  
1212 15TH STREET, COLUMBUS, GA 31901

Project: 24CCGU22RR366  
Drawn: TRM/ Approved: SRG  
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01/30/2026 issued for Bid

ROOF PLAN

**A100**




The wind uplift forces are in accordance with the current ASCE 7-16 Standard and are used for the resistance of the designed roofing systems to resist these forces. The analysis of the structures to resist these forces is not included nor a part of this scope of work.

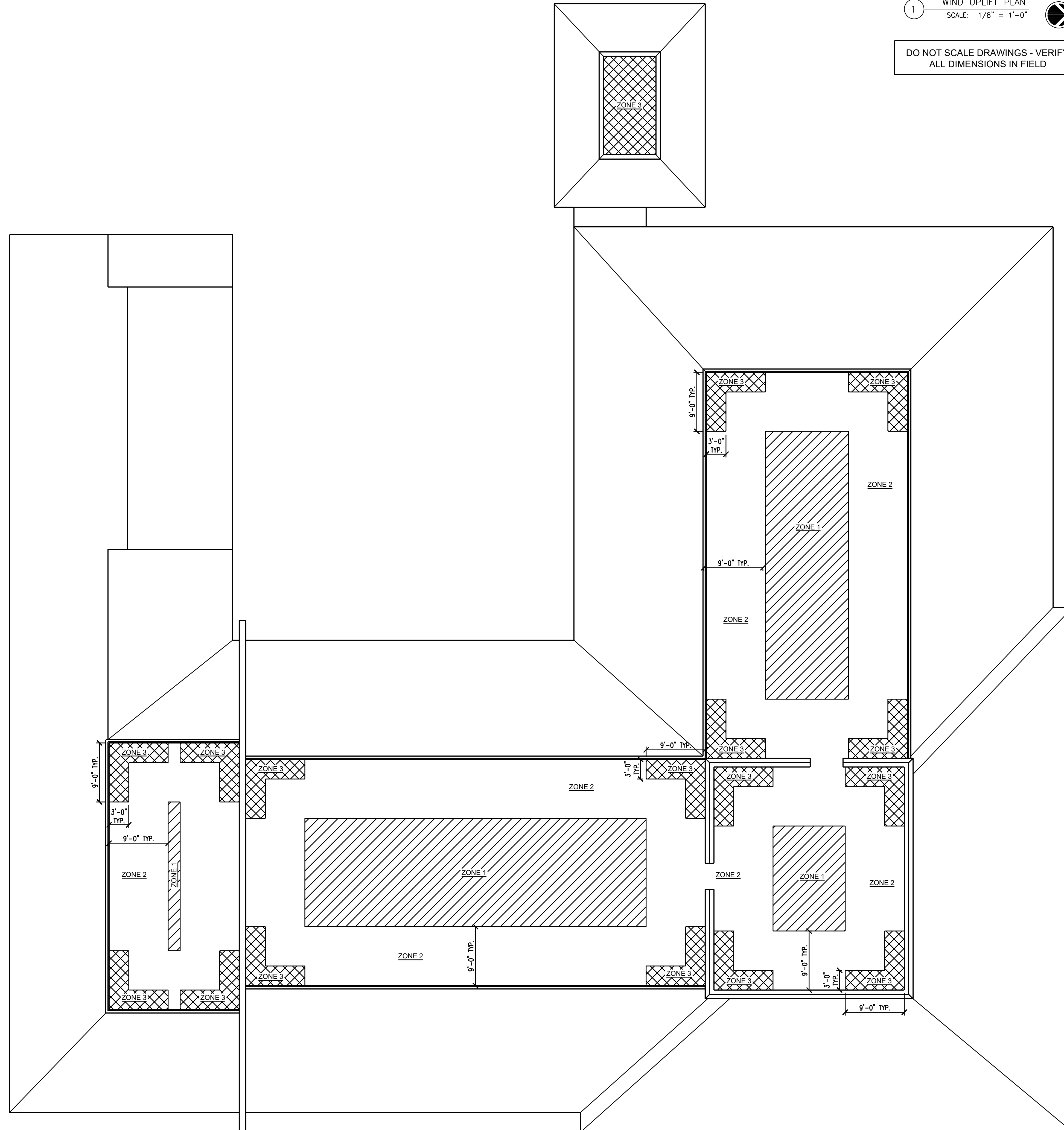
Wind pressures shown are allowable wind pressures and are to be used for the design of the roof assembly. These wind pressures are based on ultimate wind pressures reduced by a factor of 0.6 for wind and increased by a safety factor of 2.0.

Risk Category II  
Exposure Category B  
Basic Wind Speed = 110 mph

**WIND UPLIFT ZONES AND PRESSURES**

(pounds per square foot - psf)

	ZONE 1'	NOT USED
	ZONE 1	-41.6 psf
	ZONE 2	-54.8 psf
	ZONE 3	-74.8 psf



1 WIND UPLIFT PLAN  
SCALE: 1/8" = 1'-0"



DO NOT SCALE DRAWINGS - VERIFY  
ALL DIMENSIONS IN FIELD

3225 SHALLOWFORD ROAD  
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BYRON, GA 31008  
478-954-3971



**GALLOPS SENIOR CENTER**  
ROOF PROJECT  
1212 15TH STREET, COLUMBUS, GA 31901

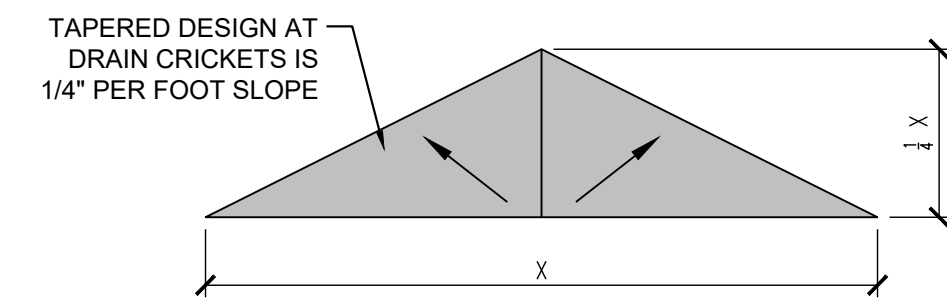
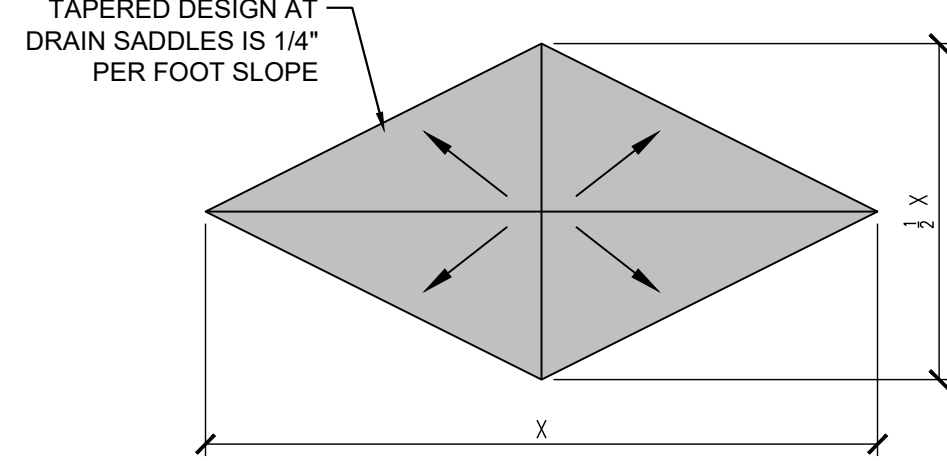
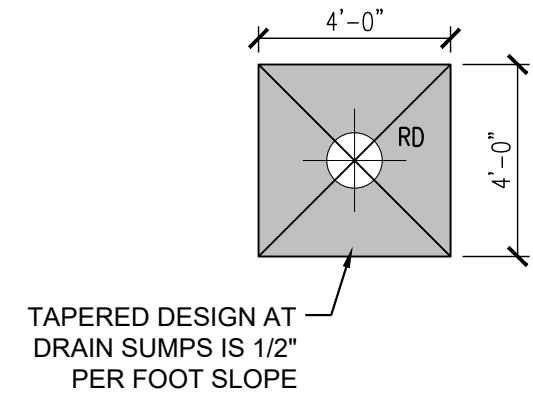
Project: 24CCGU2RR366  
Drawn: TRM/ Approved: SRG  
Issues:  
01/30/2026 issued for Bid

WIND UPLIFT PLAN

**A150**

NOTE 1:  
MODIFY TAPERED LAYOUT AND  
INSULATION LAYERS AS NEEDED  
TO PROVIDE UNOBSTRUCTED  
VALLEYS IN DRAINAGE SYSTEM

LEGEND:  
DENOTES LOCATION OF  
TAPERED INSULATION SYSTEM

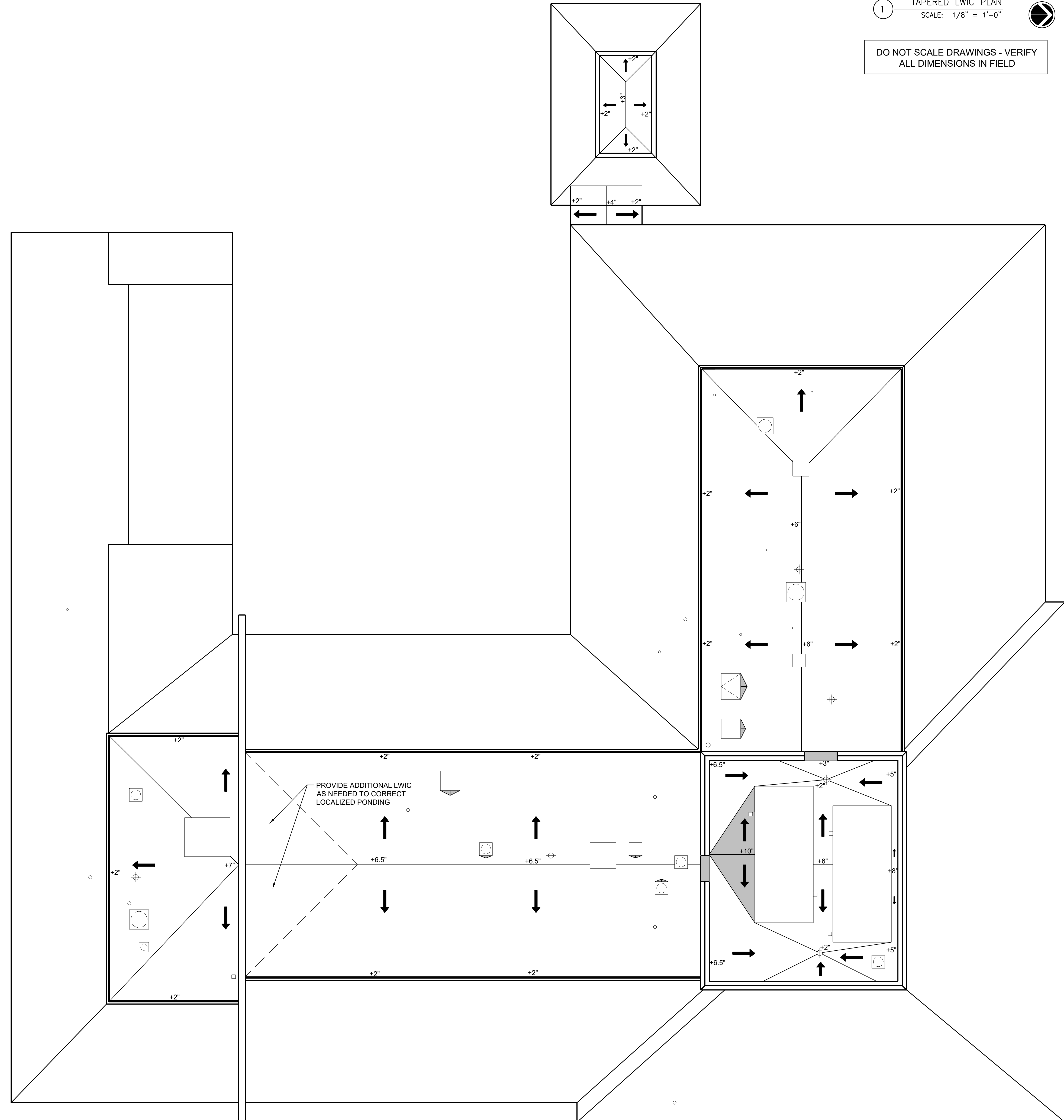


2 TYPICAL TAPERED SUMP, SADDLE, AND CRICKET DETAILS  
NOT TO SCALE

1 TAPERED LWIC PLAN  
SCALE: 1/8" = 1'-0"



DO NOT SCALE DRAWINGS - VERIFY  
ALL DIMENSIONS IN FIELD



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GALLOPS SENIOR CENTER  
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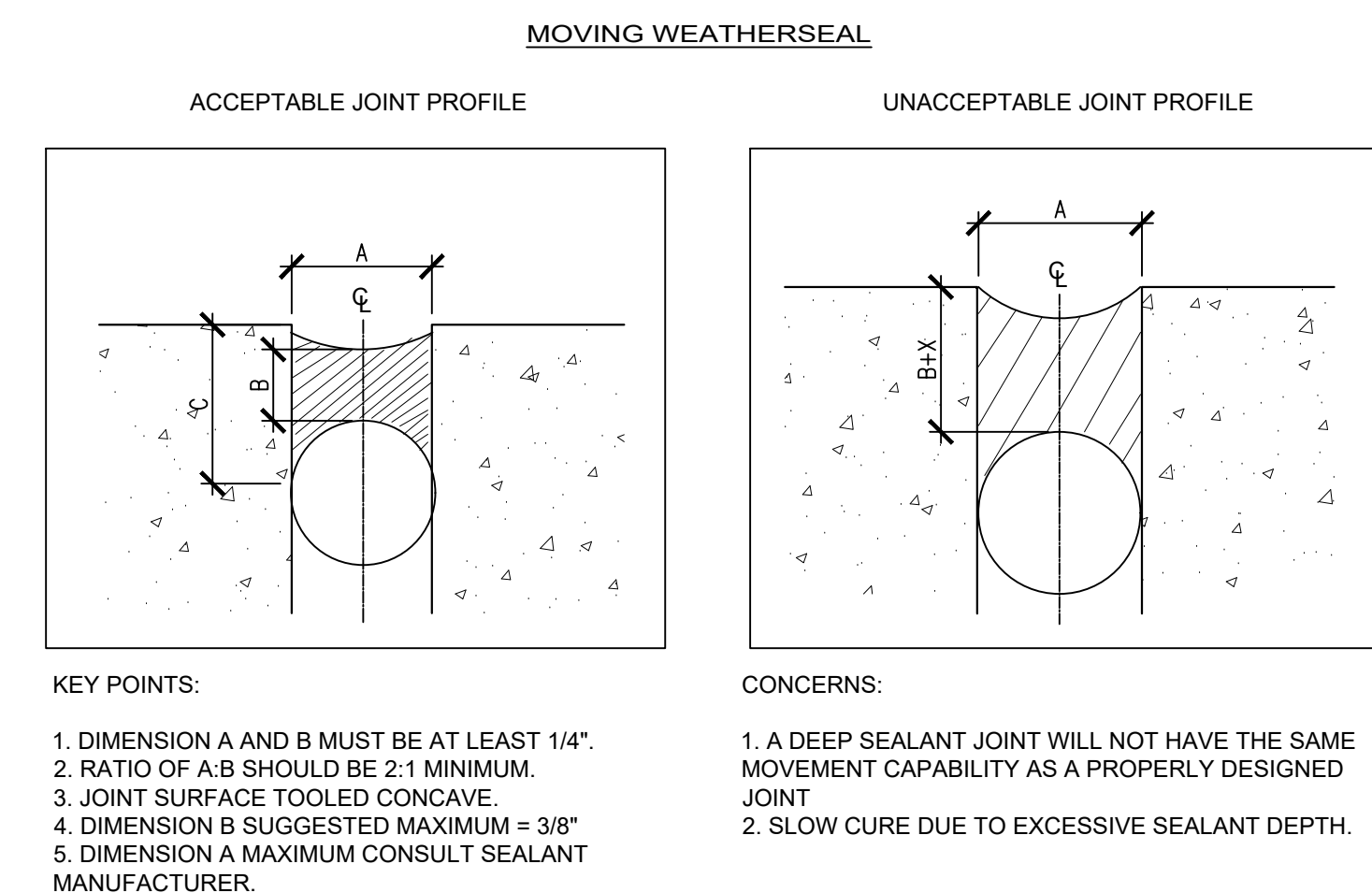
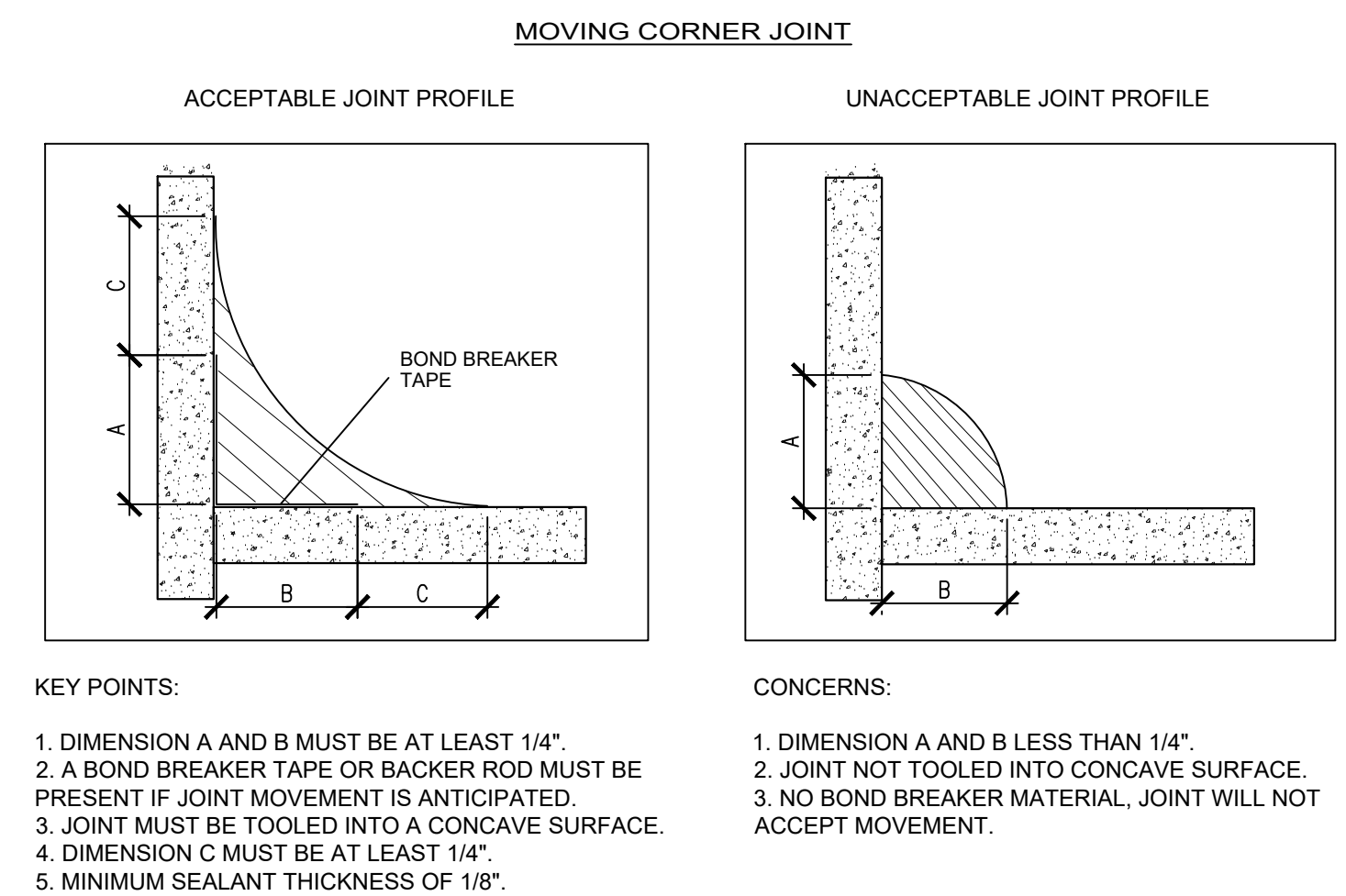
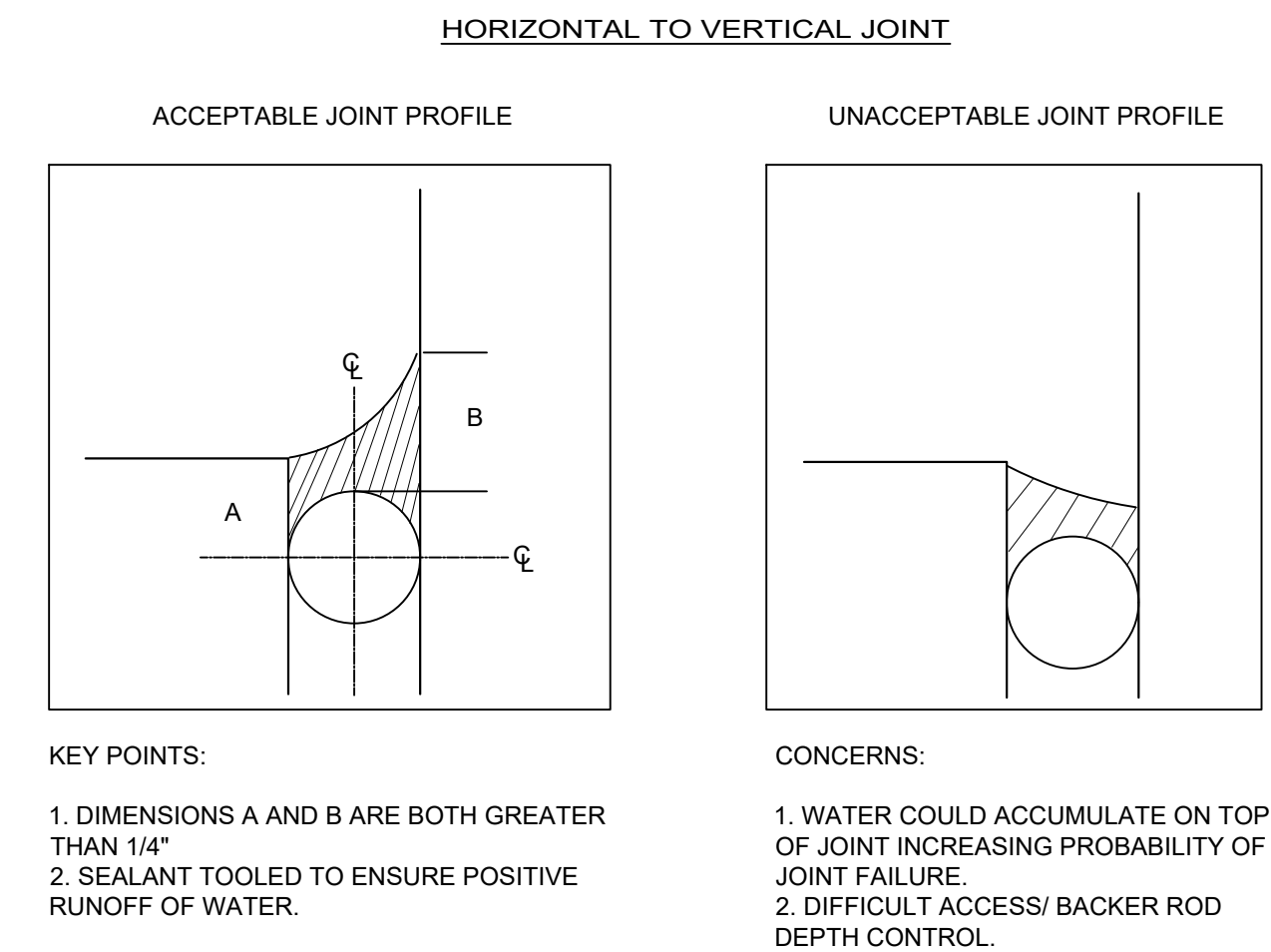
TAPERED  
LWIC PLAN

A200



TYPICAL FASTENING AND ADHESIVE ATTACHMENT PATTERNS ARE FOR REFERENCE PURPOSES ONLY. REFER TO MANUFACTURER'S TESTING, APPROVALS, AND REQUIREMENTS. CONFIRM ATTACHMENT PATTERNS MEET SPECIFIED WIND UPLIFT VALUES FOR EACH ZONE BASED ON APPROVED ROOF SYSTEM MANUFACTURER.

3 EXAMPLE ADHESIVE ATTACHMENT PATTERNS NOT TO SCALE



1 TYPICAL SEALANT DETAILS NOT TO SCALE

3225 SHALLOWFORD ROAD  
SUITE 520  
MABLETOWN, GA 30062  
770-565-3016

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BYRON, GA 31008  
478-954-3971

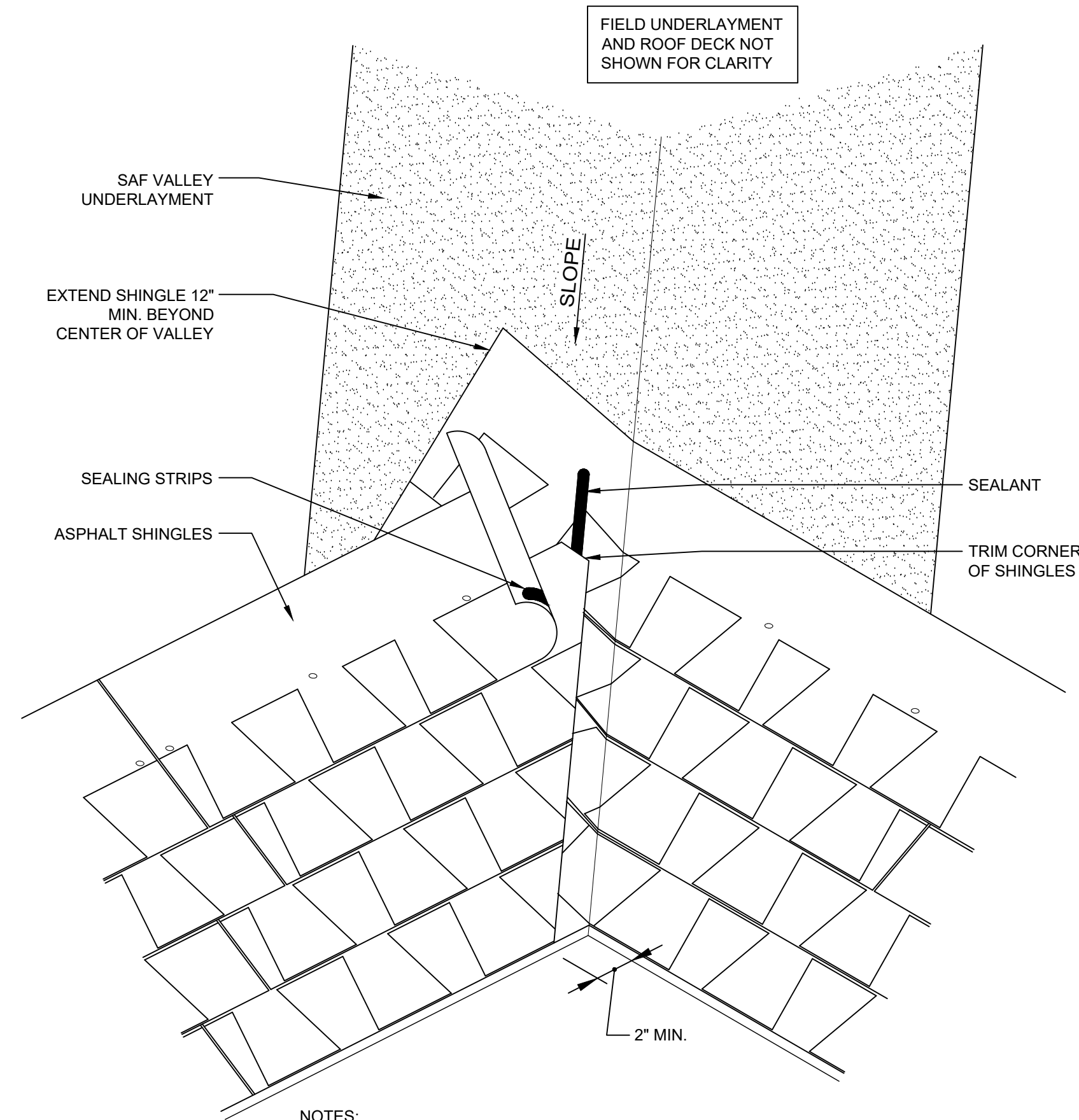


**GALLOPS SENIOR CENTER  
ROOF PROJECT**  
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Project: 24CCGU22RR366  
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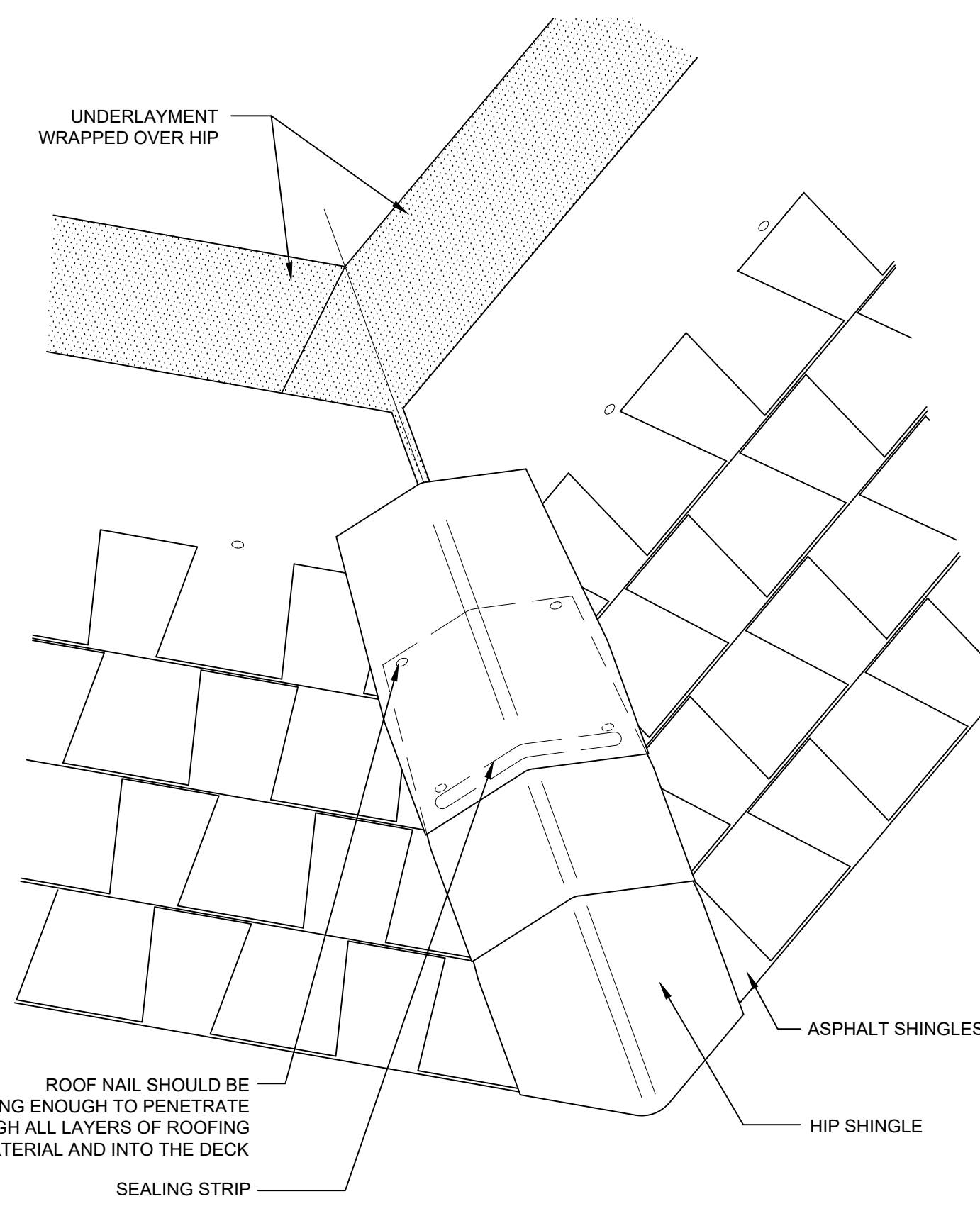
DETAILS -  
TYPICAL

**A300**



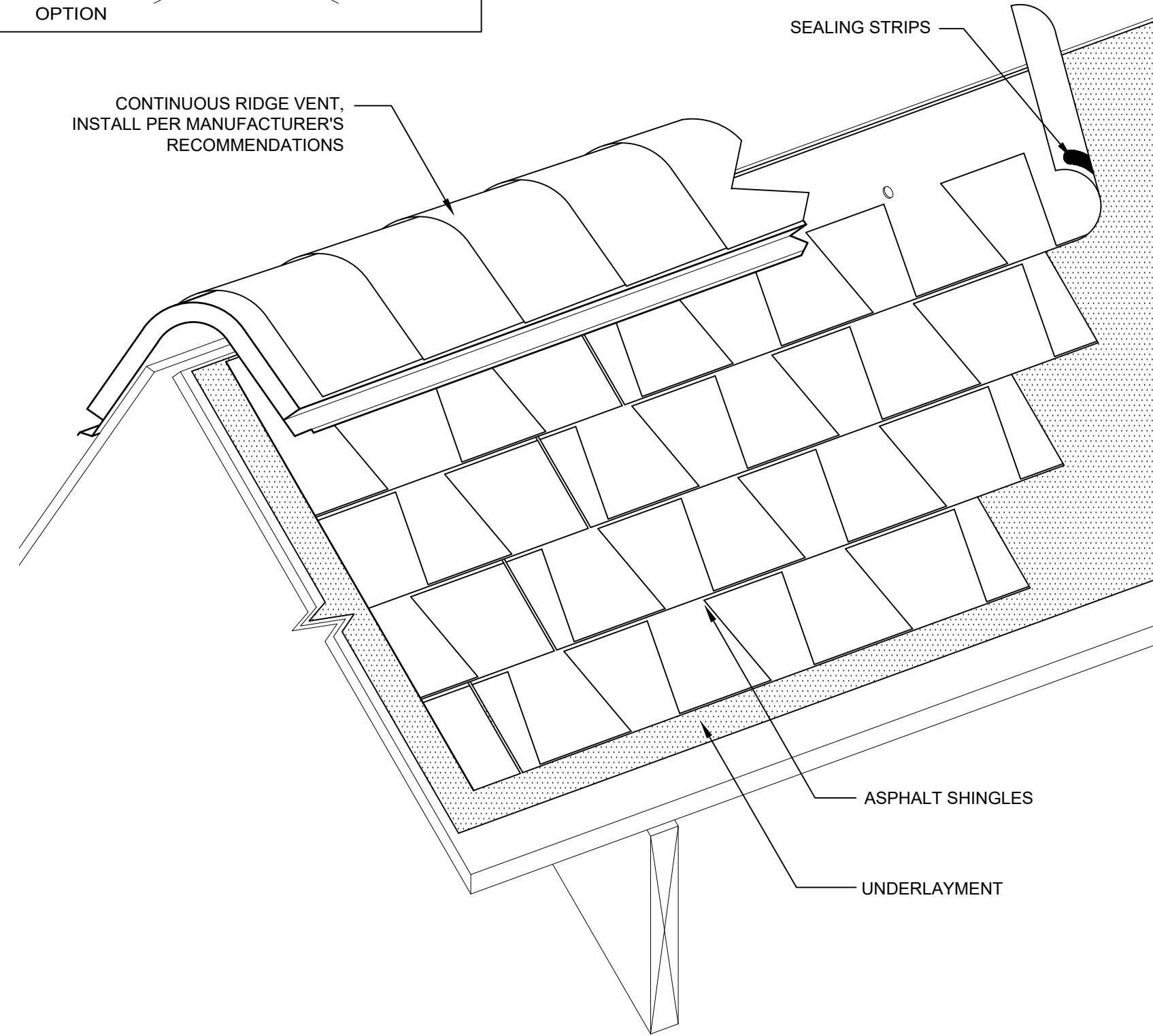
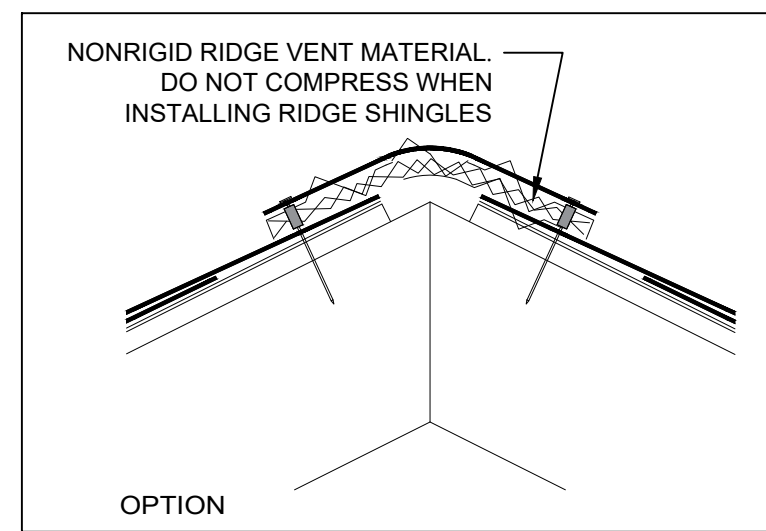
- NOTES:
1. REFER TO THE NRCA INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.
  2. VALLEY UNDERLAYMENT TYPE MAY VARY DEPENDING ON CLIMATIC CONDITIONS.
  3. NO FASTENERS WITHIN 6 INCHES OF VALLEY CENTER.
  4. THE CUT SIDE OF THE VALLEY SHOULD BE ON THE SIDE WITH THE GREATEST ROOF AREA.

5 CLOSED VALLEY  
NOT TO SCALE



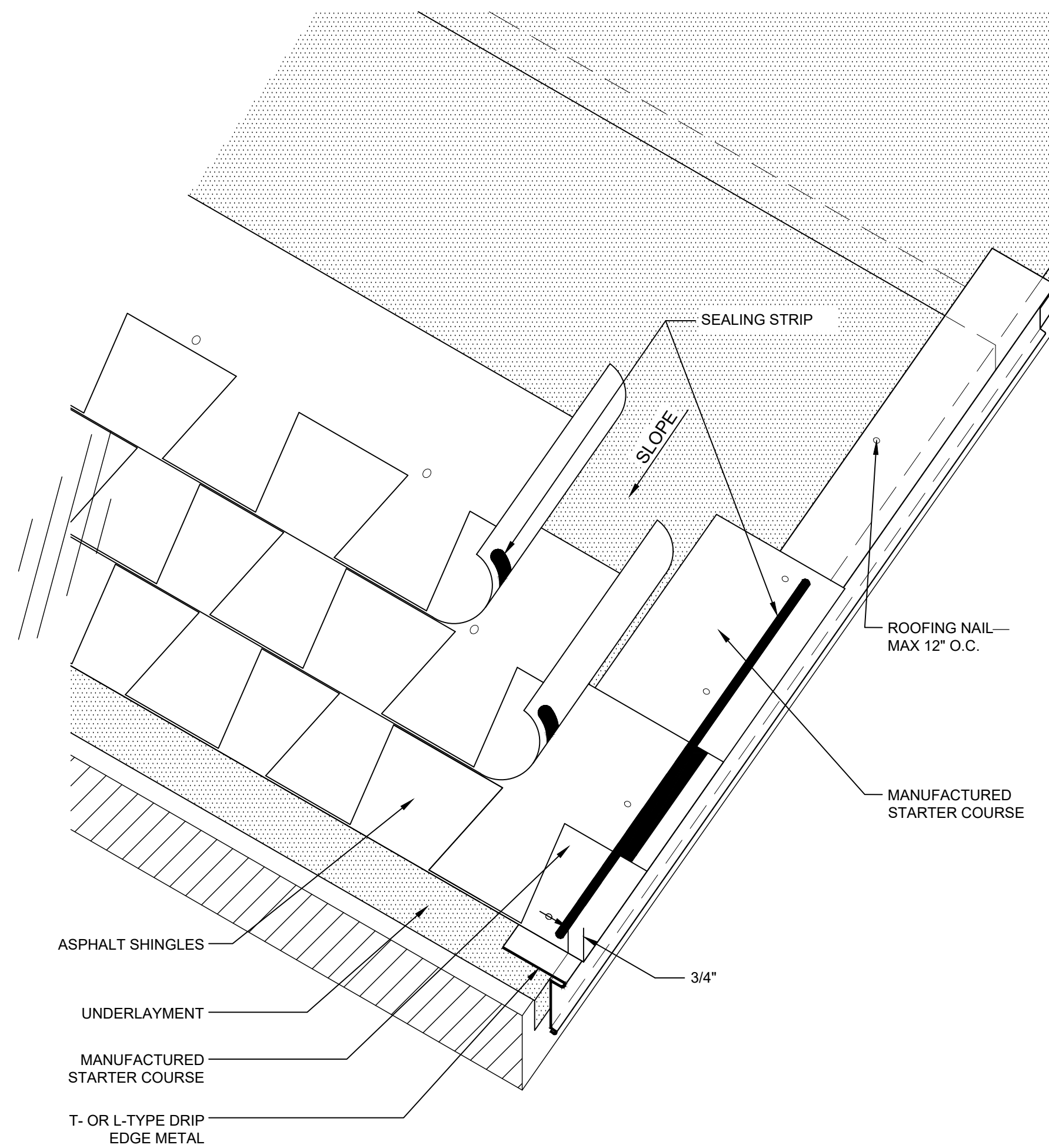
- NOTES:
1. REFER TO THE NRCA INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.
  2. MOST MANUFACTURERS SUPPLY SPECIAL HIP SHINGLES. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

4 HIP DETAIL  
NOT TO SCALE



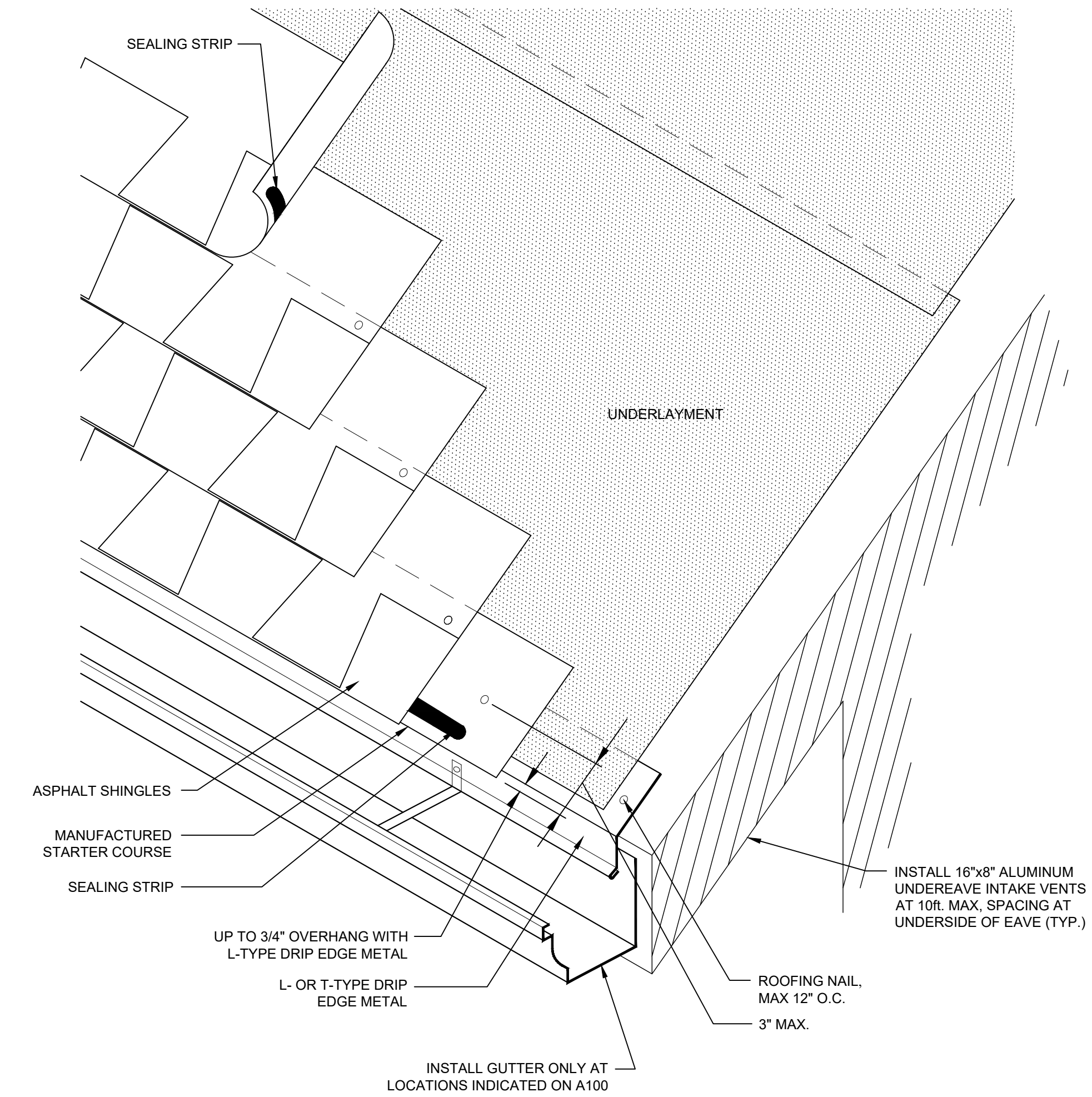
- NOTES:
1. REFER TO THE NRCA INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.

3 VENTED RIDGE  
NOT TO SCALE



- NOTES:
1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.

2 RAKE WITH STARTER COURSE  
NOT TO SCALE



- NOTES:
1. THIS DETAIL SHOWS ONE TYPE OF GUTTER SUPPORT. GUTTER SECUREMENT AND SUPPORT OPTIONS VARY.
  2. REFER TO THE NRCA INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.

1 EAVE (WITH GUTTER WHERE PRESENT)  
NOT TO SCALE

3225 SHALLOWFORD ROAD  
SUITE 520  
ATLANTA, GA 30062  
770-565-3016

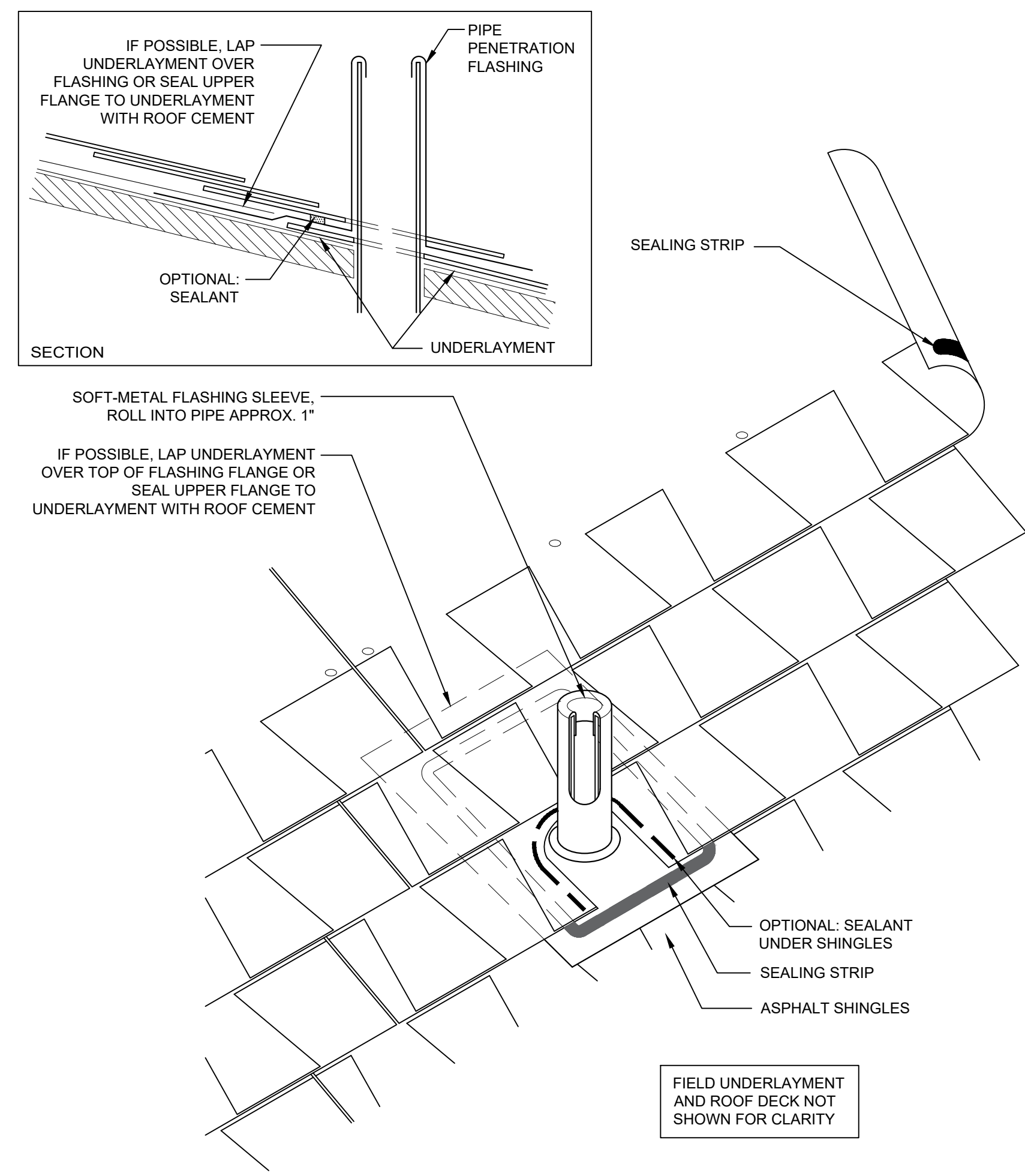
**MERIK**  
BUILDING CONSTRUCTION CONSULTANTS

**GALLOPS SENIOR CENTER  
ROOF PROJECT**  
1212 15TH STREET, COLUMBUS, GA 31901

Project: 24CCGU22RR366  
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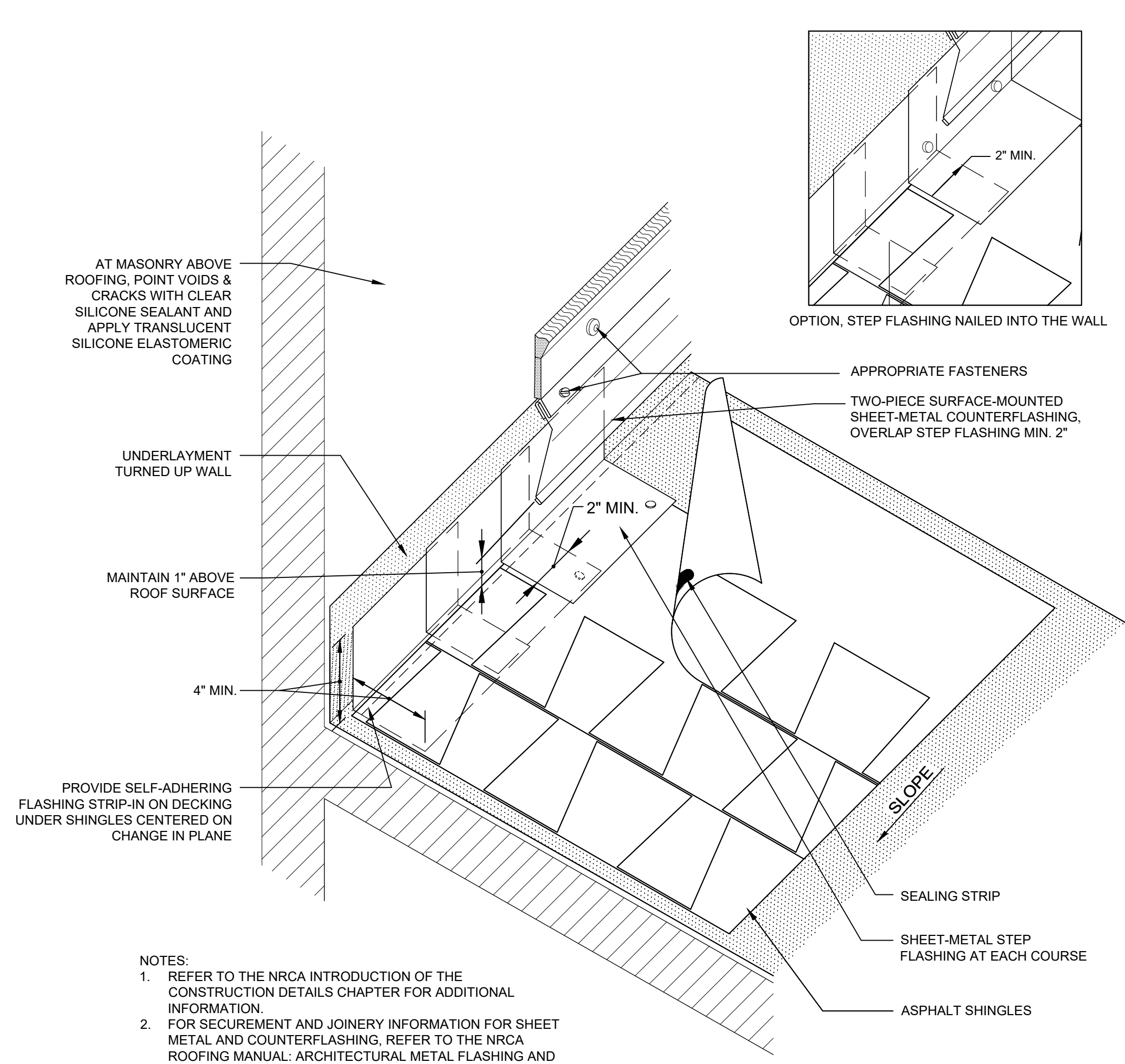
DETAILS -  
ASPHALT  
SHINGLES

**A301**



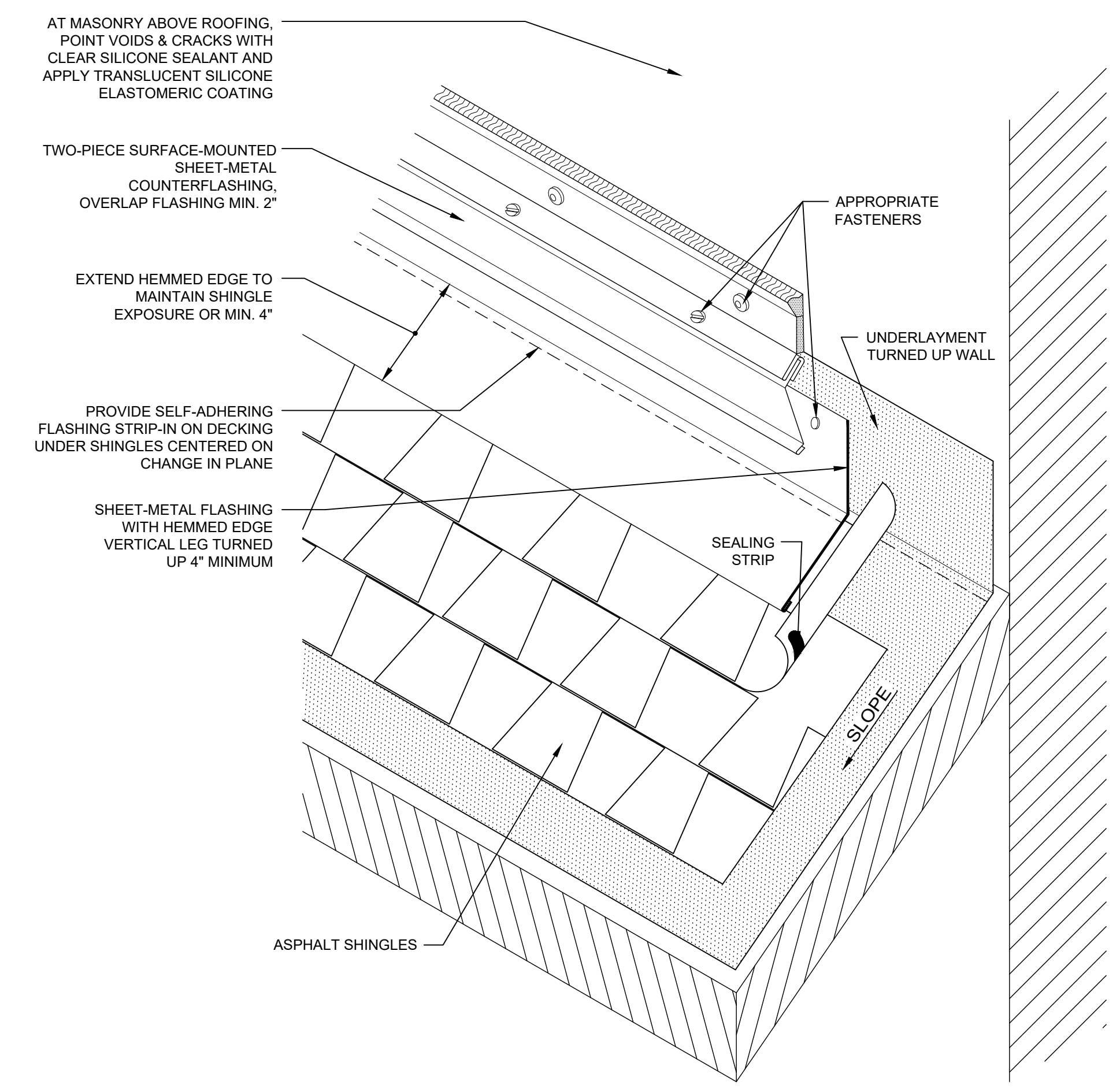
NOTES:  
 1. REFER TO THE NRCA INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.

3 PIPE/ VENT PENETRATION  
 NOT TO SCALE



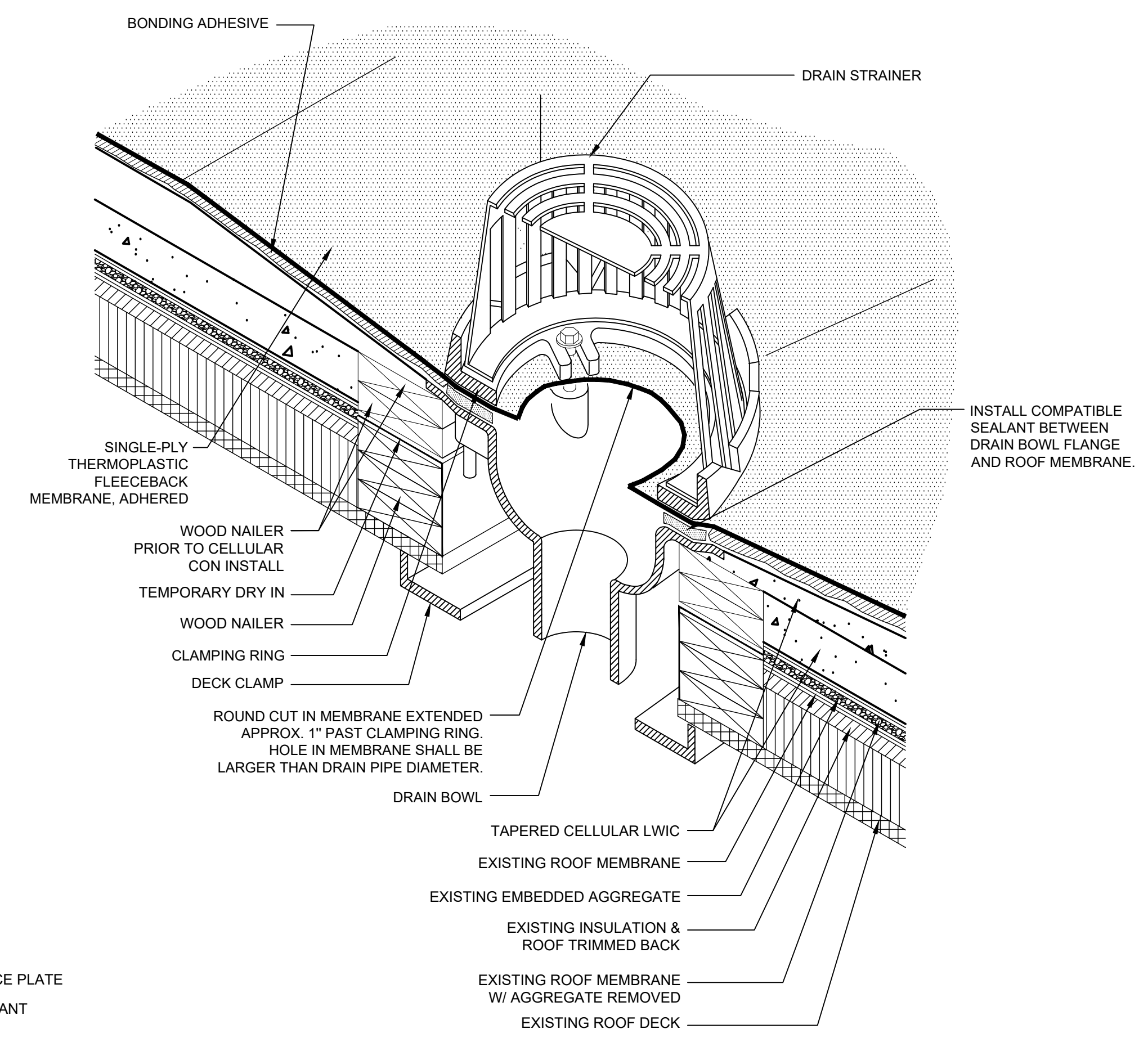
NOTES:  
 1. REFER TO THE NRCA INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.  
 2. FOR SECUREMENT AND JOINERY INFORMATION FOR SHEET METAL AND COUNTERFLASHING, REFER TO THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING AND CONDENSATION AND AIR LEAKAGE CONTROL.

2 SIDEWALL FLASHING  
 NOT TO SCALE



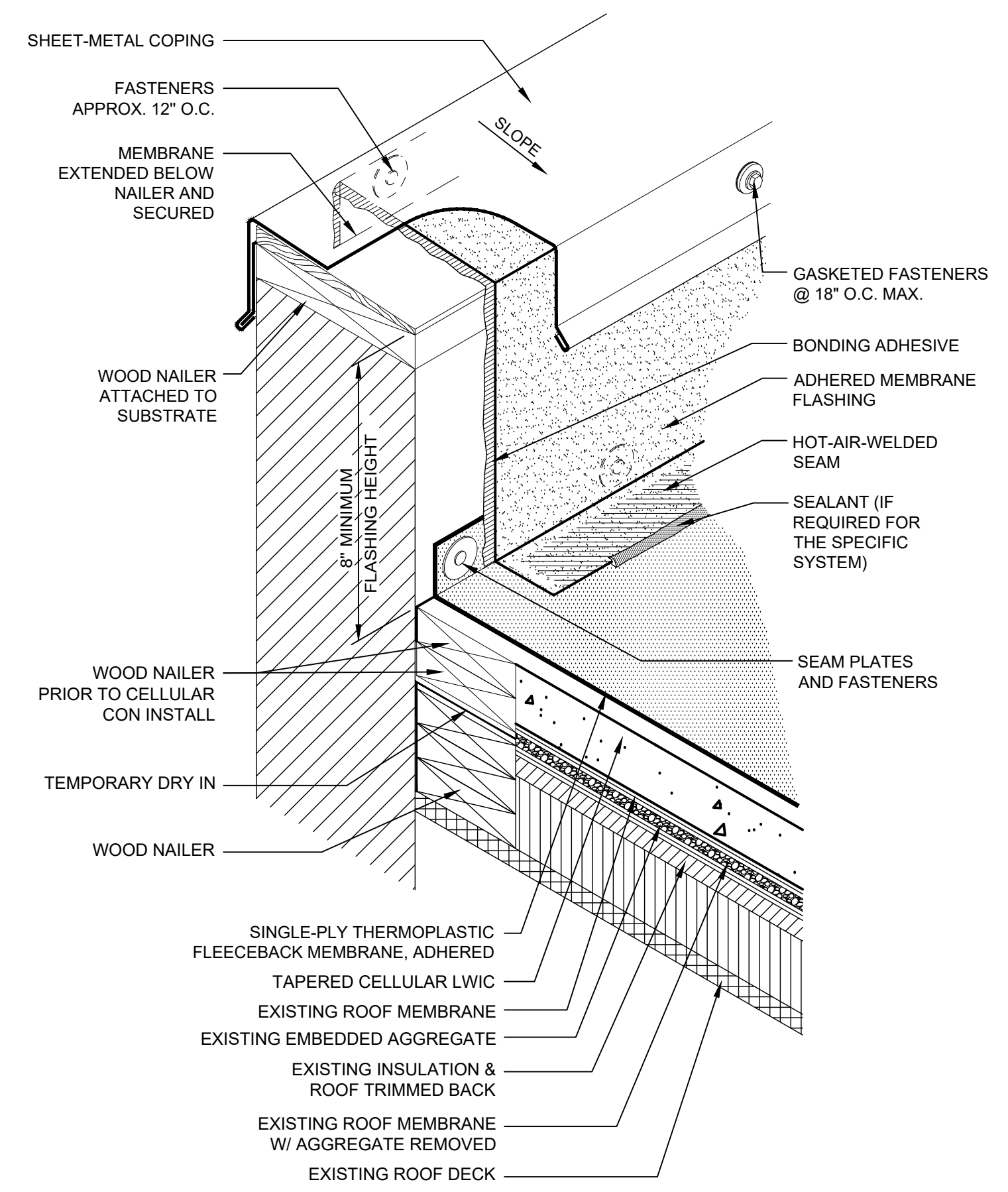
NOTES:  
 1. REFER TO THE NRCA INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.  
 2. FOR SECUREMENT AND JOINERY INFORMATION FOR SHEET METAL AND COUNTERFLASHING, REFER TO THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING AND CONDENSATION AND AIR LEAKAGE CONTROL.

1 HEADWALL FLASHING  
 NOT TO SCALE



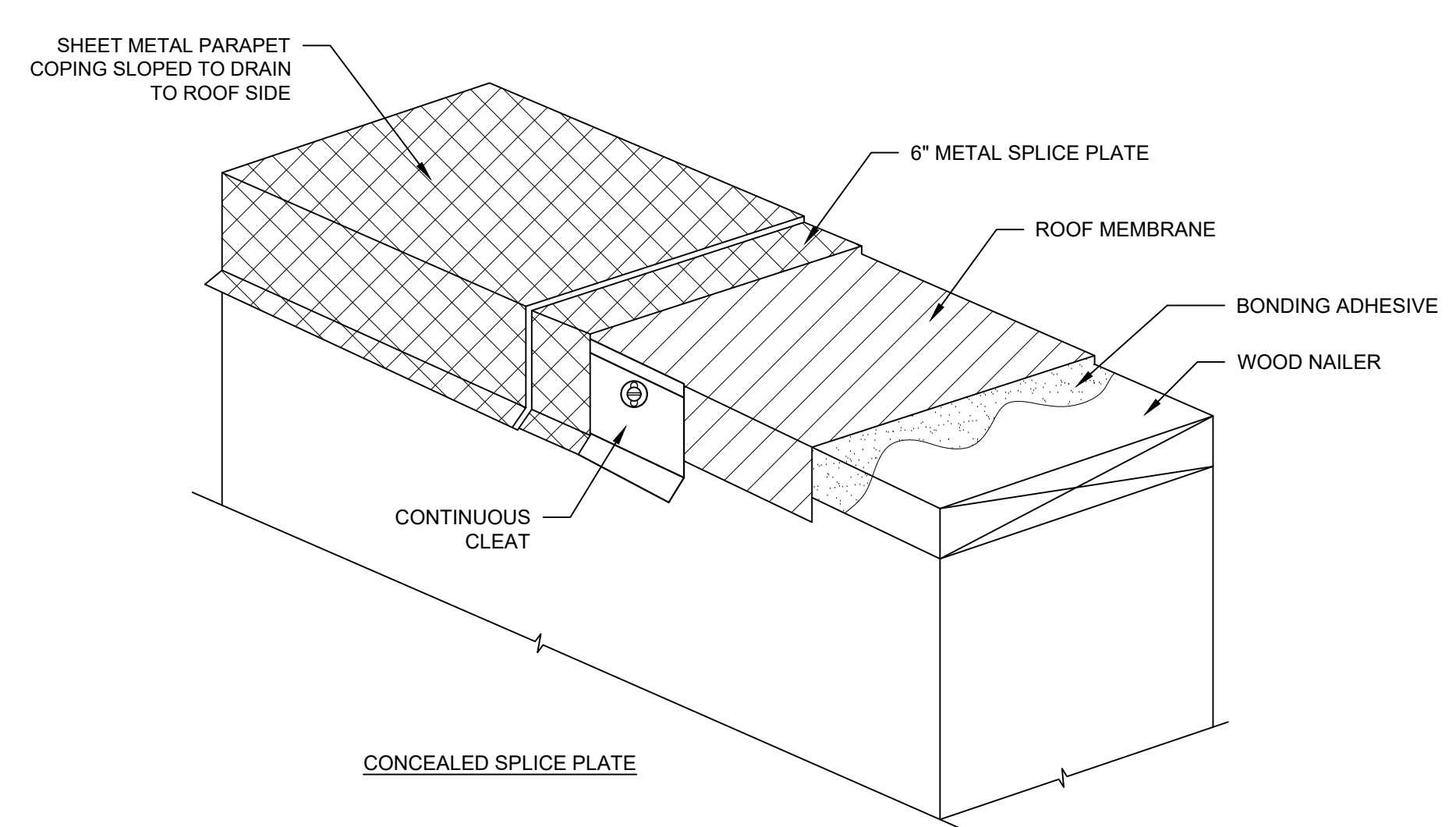
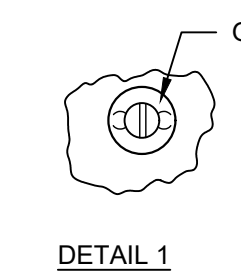
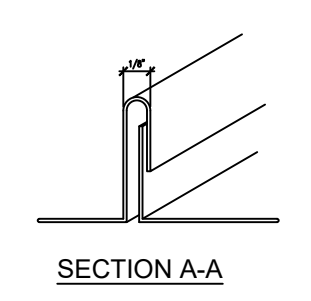
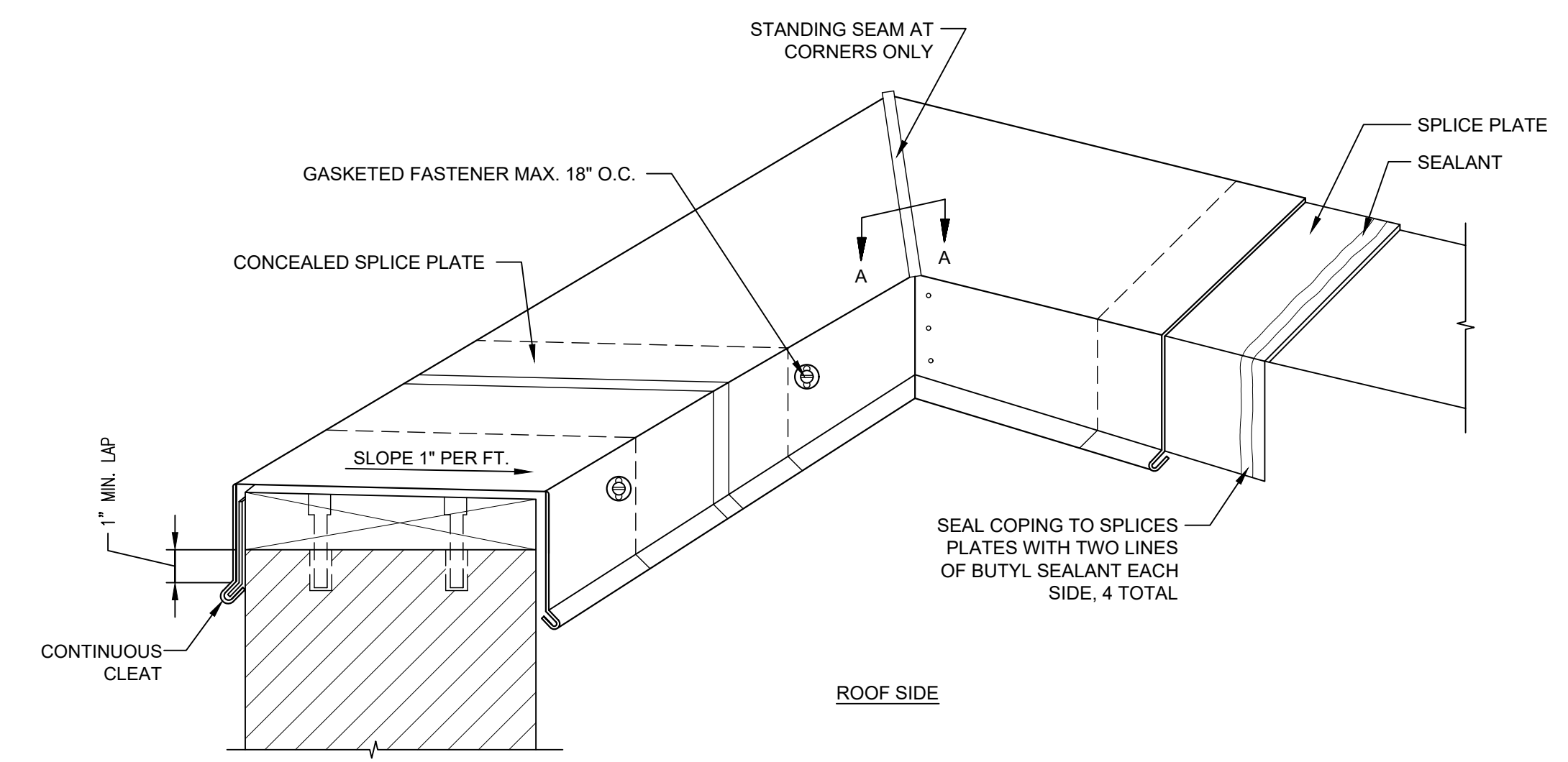
- NOTES:  
 1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.  
 2. MEMBRANE SEAMS SHOULD NOT INTERSECT DRAIN CLAMPING RING. SEAMS THAT FALL WITHIN DRAIN SUMP SHOULD BE STRIPPED IN.  
 3. REUSE EXISTING DRAINS OR INSTALL RETROFIT DRAINS WHERE DRAINS ARE TO REMAIN.

4 ROOF DRAIN  
 NOT TO SCALE

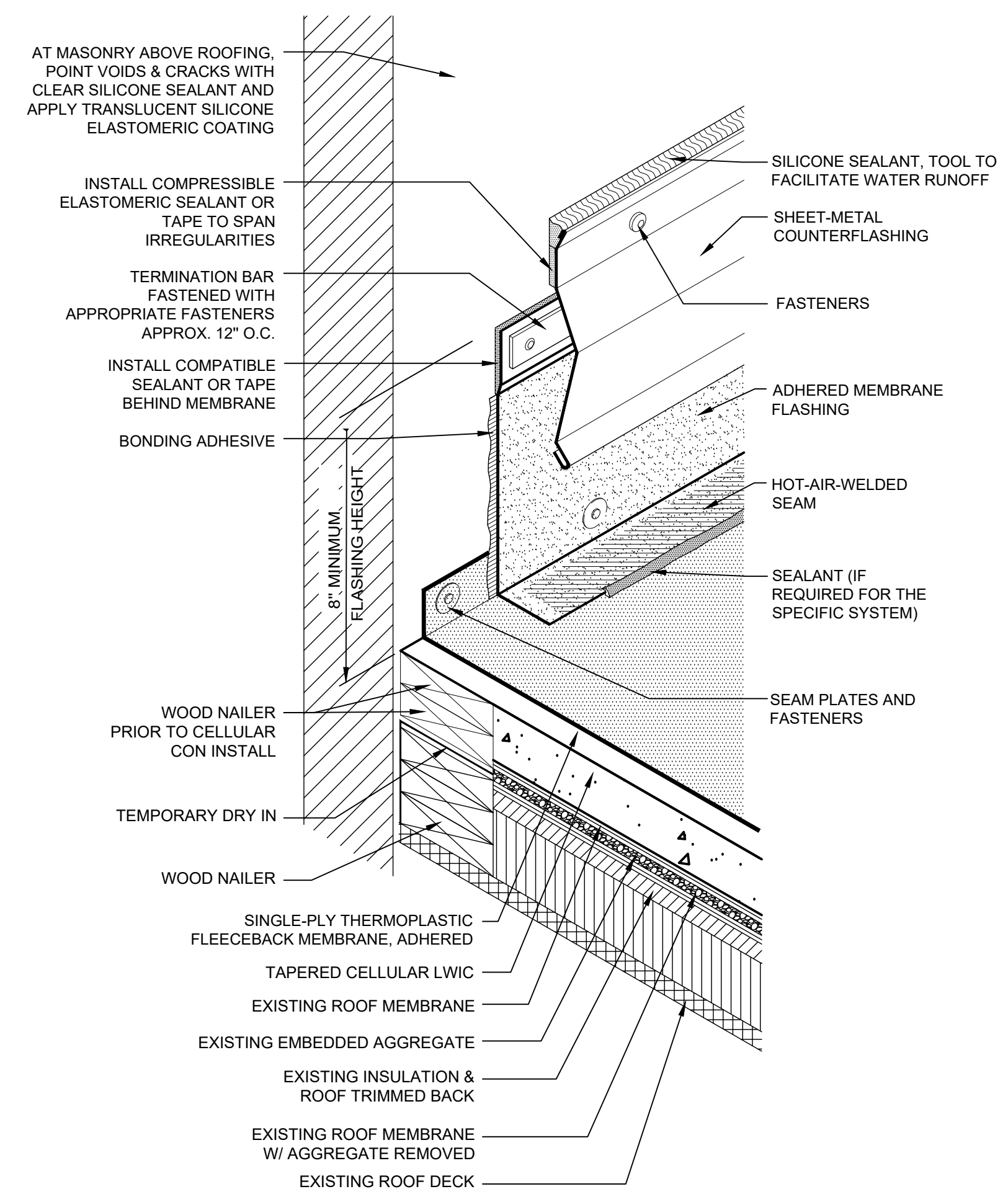


- NOTES:  
 1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.  
 2. REFER TO TYPICAL COPING CAP DETAIL FOR FURTHER REQUIREMENTS.

1 PARAPET WITH METAL COPING  
 NOT TO SCALE

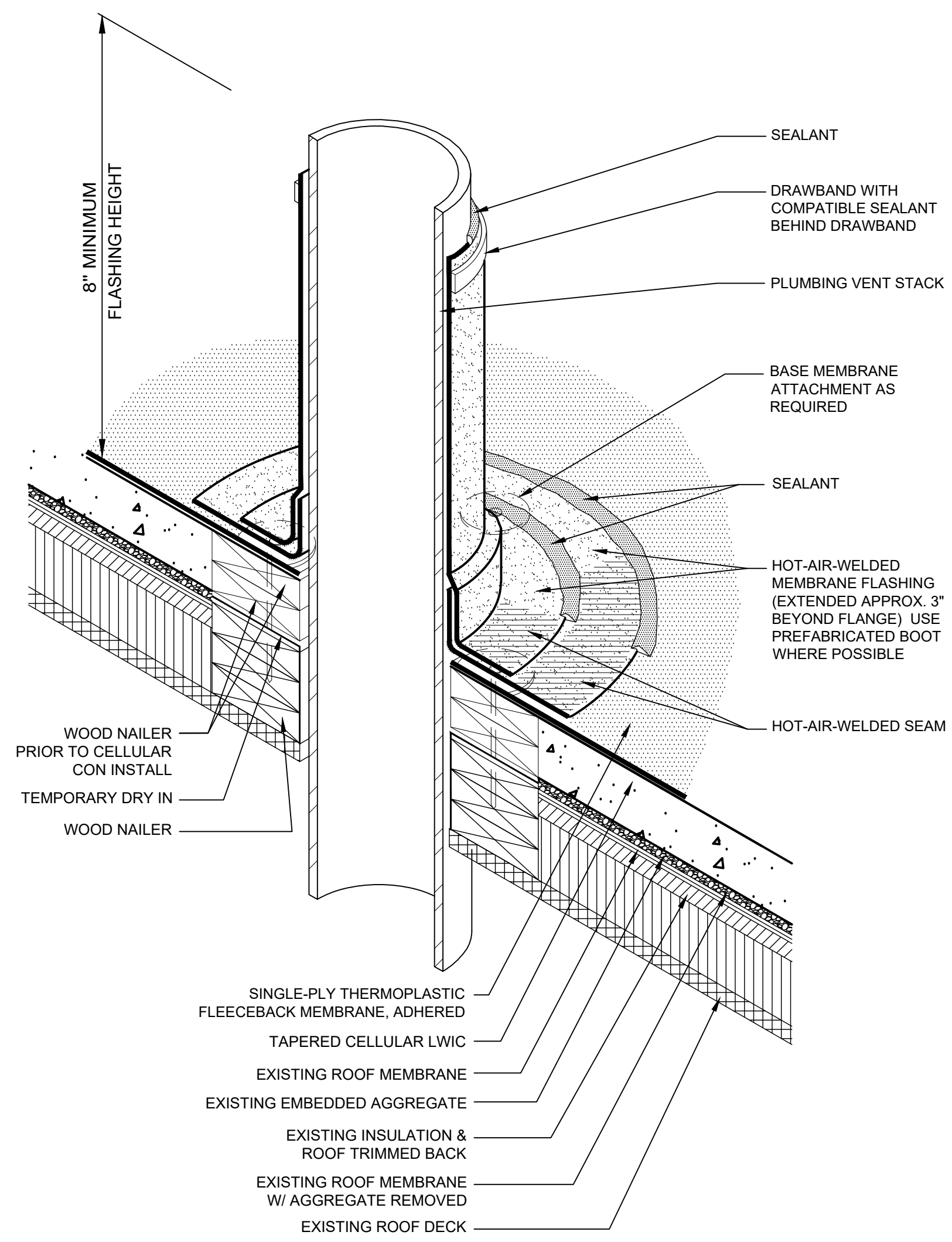


2 TYPICAL METAL COPING DETAILS  
 NOT TO SCALE



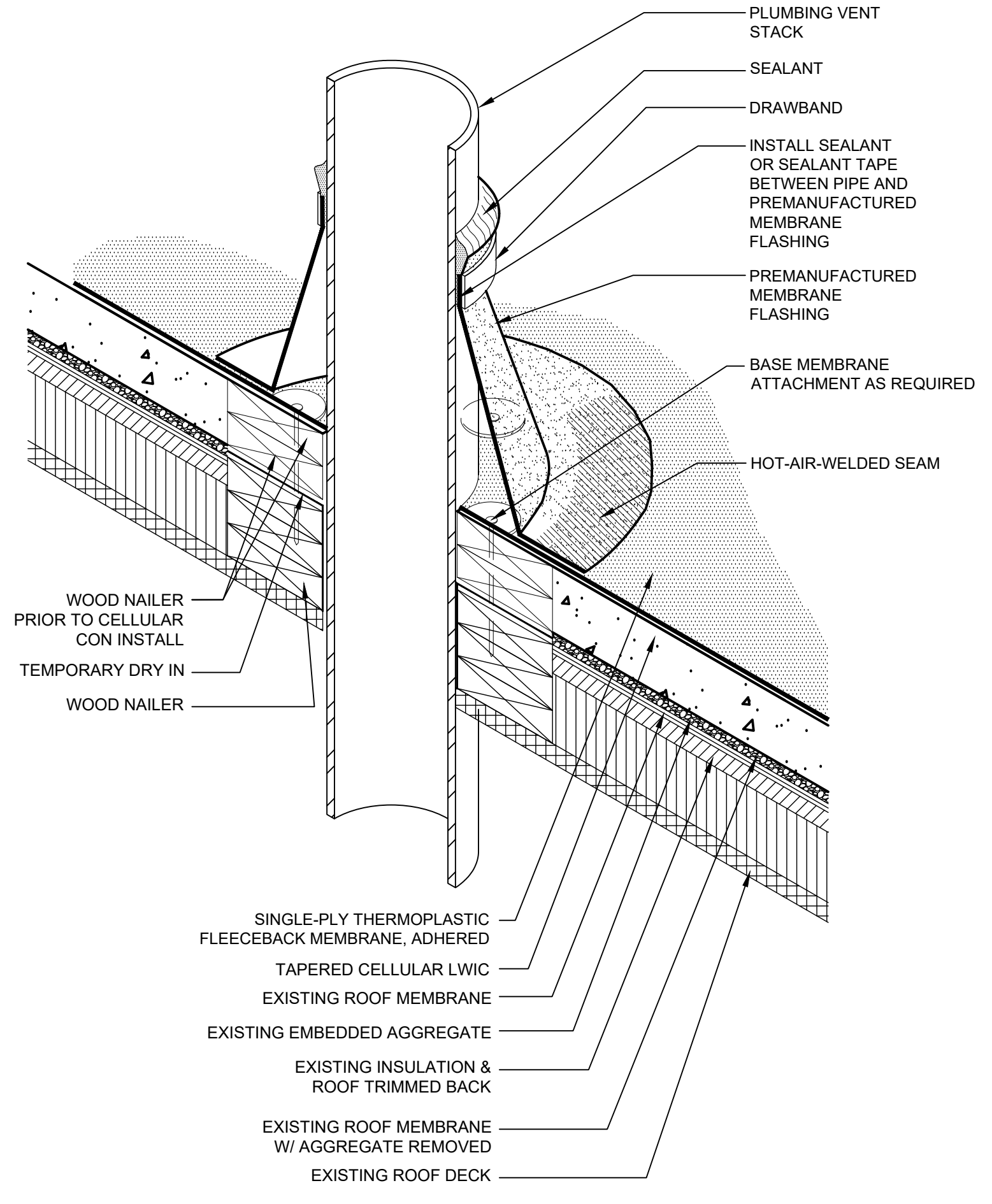
- NOTES:  
 1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.  
 2. THIS DETAIL DOES NOT ALLOW FOR DIFFERENTIAL MOVEMENT BETWEEN THE DECK AND WALL.

3 BASE FLASHING  
 NOT TO SCALE



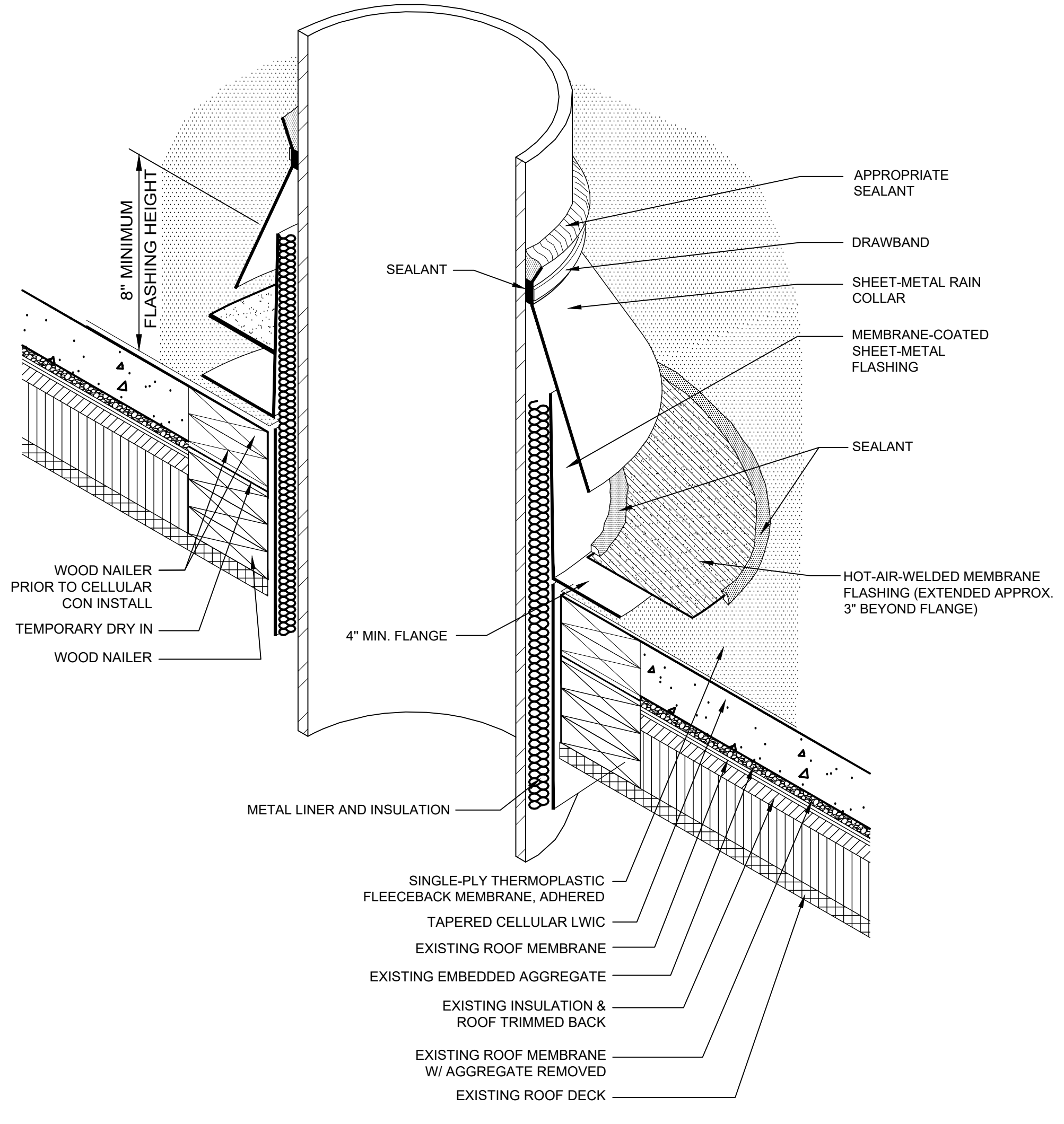
NOTES:  
 1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.

5 PIPE PENETRATION  
 NOT TO SCALE



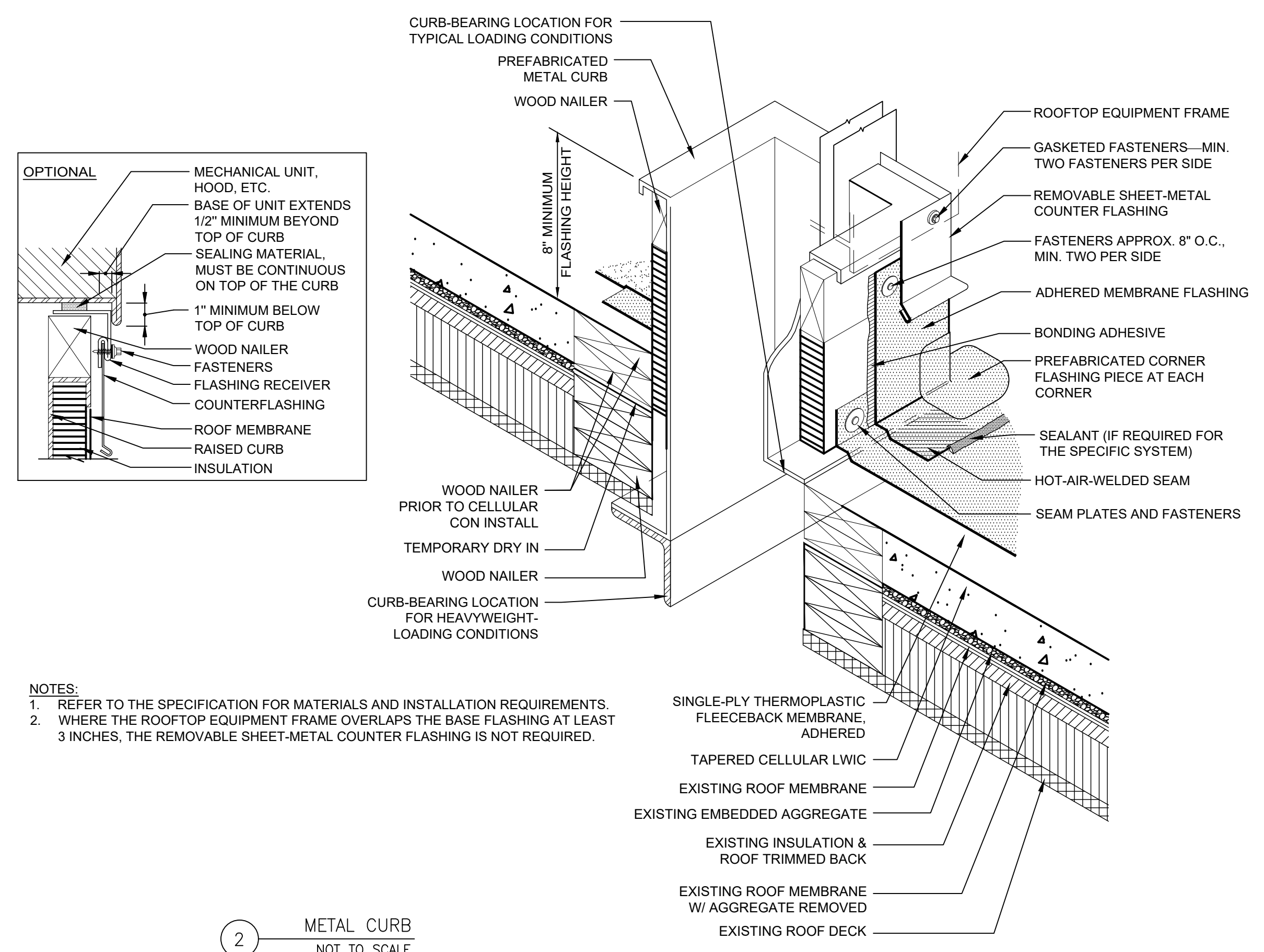
NOTES:  
 1. REFER TO MANUFACTURERS' SPECIFICATIONS FOR SPECIFIC REQUIREMENTS FOR BASE MEMBRANE ATTACHMENT AND PLACEMENT.

4 PLUMBING VENT  
 NOT TO SCALE



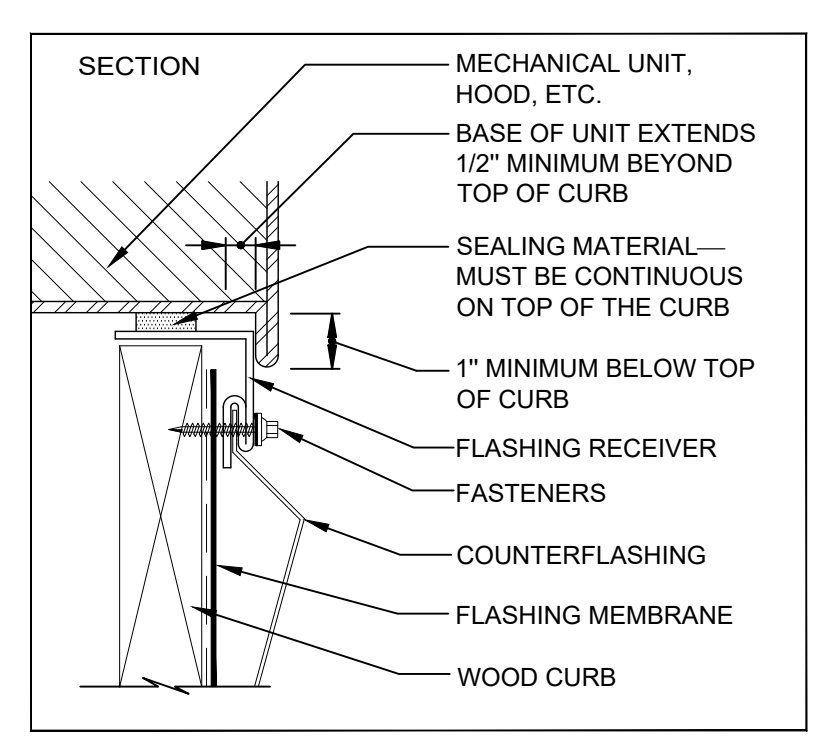
NOTES:  
 1. REFER TO MANUFACTURERS' SPECIFICATIONS FOR SPECIFIC REQUIREMENTS FOR BASE MEMBRANE ATTACHMENT AND PLACEMENT.

3 HOT STACK  
 NOT TO SCALE

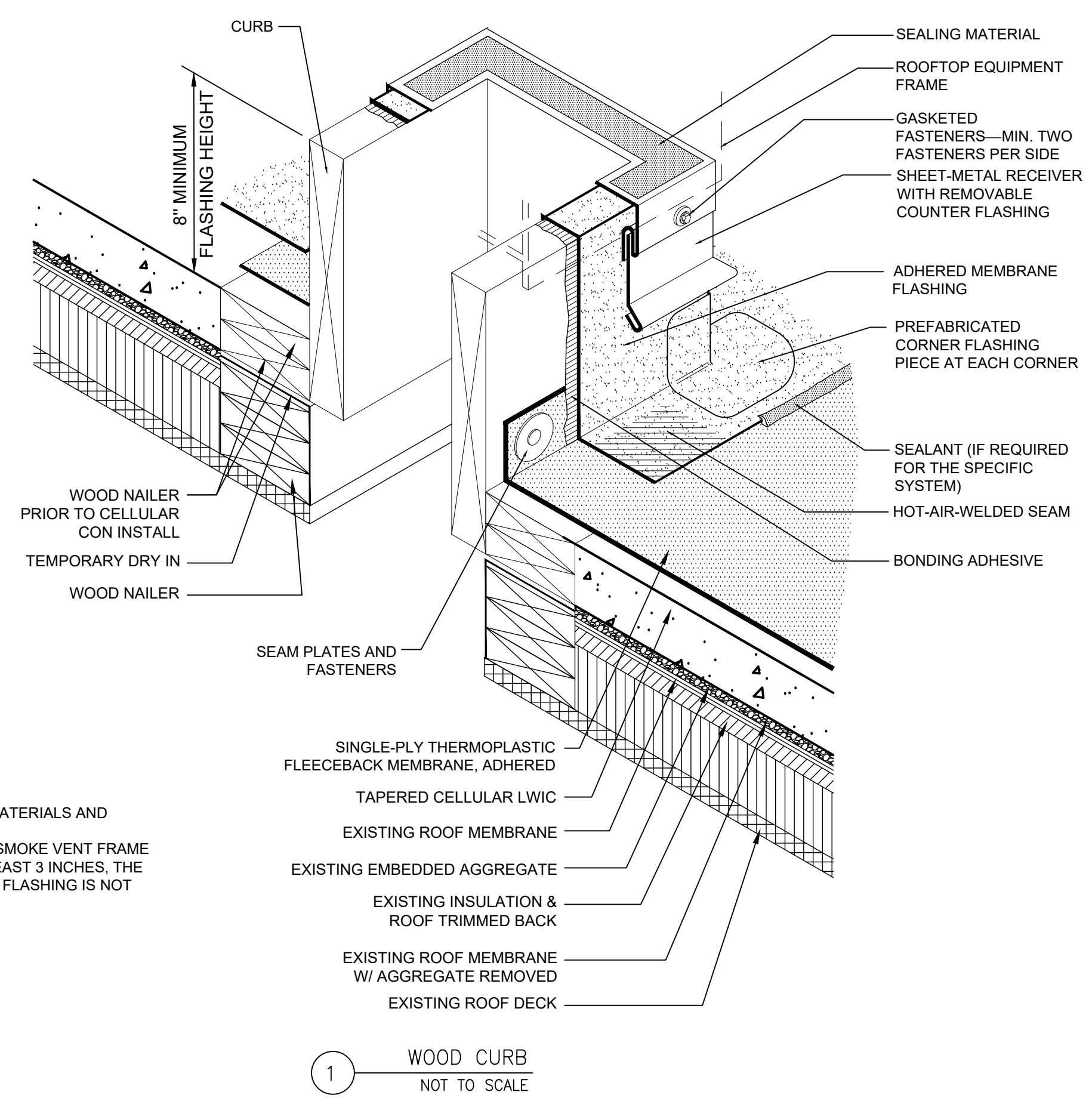


NOTES:  
 1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.  
 2. WHERE THE ROOFTOP EQUIPMENT FRAME OVERLAPS THE BASE FLASHING AT LEAST 3 INCHES, THE REMOVABLE SHEET-METAL COUNTER FLASHING IS NOT REQUIRED.

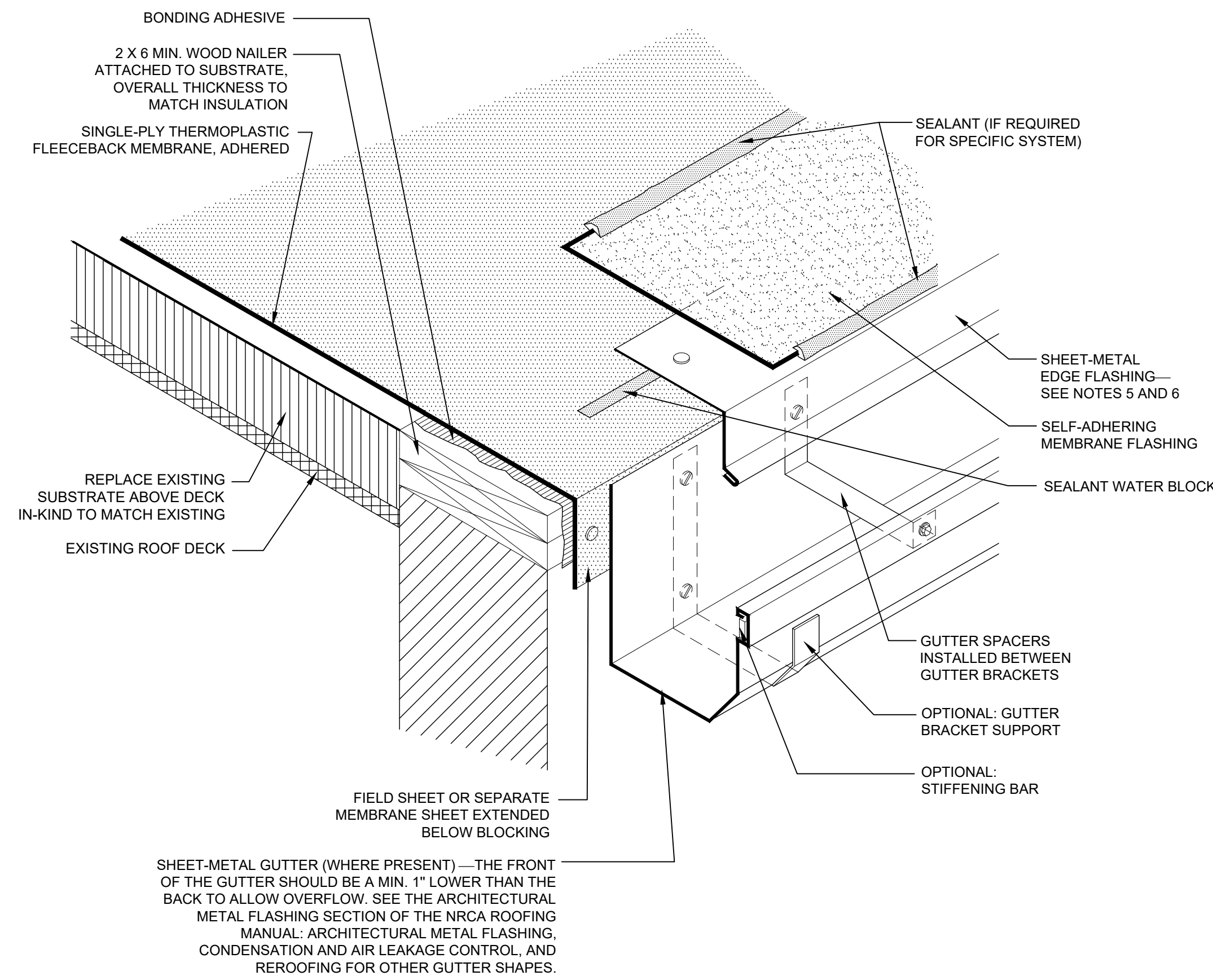
2 METAL CURB  
 NOT TO SCALE



NOTES:  
 1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.  
 2. WHERE THE SKYLIGHT, SCUTTLE OR SMOKE VENT FRAME OVERLAPS THE BASE FLASHING AT LEAST 3 INCHES, THE REMOVABLE SHEET-METAL COUNTER FLASHING IS NOT REQUIRED.



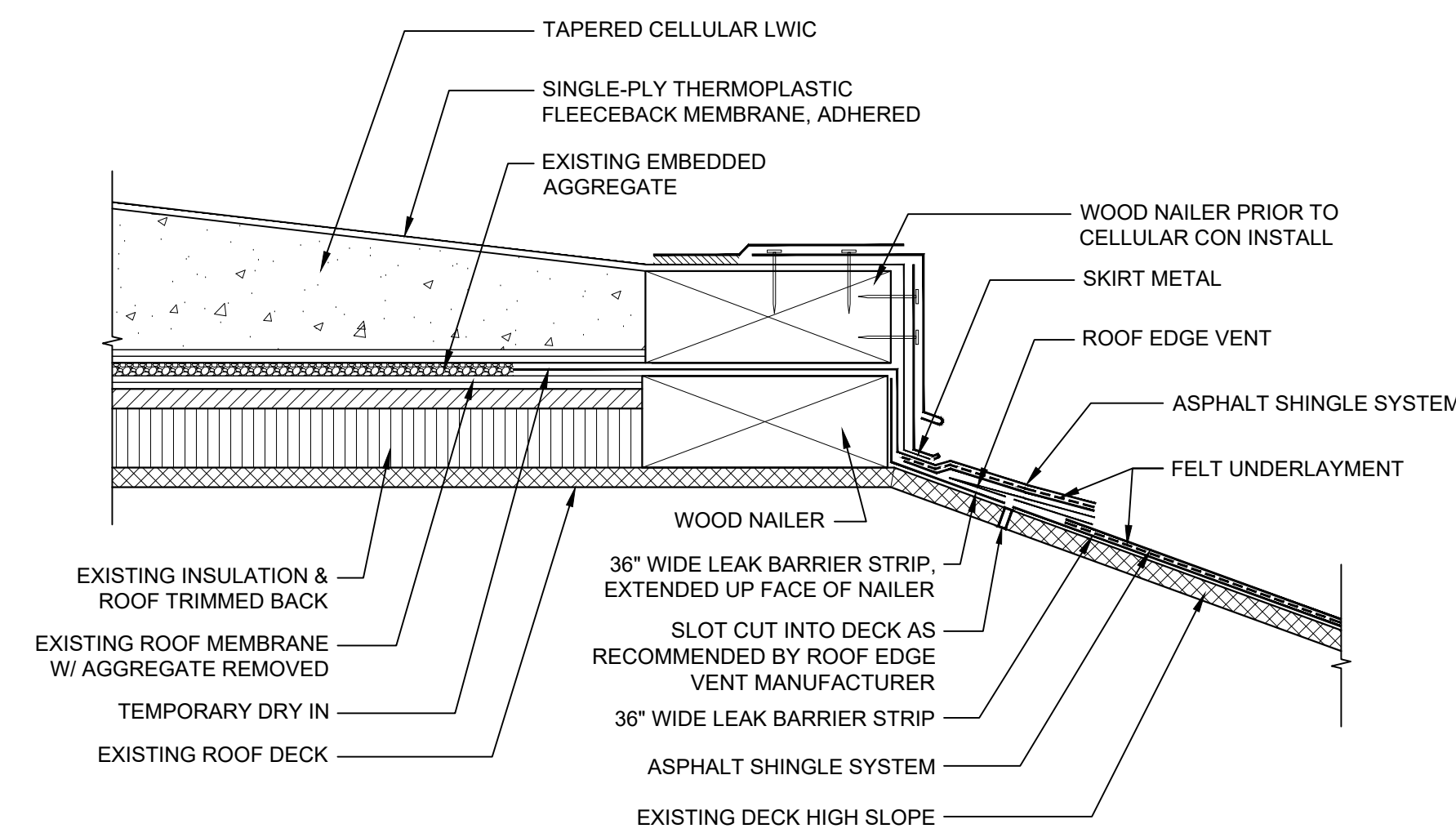
1 WOOD CURB  
 NOT TO SCALE



**NOTES:**

1. IN CLIMATES WHERE THE WINTER TEMPERATURE REMAINS BELOW FREEZING FOR EXTENDED PERIODS OF TIME, NRCA SUGGESTS INTERIOR DRAINS TO DRAIN THE ROOF.
2. GUTTER BRACKETS ARE RECOMMENDED TO BE AT LEAST ONE GAUGE HEAVIER THAN GUTTER STOCK.
3. ON BALLASTED SYSTEMS, A DRAINAGE BAR TO RETAIN BALLAST IS REQUIRED.
4. REFER TO MANUFACTURERS' SPECIFICATIONS FOR SPECIFIC REQUIREMENTS FOR BASE MEMBRANE ATTACHMENT AND PLACEMENT. MECHANICALLY ATTACHED SYSTEMS GENERALLY REQUIRE SPECIFIC ATTACHMENT REQUIREMENTS FOR PERIMETER LOCATIONS.
5. REFER TO THE ARCHITECTURAL METAL FLASHING SECTION OF THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING FOR DESIGN, JOINERY AND SECUREMENT OPTIONS FOR PERIMETER EDGE METAL.
6. REFER TO THE INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.

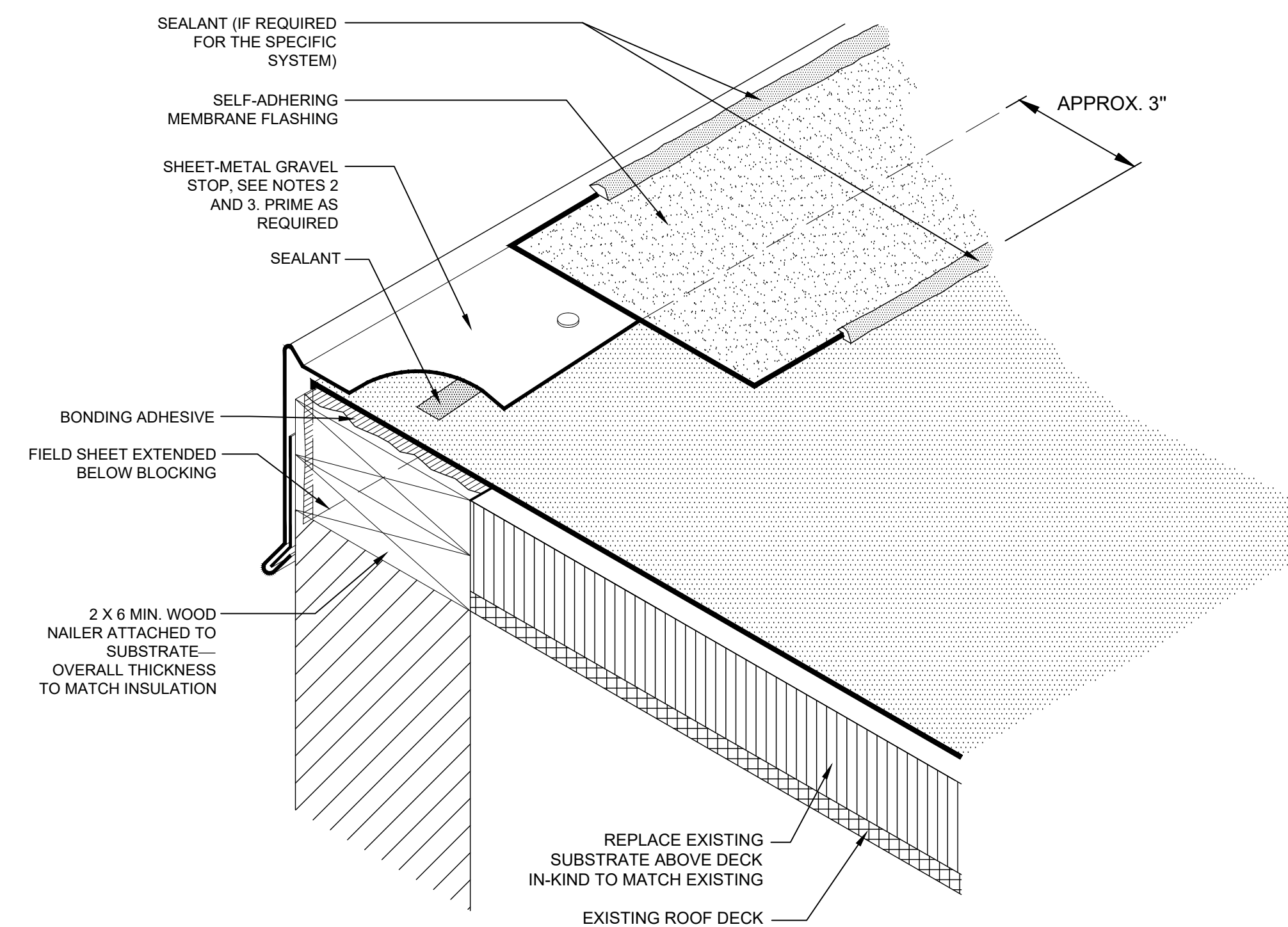
3 PERIMETER EDGE METAL WITH GUTTER (WHERE PRESENT)  
NOT TO SCALE



**NOTES:**

1. REFER TO SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.
2. PLACE VENT THROUGH DECK AS HIGH AS PRACTICAL WITHOUT INTERFERING WITH THE NEW SKIRT METAL.

2 EDGE DETAIL  
NOT TO SCALE



**NOTES:**

1. REFER TO MANUFACTURERS' SPECIFICATIONS FOR SPECIFIC REQUIREMENTS FOR BASE MEMBRANE ATTACHMENT AND PLACEMENT. MECHANICALLY ATTACHED SYSTEMS GENERALLY HAVE SPECIFIC ATTACHMENT REQUIREMENTS FOR PERIMETER LOCATIONS.
2. REFER TO THE ARCHITECTURAL METAL FLASHING SECTION OF THE NRCA ROOFING MANUAL: ARCHITECTURAL METAL FLASHING, CONDENSATION AND AIR LEAKAGE CONTROL, AND REROOFING FOR DESIGN, JOINERY AND SECUREMENT OPTIONS FOR GRAVEL STOPS.
3. REFER TO THE INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.

1 EMBEDDED EDGE METAL  
NOT TO SCALE

3225 SHALLOWFORD ROAD  
SUITE 520  
ATLANTA, GA 30062  
770-565-3016

MERIK SOUTH  
P.O. BOX 1080  
BYRON, GA 31008  
478-954-3971



**GALLOPS SENIOR CENTER  
ROOF PROJECT**  
1212 15TH STREET, COLUMBUS, GA 31901

Project: 24CCGU22RR366  
Drawn: TRM/ Approved: SRG  
Issues:

01/30/2026 Issued for Bid

DETAILS - MISC.

**A305**

## ATTACHMENT B



# TECHNICAL SPECIFICATIONS

FOR THE CONSTRUCTION OF

## POP AUSTIN RECREATION CENTER ROOF PROJECT COLUMBUS, GEORGIA

PROJECT ADDRESS: 1331 ALEXANDER ST, COLUMBUS, GA 31904

OWNER: COLUMBUS CONSOLIDATED GOVERNMENT  
602 11TH AVENUE, BLDG. A  
COLUMBUS, GA 31902-1340

CONSULTANT: MERIK, INC.  
P.O. Box 1060  
BYRON, GA 31008  
MR. JODY USRY  
JUSRY@MERIKINC.COM

MERIK No.: PROJECT No. 24CCGU23RR367

DATE: JANUARY 30, 2026  
(ISSUED FOR BID)

## SECTION 000110 - TABLE OF CONTENTS

### SPECIFICATIONS

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000110	Table of Contents
000115	List of Drawing Sheets
007200	General Conditions
<u>01 00 00</u>	<u>General Requirements</u>
011100	Summary of Work
012300	Price and Payment Procedures
013000	Project Management and Coordination
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017410	Contractor Warranty and Work Forms
<u>02 00 00</u>	<u>Existing Conditions</u>
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024000	Demolition
<u>03 00 00</u>	<u>Concrete</u>
030131	Rehabilitation of Concrete Decks
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<u>06 00 00</u>	<u>Wood, Plastics and Composites</u>
061000	Rough Carpentry
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076000	Flashing and Sheet Metal
079200	Sealants and Caulking
<u>09 00 00</u>	<u>Finishes</u>
099100	Exterior Painting
<u>10 00 00</u>	<u>Specialties</u>
108213	Equipment Screens

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See Section 000115

**SECTION 000115 – LIST OF DRAWING SHEETS**

DRAWINGS

A000	Cover Sheet
A001	Project Information
A100	Roof Plan
A150	Wind Uplift Plan
A300	Details - Typical
A301	Details – Perimeter and Drainage
A302	Details – Penetrations
A303	Details – Misc.

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract and other Division 01-48 Specification Sections, and drawing diagrams apply to this Section.

1.02 INTENT AND INTERPRETATION OF THE CONTRACT DOCUMENTS

- A. The intent of these specifications is to describe the materials and methods of construction required for the performance of the work.
- B. Where discrepancies exist in the contract documents, the more stringent requirement shall apply. Refer to contract documents for appropriate procedure to obtain clarifications.

1.03 DEFINITIONS

- A. The term "Owner" is Columbus Consolidated Government and includes the Owners' authorized representative.
- B. The terms "Consultant" and "Owners Representative" refer to Merik, Inc.
- C. The term "Contractor" as used herein shall apply to the Proposer awarded a Contract to provide Work for this project. The term "Contractor" refers to the Contractor or the Contractors authorized representative for the project.
- D. The "Contract" is the entire agreement between the Owner and Contractor which consists of the Contract Documents. The Contract only includes the Owner and the Contractor and can only be changed by written Change Order signed by both parties.
- E. The term "Contract Documents" refers to the written construction contract or proposal, any required bonds, specific conditions of the contract, project Specifications, project Drawings, contract Change Orders, Owner accepted unit prices, and Owner accepted alternates.
- F. The term "Defective Work" refers to materials or products that do not meet the specific requirements of the Contract Documents including their installation and performance.
- G. The term "Project" is the entire body of work identified by the Contract Documents.
- H. The term "Project Manual" identifies all written Contract Documents provided by the Owner and Consultant to be used by the contractor to perform the Work of this Project.
- I. The term "Specifications" identifies the portion of the Contract Documents that identify, in writing, the standards of quality and performance for the products, materials, systems, and workmanship required to meet the Contract requirements for the Work of this project.
- J. The term "Work" identifies the activities required by the Contract Documents for the Project. This includes all labor, materials, equipment, and other items and services needed by the Contractor to meet the requirements of the Contract for the Project.

1.04 OWNER REPRESENTATIVE STATUS

- A. The Owner's Representative shall have general Rights of Inspection of the work and is the agent of the Owner in all matters pertaining to the work as provided in the Contract Documents.
  - B. The Owner's Representative has the authority to stop work whenever such stoppage may be necessary to ensure the proper execution of the contract and shall have authority to reject any and all materials, whether worked or unworked, if such materials are not in accordance with the plans and specifications.
- 1.05 VERIFICATION OF DIMENSIONS AND ELEVATIONS
- A. Dimensions and elevations indicated on the drawings in reference to existing structures or utilities are the best available data obtainable but are not guaranteed by the Owner's Representative and the Owner's Representative will not be responsible for their accuracy.
  - B. Before proposing on any work dependent upon the data involved, the Contractor shall field check and verify all dimensions, grades, lines, levels or other conditions of limitations at the site to avoid construction errors.
  - C. If any work is performed by the Contractor or any of his/her sub-contractors prior to adequate verification or applicable data, any resulting extra cost for adjustment of work as required to conform to existing limitations, shall be assumed by the Contractor without reimbursement or compensation by the Owner.
- 1.06 RESPONSIBILITY FOR MEASUREMENTS AND QUANTITIES
- A. The bidding Contractor shall be solely responsible for all accuracy of all measurements and for estimating the material quantities required to satisfy these specifications.
- 1.07 PROTECTION
- A. The Contractor shall use every available precaution to provide for the safety of property Owner, visitors to the site, and all connected with the work under the specification.
  - B. Existing facilities shall remain operating during the period of construction. All access roadways must remain open to traffic unless otherwise permitted.
  - C. In those areas where fluid or liquid materials will be raised to the roof area, a protective covering shall be placed from the base of the wall extending up and over the top edge of the roof. This coverage shall be wide enough to assure that the exterior walls do not become stained or soiled during roofing operations.
  - D. Barricades shall be erected to fence off all construction areas from operations personnel.
- 1.08 HOUSEKEEPING
- A. Keep materials neat and orderly.
  - B. Remove scrap, waste and debris from project area.
- 1.09 CONDITION OF SITE
- A. The bidders shall visit the site before submitting their bids and determine the field conditions affecting their work. In considering the bids, the Owner will assume that the

bidders are aware of all items, pertinent to their work and have made allowance for same in their bids.

#### 1.10 INSPECTION

- A. Where the drawings or specifications require the inspection and approval of any work in progress by the Owner's Representative, the Contractor shall give that Representative ample notice to allow for scheduling the inspection, which shall be made promptly to avoid delay of work. If work has progressed without the required inspections or approval by the Representative, it shall be uncovered for inspection at the Contractor's expense.
- B. Uncovering of work not originally inspected, or uncovering questioned work may be ordered by the Owner's Representative and it shall be done by the Contractor. If examination proves such work to be incorrectly done or not done in accordance with the plans and specifications, the Contractor shall bear all cost of the reexamination. If the work is proven correctly installed, all such expense shall be borne by the Owner.
- C. The roofing contractor shall notify building Owner, in writing of any defects in the substrate, and work shall not proceed until defects have been corrected.
- D. Do not install new roofing until all unsatisfactory conditions are corrected. Beginning work constitutes acceptance of conditions.
- E. Check projections, curbs, and substrates for inadequate anchorage, foreign material, moisture, or unevenness that would prevent quality and execution of new roofing system.
- F. Start of work by the roofing contractor shall imply approval of substrates and site conditions; and no claim in this respect will be considered valid in case of failure of the roofing components within the guarantee period.
- G. In the event that such core cuts disclose any deficiency in materials, or soundness of construction, the Contractor shall, at his/her own expense, apply additional materials or otherwise correct the deficiencies to the satisfaction of the Owner's Representative.
- H. Noncompliance with the terms of this specification and ensuing contract can result in either the cancellation of the contract, or complete replacement of the defective areas at the Contractor's expense. In the event of cancellation, the Owner will not be obligated to compensate the Contractor for any work undertaken in a defective manner.
- I. Damages caused by water infiltration resulting from the failure of the Contractor to secure each day's work in a weather tight manner, will be corrected at the Contractor's expense. Included as damages will be all labor costs incurred by the Owner as a result of such water infiltration.
- J. The Owner will require the Owner's Representative to examine the work in progress, as well as upon completion, in order to ascertain the extent to which the materials and procedures conform to the requirements of these specifications and to the published instructions of the Manufacturer.
- K. The authorized Owner's Representative shall be responsible for:
  - 1. Keeping the Owner informed on a periodic basis as to the progress and quality of the work;

2. Calling to the attention of the Contractor those matters he/she considers to be in violation of the contract requirements;
  3. Reporting to the Owner any failure or refusal of the Contractor to correct unacceptable practices;
  4. Conducting preliminary and subsequent job-site meetings with the Contractor's official job representative;
  5. Rendering any other inspection services which the Owner may designate; and
  6. Certifying, after completion of the work, the extent to which the Contractor has complied with these specifications as well as to the published instructions of the Manufacturing Company.
- L. The presence and activities of the Owner's Representative shall in no way relieve the Contractor of his/her contractual responsibilities.

#### 1.11 SAFETY PRECAUTIONS

- A. All Owners' safety rules shall be adhered to in the execution of this work. Adequate protection shall be provided, to prevent burns and skin irritation, in accordance with safety requirements.
- B. Safety Requirements
1. TORCHES OR ANY TYPE OF OPEN FLAME IS NOT PERMITTED ON THIS PROJECT.
  2. All application, material handling, and associated equipment shall conform to and be operated in conformance with OSHA safety requirements.
  3. Comply with federal, state, local and Owner fire and safety requirements.
  4. Advise Owner whenever work is expected to be hazardous to Owner's employees and/or operations.
  5. Maintain proper fire extinguisher within easy access whenever power tools are being used.
  6. ALL SAFETY REQUIREMENTS OF THE OWNER MUST BE FOLLOWED. NO EXCEPTIONS WILL BE PERMITTED. SAFETY ORIENTATION MEETING REQUIRED PRIOR TO PERFORMING ANY WORK.
  7. THE CONTRACTOR SHALL "HOLD HARMLESS" THE DESIGN PROFESSIONAL AGAINST ANY LITIGATION ARISING FROM ANY ACCIDENTS DURING THE COURSE OF THE CONTRACT.
- C. The Contractor shall be responsible for guarding against fires, and shall provide suitable fire extinguishers conveniently located at the site.
- D. Competent operators shall be in attendance at all times equipment is in use. Materials shall be stored neatly in areas designated by the Owner and dispersed so as to present a minimum fire hazard.
- E. Loads placed on the roof at any point shall not exceed the safe load for which the roof is designed.
- F. Contractor shall conform to requirements as designated by the United States Federal Government (O.S.H.A.). Contractor shall abide by all regulations as outlined in the O.S.H.A. handbook and shall have a handbook on location at all times.

- G. Contractors hereby acknowledged that they and their workers have undergone Safety Training and shall at all times act in compliance with all NRCA recommended safety compliance rules and regulations.
  - H. The Contractor shall properly notify all employees of conditions relating to roof areas with very poor condition and which will be worked on. After such notification, the Contractor must take all necessary precautions to ensure the safety of his/her employees as well as the building personnel.
- 1.12 ROOF TRAFFIC
- A. After work on roof is started, no traffic will be permitted on the roof other than that necessary for the roofing application and inspection.
    - 1. Materials shall not be piled on the roof to the extent that design live loads are exceeded.
- 1.13 PRODUCT DELIVERY, STORAGE, AND HANDLING
- A. Proper storage on or off the site shall be the responsibility of the roofing contractor.
  - B. Refer to the specified requirements of Sections 01-48 of this project manual.
- 1.14 WORK SEQUENCE
- A. Once work is started on a roof or section, it shall continue without undue delay until that section is completed before starting another. The installation of flashings shall follow application of the roofing immediately.
  - B. Coordinate sequence of roofing work with Owner prior to start of work.
- 1.15 MISCELLANEOUS UTILITIES
- A. Electrical power will be furnished by the Owner for small tools only. All connections to the electrical system will be furnished by the Contractor.
  - B. The Owner will furnish potable water. Any connections to the water system shall be the responsibility of the Contractor.
  - C. At the completion of the work, or when the above connections are no longer required, the Contractor shall remove all connections and leave the facilities in a condition at least as satisfactory as prior to the commencement of his/her work.
  - D. The Contractor will provide toilet facilities.
    - 1. The Contractor will be responsible for supplying a portable toilet on the job-site.
    - 2. The Contractor's personnel are not permitted to enter the building without proper authorization from the Owner or Owner's Representative.
- 1.16 SITE SAFETY
- A. The Owner requires the Contractor to take all steps necessary to ensure the safety of people on the project property in areas adjacent to the Contractor's work areas. The safety of all people in or around the project site is expected to be the Contractor's highest priority at all times.
  - B. This includes, but is not limited to the following;
    - 1. Preventing access to the work area.

2. Limiting access to areas adjacent to the work area. Use of safety mechanism such as warning signs, safety cones, safety fences, safety flags, etc.

#### 1.17 CHANGES OR EXTRA WORK

- A. The Owner may, without invalidating the original contract, order such changes or additions as may from time to time be deemed desirable. In so doing, the contract price shall be adjusted, as stated below, with all work being done under the conditions of the original contract except for such adjustments in extension of time as may be acceptable to the Owner. The value of such extra work shall be determined in one of the following ways:
  1. By firm price adjustment.
  2. By cost plus with a guaranteed maximum.
  3. By cost with a fixed fee.
  4. By unit cost.
- B. If agreement is reached that the extra cost shall be handled as per methods 2, 3, or 4, the Contractor shall keep and compile a correct amount of the cost together with such vouchers, etc., as may be necessary to substantiate same for presentation to the Owner.
- C. The Owner's Representative shall have authority to make minor job changes or additions as may be necessary to expedite the job providing such changes do not involve additional material cost.
- D. No major change or addition shall be made except upon receipt by the Contractor of a signed order from the Owner authorizing such a change. No claims for an extra to the contract price shall be valid unless so authorized.

#### 1.18 CORRECTION OF WORK PRIOR TO FINAL PAYMENT

- A. The Contractor shall promptly remove any work that does not meet the requirements of the plans and specifications or is incorrectly installed or otherwise disapproved by the Owner or the Owner's Representative as failing to meet the intent of the plans and specifications. The Contractor shall promptly replace any such work without expense to the Owner and shall bear the cost of making good all work of other contractors, or the Owner, destroyed or damaged by such removal or replacement.

#### 1.19 DEDUCTION FOR UNCORRECTED WORK

- A. If the Owner deems it unacceptable to have the Contractor correct work that has been incorrectly done, a deduction from the contract price shall be agreed upon therefore. Such a deduction from the contract price shall in no way affect the Contractor's responsibility for defects that may occur nor his/her ability for correcting them, and damage caused by them.

#### 1.20 CORRECTION OF WORK AFTER FINAL PAYMENT

- A. The Contractor shall provide the specified warranties for this project in order to address deficiencies in the work of this project after the Owner makes final payment to the Contractor.

#### 1.21 LIENS

- A. The Contractor shall furnish the Owner with a release in full of all liens arising out of this contract or in lieu thereof, and receipts in full for all materials and labor on the job. In either case, the Contractor shall furnish an affidavit that the liens or receipts include all the labor and material for which a lien could be filed. In lieu of the above, the Contractor may at his/her option furnish a bond to indemnify the Owner against all hazards of liens. Neither part nor final payment shall in any way release the Contractor from the above obligation and in the event that part or full payment has been made and any lien remains un-discharged, the Contractor shall refund to the Owner the necessary funds to discharge such a lien including all cost and attorney's fees.

#### 1.22 JOB CONDITIONS

- A. There is NO SMOKING allowed on the project property, and the Contractor shall be responsible for enforcement of this job rule at all times with his/her personnel.
- B. Ladders: Any ladders used on this project must be in good condition. The ladder must also be secured at the roofline at all times while in use. All ladders must be O.S.H.A. approved.
- C. No drugs or alcoholic beverages are permitted on the grounds.
- D. The Contractor shall place necessary barriers and/or protection around or under all work areas where his/her operations involve risk of injury to plant personnel.
- E. The Contractor will also protect the building structure from damage in the process of the job. In the event that damage does occur to any property or equipment, or the Owner's work in process, notification must be made within two (2) working days of the incidents to the Owner and Owner's Representative.
- F. During the progress of the job, if waste material and rubbish are found or damage resulting from the Contractor's operations is found, or the Contractor does not comply with the requirement by keeping the premises free of accumulations and correct the damage, it shall be the Owner's prerogative to hire personnel to do so; and the cost of this work will be deducted from the balance due the Contractor.
- G. The Contractor is responsible for protecting all materials from the elements. If any material becomes wet, it cannot be installed and must be replaced at the Contractor's expense. NOTE: Roofing materials must be covered with waterproof tarps at the end of each workday. Plastic wrappers supplied by the manufacturer are not acceptable substitutes for tarps. The Owner's Representative will reject any covering method or material that does not adequately protect roofing materials.
- H. Anyone guilty of willful destruction or unlawful removal of Owner's property will be dismissed from the job and is subject to prosecution by law.
- I. The Contractor must verify that all materials can be installed to accommodate the building design, governing codes and regulations, and the manufacturer's current recommendations. In the event of a conflict the more stringent shall govern.
- J. The Contractor will ensure that all substrates are clean, dry, sound, smooth, and free of dirt, debris, and other contamination before any materials are supplied.

#### 1.23 WORKMANSHIP

- A. All materials will be securely fastened and placed in a watertight, neat and workmanlike manner. All workmen shall be thoroughly experienced in the particular

class or work upon which they are employed. All work shall be done in accordance with these specifications and shall meet the approval of the Owner or Owner's Representative. The Contractor's representative or job supervisor shall have a complete copy of specifications and drawings on the job-site at all times.

- B. Contractor shall plan and conduct the operations of the work so that each section started on one day is complete and thoroughly protected before the close of work for that day.

#### 1.24 WORK HOURS AND DAYS

- A. When the Contract is awarded, the Contractor will contact the Owner's Representative to arrange the work schedule and the hours of the day that the workers may be on the building.

#### 1.25 COMPLIANCE WITH LAWS

- A. The Contractor shall give notices, pay all fees, permits and comply with all laws, ordinances, rules and regulations bearing on the conduct of work.

#### 1.26 OWNER'S RULES

- A. The Contractor and all his/her personnel/agent(s) shall abide by all rules created by the Owner.
- B. The Contractor must contact the Owner's Representative for specific information regarding the rules governing all operations of the project.

#### 1.27 ANTI-DISCRIMINATION IN EMPLOYMENT

- A. Contractors and subcontractors shall not discriminate against any employees or applicant for employment, to be employed in performance of his/her contract, with respect to his/her hire, tenure, terms, conditions or privileges of employment because of his/her race, color, gender, sexual preference, religion, national origin, or ancestry.

#### 1.28 FINAL INSPECTION

- A. Upon completion of the installation, an inspection shall be made by a representative of the roofing manufacturer to ascertain that the roofing system has been installed according to the roofing system warrantor's published specifications and details. The warranty will be issued upon approval of the installation and payment for all materials and fees.

#### 1.29 ADJUSTMENT AND REPAIR

- A. Any roofing damaged or misapplication shall be repaired or replaced as designated by the building Owner and roofing system warrantor. Repairs or replacement will be made by the contractor at no expense to building Owner.

#### 1.30 DISCREPANCIES AND ADDENDA

- A. Should a Bidder find any discrepancies in the Drawings and Specifications, or should he be in doubt as to their meaning, he/she shall notify the Owner's Representative at once, who will send a written Addendum to all Bidders concerned. Oral instructions or decisions, unless confirmed by Addenda, will not be considered valid, legal or binding.

- B. No extras will be authorized because of the Contractor's failure to include work called for in the Addenda in his/her bid.
- C. It shall be the responsibility of all Bidders to call to the Owner's Representative's attention at the pre bid meeting, any discrepancies which may exist between or with any of the contract documents, or any questions which may arise as to their true meaning.
- D. Modifications to the specifications (if necessary) will be followed by an addendum; no verbal discussions or agreements shall be recognized.

#### 1.31 TERMINATION BY THE OWNER FOR CAUSE

- A. The Owner may terminate the Contract and finish the work by whatever reasonable method he/she deems necessary if the Contractor:
  - 1. Persistently or repeatedly refuses to supply specified materials or to provide enough skilled workers to ensure the project will be completed within the time period indicated on his/her Bid form;
  - 2. Is guilty of substantial breach of any provision of the project documents.

#### 1.32 TAXES

- A. Contractor must comply with all state, federal and local taxes. The Contractor shall accept sole and exclusive responsibility for any and all state and federal taxes with respect to Social Security, unemployment benefits, withholding taxes and sales taxes.

#### 1.33 BUILDING PERMITS

- A. The acquisition of the applicable permits and associated costs to obtain said permits will be the responsibility of the successful Contractor.

#### 1.34 JOB COORDINATION

- A. Contractor is responsible for daily communication with the Owner or Owner's Representative relating to areas of roof work in order that the Owner may adequately protect tenant's personal belongings, and the people themselves against possible damage or injury. Contractor is also responsible for policing and protecting areas involving removal and replacement of roof projections, defective substrates or other work involving substrates penetration.
- B. Seventy-two hours prior to starting of the project and/or delivery of materials, the Contractor shall notify the designated Owner's Representative.

#### 1.35 CLEAN-UP

- A. Accumulated debris shall be removed periodically to assure maximum safety and sanitation at all times. At completion of work, the Contractor shall remove all excess material and debris from the site and leave all roof surfaces free from accumulations of dirt, debris and other extraneous materials. The Contractor shall also remove any and all drippage of fluid materials from the face of the buildings, floor, window, ladders and other finished surfaces.

#### 1.36 SUPERINTENDENT

- A. The Contractor shall keep a competent non-working, English language speaking superintendent, satisfactory to the Owner and Owner's Representative, on the job at

all times when work is in progress. The superintendent shall not be changed without notifying the Owner and the Owner's Representative.

- B. The superintendent shall attend all meetings beginning with the pre-installation meeting.
- C. The superintendent shall represent the Contractor in his/her absence and all directions and instructions given to the superintendent shall be as binding as if given directly to the Contractor.
- D. The superintendent shall be responsible for the conduct of all the Contractor's employees on the premises and shall promptly take necessary measures to correct any abuses called to his/her attention by the Owner.

#### 1.37 ACCEPTABILITY OF COMPLETED WORK

- A. The acceptability of completed roofing work will be based on its conformance to the contract requirement.
- B. The Owner and Owner's rep are not obligated to accept non-conforming work, and such non-conforming work may be rejected.
  - 1. The rejected work shall be promptly replaced or corrected in a manner and by methods approved by the Owner's rep at the Contractor's expense.
- C. The Owner's rep will instruct the Contractor's foreman and work crew on the proper methods of installation of the roofing system, and will follow-up on a regular basis to inspect the work being done.
- D. Any deficiencies from the specified work noted by the Owner's rep will be immediately reported to the Owner, along with recommended corrective actions necessary.
- E. The Owner's rep will not act in a supervisory capacity, and will not be responsible for the Contractor's errors or omissions.

END OF SECTION

## PART 1 - GENERAL

### 1.1 DESCRIPTION OF WORK

- A. Extent of Work: The Work includes reroofing and related repairs throughout all low-slope roof areas of the facility.
- B. Base Bid: The work consists of removal and replacement of localized wet existing modified bitumen roof system materials, preparation of the existing modified bitumen roof surface, and installation of a new fully-adhered TPO fleeceback roof system fully-adhered to the prepared existing modified bitumen roof surface as specified. The base bid includes additional miscellaneous scope of work items including installation of perimeter coping/factory edge metal, installation of mechanical equipment screen wall, installation of sealants, and replacement of sheet metal scuppers, conductor heads, gutters and downspouts.
  - 1. Section 022529 - Existing Roof System Moisture Assessment
  - 2. Section 024000 - Demolition
  - 3. Section 030131 - Rehabilitation of Concrete Decks
  - 4. Section 030150 - Rehabilitation of Cementitious Wood Fiber Decks
  - 5. Section 075423 – TPO Thermoplastic Roofing (incl. KEE Alternate)
  - 6. Section 076000 - Flashing and Sheet Metal
  - 7. Section 079200 – Sealants and Caulking
  - 8. Section 099100 – Exterior Painting
  - 9. Section 108213 – Equipment Screens
- C. Alternate Bid: Refer to Section 012300.
- D. Applicable standards and code requirements
  - 1. IBC – International Building Code, with Georgia Amendments
  - 2. IECC – International Energy Conservation Code
  - 3. OSHA – Occupational Safety and Health Administration
  - 4. ASTM – ASTM International (formerly American Society for Testing and Materials)
  - 5. ANSI – American National Standards Institute
  - 6. SMACNA – Sheet Metal Air Conditioning Contractors National Association, Inc.
  - 7. NRCA – National Roofing Contractors Association

### 1.2 RELATED SECTIONS

- A. Section 007200 – General Conditions

- B. Section 012300 - Price and Payment Procedures
  - C. Section 013000 – Project Management and Coordination
  - D. Section 017000 – Contract Closeout
  - E. Section 017410 – Contractor Warranty
- 1.3 CONTRACTOR QUALIFICATIONS: Prior to contract award, the apparent low bidder shall furnish proof that he meets the following qualifications:
- A. The Contractor shall have been in business under the present company name for a minimum of five (5) years and shall NOT have been judged in default on construction contract within that time. Contractor shall be licensed to do business in the State of Georgia.
  - B. The Contractor and/or sub-contractor(s) shall have completed at least three (3) projects of similar scope, size, and complexity. These projects shall be governmental, institutional, or commercial work (NOT Residential) involving reroofing and sheet metal work.
  - C. The Contractor's Superintendent shall have at least five (5) years experience as Superintendent on projects of similar scope and complexity as this project and shall have been the Superintendent on at least one facility that includes work comparable to this project. Contractor's Foreman shall be present at the pre-construction meeting and shall be present FULL TIME at the job site for the duration of the project.
  - D. Any sub-contractor for the work as described above shall meet these same qualifications. The apparent low bidder shall submit a list of qualified sub-contractors with proof of insurance certificates and copy of their respective commercial license within 10 calendar days of written Notice to Proceed.
  - E. The Contractor and all sub-contractors shall pay all sales; consumer, use and other similar taxes required by law and shall pay any state, municipal and/or county business taxes, if any, as well as applicable municipal, county or other Authority Having Jurisdiction (AHJ) permit fees.
- 1.4 QUALITY ASSURANCE
- A. Roof System shall be UL Class A listed and meet the wind uplift requirements of ASCE-7 and FM 1-90.
  - B. The Contractor shall obtain permits as required in the construction of the specified scope of work. The Contractor shall obtain review of the construction drawings by a licensed Architect or Design Professional when required by State authorities.
  - C. Pre-construction conference: Prior to the start of work, a conference to be attended by all affected parties shall be held at the jobsite with the intent of coordinating activities to minimize disruptions to the building tenants. The Superintendent, roofing foreman and sheet metal foreman shall be present.
    - 1. The conference will not be held unless the Superintendent and Foremen are present. If the installation Superintendent and Foremen are different from those who attended the preconstruction conference, a new preconstruction conference will be held prior to the start of work. The cost for each additional conference is \$2,000 and shall be paid by the Contractor via deductive change order.
  - D. Inspection: Upon completion of the installation, an inspection shall be made by the Owner's representative to ascertain that the materials have been installed according to approved specifications and details. The inspection shall be scheduled only after receipt, by the Design Professional, of the Contractor's completed punch list. Upon approval of the project, the required warranties shall be issued.

Work judged unsatisfactory requiring a second final inspection shall be charged to the Contractor at \$2,000 per inspection.

1.5 WARRANTY

- A. Refer to Section 017410.

1.6 SITE CONDITIONS

- A. Tear off, disruptive noises and use of solvented adhesives shall not interfere with use of the building.

1.7 DEFINITIONS

- A. Contractor is the business entity providing all labor, materials, equipment, and services to complete the Work as specified in the Contract Documents.
- B. Ponding water shall be considered to occur when free water remains on the roof longer than 48 hours.

1.8 BASE BID SCOPE OF WORK

A. General

1. The Contractor shall provide a written disaster relief plan designating their agent for emergency response management. The responder will be a company operating in good standing with the State of Georgia DOAS. Refer to Section 013000 Part 1.
2. Contractor shall be responsible for protecting the existing adjacent roof areas that are trafficked over for executing this work.
3. Provide protection for interior spaces below work areas and ensure roof work, penetrations, fasteners, etc. do not damage existing ceiling fixtures, finishes and other appurtenances.

B. Section 022529 – Existing Roof System Moisture Assessment

1. Provide third-party moisture survey of all low slope bituminous roof sections.

C. Section 024000 - Demolition

1. Remove loose granules and other materials and residues not acceptable for adhesion of new roofing and prepare the surface of all existing low-slope modified bitumen roof for installation of the new roof system.
2. Remove existing wet roofing materials based on moisture survey.
  - a. Where exposed, inspect existing concrete deck; replace defective decking on a unit cost basis.
  - b. Where exposed, inspect existing cementitious fiber deck; replace defective decking on a unit cost basis.
3. Remove the existing sheet metal perimeter, drainage and penetration flashings, including copings, expansion joint caps, counter flashings, pitch pans, metal edge, scuppers, conductor heads, gutters and downspouts, etc.
4. Inspect and remove existing damaged blocking and nailers at gutters, roof edges, equipment, or other locations.

5. Remove existing roof accessories, including expansion joint membranes and flashings, ridge caps, multi-port HVAC penetrations, etc.
  6. Adjust conduits, curbs, stacks, gas piping, etc. as necessary to accommodate new roofing elevations.
- D. Section 061000 – Rough Carpentry
1. Install new wood nailers equal in thickness to the height of the new roof system.
  2. Raise curbs to a height 8 inches above the finished roof height.
  3. Install wood nailers as required on the top of parapet walls to receive sheet metal coping/edge metal.
  4. Install replacement wood nailers and blocking at damaged areas.
  5. Install plywood substrate for boxed-in existing duct work at walls above low roof.
- E. Section 075423 – TPO Thermoplastic Membrane Roofing (incl. KEE Alternate)
1. Abate wet thermal insulation and roofing at all wet areas as indicated on Section 02 2529. Match existing materials and comply with new roof system manufacturer requirements.
  2. Prepare all substrates for new roof membrane system installation, in accordance with new membrane manufacturer technical recommendations for specified warranty, including but not limited to removal of loose mineral granules and other materials and residues not acceptable for adhesion of new thermoplastic membrane roofing system.
  3. Provide any warranting manufacturer required third party pull testing in accordance with thermoplastic membrane roofing system specified requirements.
  4. Install standard color, fully-adhered, 115 mil TPO fleeceback thermoplastic roof membrane and all membrane flashings and accessories as specified and shown in the construction drawings and specified herein.
    - a. Alternate: Install standard color, fully-adhered, 105 mil KEE fleeceback thermoplastic roof membrane and all membrane flashings and accessories as specified and shown in the construction drawings and specified herein.
  5. Install new roof membrane curb flashings, base flashings, and penetration flashings; paint any flashings and accessories not available in custom color to match field sheet.
  6. Install liquid-applied flashings/custom flashings at low flashing height conditions per roofing manufacturer requirements as required for warranty coverage.
  7. Picture frame motorized RTUs with roofing manufacturer's premium walkway/protection pad. Install walkway protection pad at roof access points, at the base of roof ladders, roof hatches, and downspout discharges. Provide protection pad between roof access points and other access points, ladders, and motorized RTUs to provide continuous pathway.
  8. At existing sheet metal HVAC ducts embedded in the precast concrete panel walls, box in existing duct openings with plywood sealed watertight around the openings and install roof membrane wall flashings over plywood, terminated per roofing manufacturer requirements and provided with new prefinished sheet metal skirt counterflashing shingle-lapped and sealed below

existing sheet metal flashing. At existing sheet metal flashings to remain, install silicone sealant at all metal-to-metal and metal-to-concrete joints.

9. Roof drains and subsurface downspout discharge locations:
  - a. Inspect and water test all roof drains and subsurface downspout discharge to remain to confirm they are watertight and functioning properly (notify Owner's representative of any damaged or improperly functioning drainage features prior to roofing those areas).
  - b. Inspect and secure drain bodies, boots and couplings below the deck as required.
10. At existing internally piped roof drains reuse existing drains, clean drain bowl and clamping rings, and replace missing or damaged hardware as required, or install retrofit roof drains at existing drain locations (Contractor's Option).
11. Replace sheet metal perimeter, drainage, and flashing components, including copings, metal edge, counterflashings, trim, gutters downspouts and conductor heads, etc. Refer to Section 076000.
12. Coordinate and flash new replacement HVAC unit with Owner's HVAC contractor.
  - a. All HVAC and related piping work shall be performed by a third-party mechanical contractor licensed by the State for non-restricted commercial work.
13. Install new tapered polyisocyanurate insulation at crickets and saddles between drainage points, sumps, and at up-slope side of rooftop equipment. Overbuild existing crickets and saddles to provide additional slope. Sump through-wall scuppers with three-sided tapered edge application.

F. Section 076000 - Flashing and Sheet Metal

1. General: Sheet metal expansion joint covers, copings, edge metal, counter flashing, pitch pans, scupper sleeves, gutters/downspouts, throughwall flashings, etc. shall be fabricated as specified and shown in the construction drawings and per SMACNA requirements otherwise, and where applicable, meet ANSI/SPRI requirements.
2. Install perimeter and penetration sheet metal flashing materials.
3. Replace sheet metal copings, edge metal, counterflashing and trim.
4. At counterflashing conditions, provide two-piece counterflashing consisting of pre-finished sheet metal receiver with lower pre-finished sheet metal counterflashing skirt attached to the receiver.
5. Provide new membrane-clad through-parapet open-top scuppers at high roof, lapped by parapet copings and terminated at the face with sheet metal face plate, caulked watertight to the wall panels with silicone sealant.
6. Provide watertight sheet metal rain collars over pitch pockets/pitch pans.
7. Install pillow block supports under conduit, gas, pipe and condensate lines.
8. Plumb condensate lines to nearest drain, gutter, throughwall-scupper or downspout leader, or off the building at a location approved by the Owner.
9. At sheet metal copings and edge metal provide continuous, watertight underlayment consisting of roof flashing membrane.
10. Provide pre-fabricated side entry portal covers for HVAC line hoods at existing HVAC/condensing units, with concrete pad over roofing protection course under units.

11. Replace sheet metal gutter and downspouts at locations indicated on the drawings and specified herein. Provide prefinished sheet metal gutter and downspouts sized one-inch larger than existing, with two downspouts per gutter with separate leaders and discharges at grade (maximum downspout elbow angle 75 degrees). Provide concrete splashblocks at downspout discharge locations.

G. Section 079200 - Sealants and Caulking

1. Install the specified sealant at locations indicated on the construction drawings and as specified herein.
2. Seal exposed non-gasketed fasteners, rivets, and other wall or flashing penetrations and fasteners above the roofing.
3. Install pre-formed silicone seals at terminations of sheet metal copings that abut other components.
4. Recaulk precast concrete panel joints above roofs with silicone sealant.
5. Recaulk window and wall penetrations above roofs with silicone sealant and wet-seal window metal-to-metal and metal -to-glass joints with silicone sealant.

H. Section 099100 – Exterior Painting

1. Prep, prime and paint steel components within the roof work areas, including equipment supports, roof hatch frames and covers, steel vent/stacks, curb covers, etc.
2. Repaint fixtures, fasteners, tie-backs and other metal items above the roof areas and attached to the roof structure that are presently painted; repaint downspout boots at grade.

I. Section 108213 – Equipment Screens

1. Remove and dispose of existing HVAC screen wall and mounts.
2. Replace screen wall with specified unit-mounted screen wall.

PART 2 - PRODUCTS

2.1 APPROVED PRODUCTS

- A. Subject to compliance with the specified requirements, products of the following manufacturers are approved.

B. Section 075423 - TPO Thermoplastic Roofing (incl. KEE Alternate)

1. Carlisle Syntec, PO Box 7000, Carlisle, PA 17013, Tel. 800-479-6832, [www.carlisesyntec.com](http://www.carlisesyntec.com)
2. Siplast; 1000 Rochelle Blvd., Irving TX 75062, +1 (469) 995-2200, 1.800.922.8800 [www.siplast.com](http://www.siplast.com)
3. Johns Manville Corporation, PO Box 5108, Denver, CO 80217, Tel 303-978-2000

4. GAF Materials Corporation, 1361 Alps Road, Wayne, NJ 07470, Tel. 800-766-3411, [www.gaf.com](http://www.gaf.com)
5. Elevate (formerly Firestone Building Products), 250 West 96th Street, Indianapolis, IN, 46260, Tel. 800-428-4442

C. Section 076000 – Flashing and Sheet Metal

1. Expansion joint covers, copings, counter flashing, pitch pans, scupper sleeves, gutters/downspouts, throughwall flashings, etc. shall be fabricated as specified and shown in the construction drawings and per SMACNA requirements otherwise, and where applicable, meet ANSI/SPRI requirements.

D. Section 079200 – Sealants and Caulking

1. Sika/Master Builders Solutions, Inc., 201 Polito Avenue, Lyndhurst, NJ, 07071 Tel: 201-933-8800, fax: 201-804-1076.
2. Tremco, Inc., 3735 Green Road Beachwood, OH 44122, Tel: 216-292-5000, fax: 216-766-5543.
3. GE / Momentive Performance Materials, 260 Hudson River Road Waterford, NY 12188. Web Site [www.siliconeforbuilding.com](http://www.siliconeforbuilding.com)
4. Dow Silicones Corporation, Corporate Center, 2200 W. Salzburg Rd., PO Box 994 Auburn MI 48611, Tel. 800-248-2481 [www.dowcorning.com](http://www.dowcorning.com)
5. Pecora Corporation, 165 Wambold Road, Harleysville, PA 19438, Tel. 800-523-6688, [www.pecora.com](http://www.pecora.com)

E. Section 099100 – Exterior Painting

1. Benjamin Moore & Company, 101 Paragon Drive, Montvale, NJ 07645 Tel: 201-573-9600 Fax: 201-573-9046, [www.benjaminmoore.com](http://www.benjaminmoore.com)
2. PPG Architectural Coatings, One PPG Place, Pittsburgh PA 15272, [www.ppgac.com](http://www.ppgac.com), (800) 441-9695.
3. Sherwin Williams Company, 101 Prospect Avenue, Cleveland, OH 44115, Tel. 800-524-5979, [www.sherwin-williams.com](http://www.sherwin-williams.com) .

PART 3 - EXECUTION – NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Base Bid scope of work
- B. Alternate bid scope of work
- C. Unit Prices and Allowances
- D. Verification of Unit Price and Allowance Work
- E. Pay request submittals

1.02 RELATED SECTIONS

- A. PROPOSAL FORM
- B. Section 011100 - SUMMARY OF WORK
- C. Section 013000 - PROJECT MANAGEMENT AND COORDINATION
- D. Section 017000 - CONTRACT CLOSEOUT: Contract warranties, bonds, manufacturer's certificates, and closeout submittals

1.03 BASE BID

- A. As specified in Section 011100.

1.04 ALTERNATES

- A. Alternate No. 1 –: Install fully-adhered KEE fleeceback thermoplastic roof membrane in lieu of TPO fleeceback membrane.
  - 1. Description: At upper and lower low-slope roof areas, Install standard color, fully-adhered, 105 mil KEE fleeceback thermoplastic roof membrane and all membrane flashings and accessories as specified and shown in the construction drawings and specified herein in lieu of 115 mil TPO fleeceback membrane.
  - 2. Quote as a lump sum dollar amount for the additive work.
  - 3. Work for this Alternate shall be performed in accordance with the requirements of these Technical Specifications and other Contract Documents.
  - 4. Contractor to determine need for additional work in conjunction with this Alternate and include in the Alternate price.

1.05 UNIT PRICES

- A. Unit Price No. 1 – Replacement of Existing Wood Blocking and/or Nailers
  - 1. Description: Removal and replacement of deteriorated and/or damaged wood blocking and/or nailers; refer to Section 024000 Demolition and 061000 Rough Carpentry.
  - 2. Unit of Measurement: Price per board foot (BF) of blocking and/or nailers based on board feet of blocking and/or nailers removed.
  - 3. Work for this Unit Price shall be performed in accordance with the requirements of these Technical Specifications and other Contract Documents.

4. Contractor to determine need for additional work in conjunction with this Unit Price and include in the Unit Price.
- B. Unit Price No. 2 – Rehabilitation of Concrete Deck
1. Description: Structural concrete repair material where deck requires replacement due to deterioration and/or damage, as required, according to Section 03 0130 - Rehabilitation of Concrete Decks.
  2. Unit of Measurement: Cost per square foot (SF) of deck based on survey of existing deck removed.
  3. Work for this unit price shall be performed in accordance with the requirements of these Specifications and other Contract Documents.
  4. Contractor to determine need for additional work in conjunction with this unit price and include in the Unit Price.
- C. Unit Price No. 3 – Rehabilitation of Existing Cementitious Wood Fiber Deck
1. Description: Structural cementitious repair material where deck requires replacement due to deterioration and/or damage, as required, according to Section 03 0150, Rehabilitation Of Cementitious Wood Fiber Decks.
  2. Unit of Measurement: Cost per square foot (SF) of deck based on total of existing deck rehabilitated.
  3. Work for this unit price shall be performed in accordance with the requirements of these Specifications and other Contract Documents.
  4. Contractor to determine need for additional work in conjunction with this unit price and include in the Unit Price.
- D. Unit Price No. 4 – Additional Wet Roof Material Removal and Replacement without cricketing on **Lower** roof areas
1. Description: Removal and replacement of existing roof system materials due to deterioration, wetness and/or damage, as needed. Refer to Section 02 2529 - Existing Roof System Moisture Assessment for additional requirements.
  2. Unit of Measurement: Cost per square foot (SF) of roofing materials based on quantity of existing roofing materials removed.
  3. Work for this unit price shall be performed in accordance with the requirements of these Specifications and other Contract Documents.
  4. Contractor to determine need for additional work in conjunction with this unit price and include in the Unit Price.
- E. Unit Price No. 5 – Additional Wet Roof Material Removal and Replacement without cricketing on **Upper** roof areas
1. Description: Removal and replacement of existing roof system materials due to deterioration, wetness and/or damage, as needed. Refer to Section 02 2529 - Existing Roof System Moisture Assessment for additional requirements.
  2. Unit of Measurement: Cost per square foot (SF) of roofing materials based on quantity of existing roofing materials removed.
  3. Work for this unit price shall be performed in accordance with the requirements of these Specifications and other Contract Documents.
  4. Contractor to determine need for additional work in conjunction with this unit price and include in the Unit Price.
- F. A Change Order or Construction Directive is required to proceed with work to be compensated at unit prices. The Contractor shall have the quantity of work verified throughout the project. Only work that is

verified by the Owners Rep, Design Professional or the Construction Observer is to be listed on Change Orders. The Contractor shall have unit price items laid out in an organized manner for verification and shall show the locations of work on construction drawings included in the project manual.

1.06 ALLOWANCES

A. N/A

1.07 VERIFICATION OF UNIT PRICE AND ALLOWANCE WORK

A. The Contractor shall follow the procedure outlined for submittal of the items and quantities of work.

1. A daily log shall be completed showing each item of unit price and allowance work. Notation shall be made each day whether work was done or not.
2. Photographs shall be taken of each item of work documenting the specific item being repaired or replaced. For example, two wood nailers being replaced will be documented by two photographs.
3. The location of each item of work will be indicated on a construction drawing. At the Owner's request, the Contractor will deconstruct the work to allow the Design Professional to verify the work by visual inspection. The Contractor will be compensated for the cost of verification when the work has been observed to have been correctly completed. Work not verified to be correctly completed will be corrected at no cost to the Owner.
4. The records will be delivered to the Design Professional by the close of business each week.

1.08 PAY REQUEST SUBMITTALS

A. The Contractor shall submit each pay application using the AIA G702 unless directed otherwise by the Owner.

B. The Contractor shall include all submittal items required by the Owner with each application for progress payments. The list of required items shall be discussed during the preconstruction meeting. Typical items include:

1. Construction Schedule revised to the current period.
2. Payment application form required by the Owner.
3. Continuation Sheet showing the elements of the Work and the amount of completion.
4. Unit Price and Allowance work showing the item, quantity and location on the project manual construction drawing, revised to the current period.
5. Affidavits as required.

C. All sums received by the Contractor for any part or parts of the work furnished or performed by a Subcontractor shall be paid promptly to the latter by Contractor and while in the hands of the Contractor shall constitute trust funds held for the use and benefit of Owner. Contractor shall

submit with payment requests lien releases from material suppliers which state that suppliers have been paid for materials supplied to the project. Payment requests may be delayed if not received in a timely manner.

- D. If payments are to be made on account of materials or equipment not incorporated in the work, but delivered and suitably stored at the Site, or at such other location agreed upon in writing, such payments shall be conditioned upon submission by Contractor of bills of sale or other documents satisfactory to the Owner establishing Owner's title to such materials or equipment or otherwise protecting Owner's interest therein, including the prepayment of applicable insurance and transportation to the Site.
- E. Final payment of retainage shall not be made by the Owner until all subcontractor invoices are paid by the Contractor.

PART 2 – PRODUCTS

2.01 NOT USED

PART 3 – EXECUTION

3.01 NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Submittal procedures
- B. Construction progress schedules
- C. Proposed products list
- D. Shop drawings
- E. Product data
- F. Samples
- G. Manufacturer's installation instructions
- H. Manufacturer's certificates
- I. Schedule of values
- J. Definitions
- K. Periodic jobsite management meetings
- L. Use of the premises.
- M. Temporary facilities and controls
- N. Contractor project supervision
- O. Emergency Leak Response
- P. Correction of Observed Deficiencies
- Q. Storage and Protection
- R. Testing
- S. Experience Modification Factor
- T. Hazardous Waste Removal Records.

1.02 RELATED SECTIONS

- A. Section 017000 - Contract Closeout: Contract warranties, bonds, manufacturer's certificates, asbestos disposal and closeout submittals

1.03 SUBMITTALS

- A. General
  - 1. Refer to the Bid Form for items to be included as bid submittals. Failure to follow the Owner's requirements may result in the bid being termed non-responsive.

2. Preconstruction submittals shall be made in PDF electronic format. The Contractor will include all submittal items in a single transmittal unless otherwise approved by the Design Professional. Individual cut sheets will be combined into one pdf document. The pdf shall be in an editable form to allow the Design Professional's approval and comments.
  3. Close-out submittal documents shall be as described in Section 017000 and the preconstruction minutes. The closeout procedure shall comply with the Owner's requirements.
- B. Transmit each submittal with a transmittal form. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
  - C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate.
  - D. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
  - E. Schedule submittals to expedite the Project, and deliver to the Design Professional. Coordinate submission of related items.
  - F. For each submittal for review, allow 10 working days excluding delivery time to and from the Contractor.
  - G. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
  - H. Provide space for Contractor and Design Professional review stamps.
  - I. Revise and resubmit, identify all changes made since previous submission.
  - J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with provisions.
  - K. The required submittal items are listed below.

ITEM	COMMENTS
<b>Section 011100, General Requirements</b>	
Schedules of values	
Construction schedule	
Contractor Intent to Warrant	Per Section 017410
MSDS Sheets maintained at jobsite	
Contractor Safety Plan	
Reference list of similar projects to the specified scope of work.	
Emergency Leak Response Contact	Per Section 013000 Part 1
Work sequence plan	Per Section 013000 Part 1
<b>Section 024000 Demolition</b>	
Landfill and transport records showing disposal of materials	Close-out documents

<b>030131 Concrete Deck Rehabilitation</b>	
Product technical data	
<b>030150 Cementitious Wood Fiber Deck Rehabilitation</b>	
Product technical data	
<b>Section 061000 Rough Carpentry</b>	
Product technical data	
<b>Section 075423 TPO Thermoplastic Membrane Roofing (&amp; KEE Alternate)</b>	
Manufacturer approved applicator letter	
Manufacturer spec review and intent to warrant letter	
Manufacturer system/product letter	
Manufacturer product data sheets	
Manufacturer installation instructions	
Manufacturer warranty specimen	
Insulation / Cover board product data	
Insulation adhesive product data	
Wind uplift attachment layout (fasteners and adhesives)	
Tapered insulation layout drawing	
Fastener product data	
<b>Section 076000 Sheet Metal Flashing</b>	
Sheet metal product data	
Sheet metal color chart	
ANSI/SPRI ES-1 certification letter	
<b>Section 079200 Sealant</b>	
Sealant Product Data Sheets	
Accessory Product Data Sheets	
Color charts	
<b>Section 099100 Painting</b>	
Product data sheet primer	
Product data sheet finish/int. coat	
Color Charts	

1.04 CONSTRUCTION PROGRESS SCHEDULES

A. Description

1. To assure adequate planning and execution of the work so as to complete the project within the time period allowed in the Contract and to assist the Design Professional in evaluating work progress.

2. "Day" used throughout the Contract shall mean "Consecutive Calendar Days" unless otherwise stated.

B. Schedule Adherence

1. Should any activity not be completed within 7 days after the scheduled completion date, Owner shall have the right to order the Contractor to expedite completion of work by whatever means the Owner deems appropriate and necessary without additional expense.
2. Should any activity be 14 or more days behind schedule, the Owner shall have the right to complete the activity or to have the activity completed by whatever means the Owner deems appropriate and necessary.
3. Any costs incurred by the Owner in connection with expedition of the construction activity under this article shall be reimbursed to the Owner by the Contractor. This may take the form of deductions from payments due Contractor.
4. Failure by the Owner to exercise the option to either order the Contractor to expedite any activity or to expedite an activity by other means shall not be considered precedent setting for any other activity.

C. Schedule

1. Within 10 days after receipt of the Notice of Intent to Award, the Contractor shall submit one reproducible and two prints of the construction schedule to the Design Professional. Revise and resubmit as required.
2. Submit revised schedules with each application for payment, identifying changes since previous version.
3. Submit a computer generated horizontal bar chart with separate line for each section of Work, identifying first work day each week.
4. Schedule and execute work to prevent leaks and traffic on unprotected completed work sections. Do not disrupt activities in the occupied building spaces.

1.05 PROPOSED PRODUCTS LIST

- A. Provide submittal data of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model, or catalog designation, and reference standards.

1.06 SHOP DRAWINGS

- A. Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by Design Professional.
- B. Shop Drawings: Submit for review. After review, produce copies and distribute in accordance with the SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 017000 - CONTRACT CLOSEOUT.

- C. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- D. The Contractor will provide a construction drawing indicating the sequence of work from area to area. The start point and flow of work, section by section, will be indicated on the drawing. The drawing will be updated with each pay application.

#### 1.07 PRODUCT DATA

- A. Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Design Professional.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this Project.
- C. Indicate Product utility and electrical characteristics, utility connect requirements and location of utility outlets for service for functional equipment and appliances.
- D. After review distribute in accordance with Submittal Procedures article above and provide copies for record documents described in Section 017000 - CONTRACT CLOSEOUT.

#### 1.08 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- B. Submit samples of finishes from the full range of manufacturer's standard colors, textures, and patterns for Design Professional selection.

#### 1.09 MANUFACTURER INSTALLATION INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting and finishing, to Design Professional in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

#### 1.10 MANUFACTURER CERTIFICATES

- A. When specified in individual specification sections, submit certification by manufacturer to Design Professional, in quantities specified in Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Design Professional.

#### 1.11 SCHEDULE OF VALUES

- A. Contractor shall use the current AIA G703 unless directed otherwise by the Owner's construction requirements.

- B. Prior to the start of work, submit in column format a complete description of work with the individual items listed, the quantity of each item, unit cost, total cost, quantity to date and extended to date cost. The schedule of values shall be prepared with each pay request and submitted for Design Professional's review and approval.
- C. The schedule of values shall equal the contract amount dollar value and shall be adjusted when change orders are approved.
- D. The schedule of values shall be broken down to include each technical section in the construction documents. Each section shall include a cost for materials and a cost for installation.

#### 1.12 DEFINITIONS

- A. Wherever the term Design Professional appears in these specifications, it shall be construed to refer to Merik, Incorporated, Building Envelope Consultants, 3225 Shallowford Rd., Suite 820, Marietta, GA 30062.

#### 1.13 PERIODIC JOBSITE MANAGEMENT MEETINGS

- A. At the direction of the Design Professional, the project will require periodic meetings at the jobsite to coordinate the work, review job progress and resolve unforeseen issues of construction. The Contractor shall have the project manager and the job Superintendent present at each meeting. The project manager for subcontractors shall attend as required.
  - 1. Prebid meeting shall be held with the Owner and prospective bidders at the jobsite.
  - 2. The preconstruction meeting shall be scheduled with the Owner, Contractor's project manager, superintendent/foreman and subcontractor project managers prior to the start of work. The meeting shall be held at the jobsite after the review of submittals.
  - 3. Operations and Control meetings shall be held at agreed intervals with the Owner, Contractor and Design Professional in attendance. The meetings shall be at the jobsite.

#### 1.14 USE OF THE PREMISES

- A. Before beginning work, the Contractor shall secure approval from the Building Owner's Representative for the following:
  - 1. Areas permitted for personnel parking.
  - 2. Access to the site.
  - 3. Areas permitted for storage of materials and debris.
  - 4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.
- B. Interior stairs or elevators may not be used for removing debris or delivering materials, except as authorized by the building superintendent.

#### 1.15 TEMPORARY FACILITIES AND CONTROLS

- A. Description
  - 1. Contractor shall provide for temporary facilities and controls required for the performance of the project except as otherwise noted. Such items include, but are not necessarily

limited to, utilities such as heat, water, electricity and telephone; sanitary facilities; contractor's facilities; and enclosures such as tarpaulins, barricades, and canopies.

2. All equipment furnished by Contractor shall comply with all pertinent safety requirements. The Contractor shall immediately correct equipment and procedures that have been indicated as unsafe working conditions. The Contractor will reimburse the Owner for the cost of correcting unsafe working conditions that are not corrected within 24 hours from notice.
3. Ladders, planks, hoists, and all similar items furnished by individual trades in the execution of their own portions of the work are not part of this Section.
4. All temporary facilities will be subject to the Owner's approval.

B. Product Handling

1. The Contractor shall exercise all means necessary to maintain temporary facilities and controls in proper and safe condition throughout the progress of the project.
2. All required connections to existing utility systems shall be made with minimum disruption. If disruption of existing service is required, notice shall be given to the Owner and connections shall not be made without Owner's approval. If necessary, Contractor shall provide for alternate temporary service.
3. If the required utility is not available from the Owner, the Contractor shall provide for alternate temporary service for the duration of the project.

C. Electricity

1. Owner will furnish electricity to the Contractor during this project only at available electrical outlets located on the exterior of the building. Any additional electrical requirements required by the Contractor shall be provided by the Contractor at no additional cost to the Owner.
2. All wiring needed to facilitate construction of the project shall be temporary in nature and shall be furnished and installed by the Contractor at no additional cost to the Owner. Upon completion of the work, the Contractor shall remove all such temporary wiring and restore service to its original condition at no additional cost to the Owner.

D. Water

1. The Owner will furnish water required for construction through available hose bibs. Any additional water requirements by the Contractor shall be provided by the Contractor at no additional cost to the Owner.

E. Telephone

1. The project Superintendent will be required to have a working mobile phone during the course of the work. Such costs shall be included in the Base Bid.

F. Sanitary Facilities

1. Contractor shall provide toilet and washroom facilities at the project site at no additional cost to the Owner. The use of the facility's toilet and/or washroom facilities is not approved.

G. Enclosures

1. Contractor shall furnish, install and maintain for the duration of the project, all scaffolds, ladders, tarpaulins, barricades, warning signs, platforms, bridges, canopies, steps, and other temporary construction required to properly facilitate completion of the project in compliance with all safety and other regulations.
2. Contractor shall provide all necessary safeguards to warn and prevent pedestrians and Owner's personnel from being exposed to dangers or hazards created by this project.

H. Signs

1. No signs or advertising of any kind shall be allowed on the project site unless approved in advance by Owner.

I. Construction Aids

1. A disposal chute shall be constructed by Contractor to prevent damage to buildings and grounds. Disposal chute shall be enclosed-type and shall be located such that demolition debris will be discharged from the roof at the designated staging area directly into disposal vehicles or containers.
2. Contractor shall provide for debris removal services and containers. Placement and servicing of containers shall be coordinated with the Owner.
3. Residue and debris from all operations shall not be allowed to accumulate on the project site. Debris shall be removed and properly disposed of daily in accordance with all Federal, state and local regulations.
4. Dust, dirt and debris created by project construction shall be properly contained or controlled by the Contractor. Method(s) of control shall be approved by the Design Professional.

J. Parking

1. Contractor's construction vehicles shall enter the project site and park in areas as directed by the Owner. The Contractor shall be responsible for coordination of traffic by his subcontractors, suppliers, etc., so as not to disrupt ongoing operations of the Owner.

K. Field Office

1. The Contractor may not provide his own Field Office.

L. Ventilation

1. Provide, as required, facilities to maintain specific storage conditions as described within this Specification and as recommended by the material's manufacturer for use in construction.
2. Provide adequate ventilation of enclosed areas to prevent the accumulation of fumes, vapors, and gases.

M. Connects and Disconnects

1. In the event it is necessary to disconnect any electrical wiring or connections, plumbing lines or other building services, notify the Owner. Contractor shall not disconnect or connect services unless authorized by Owner.
2. Modification of existing service piping, wiring and duct work required in connection with the lifting, removal or relocation of roof-mounted equipment shall be accomplished by the Contractor as part of his Contract.
3. The Owner shall be responsible for disconnecting and re-connecting communication and security wiring that may cross the work areas where construction operations are to be conducted. Such work shall be coordinated with the appropriate facility personnel. It is a requirement that the facility personnel be notified immediately to re-connect this wiring. Contractor shall take appropriate measures to protect wiring while re-roofing operations are underway. Any damage to such lines/wiring during construction operations shall be repaired by the Owner and any costs for such work shall be borne by the Contractor.

1.16 CONTRACTOR PROJECT SUPERVISION

- A. Contractor shall provide full-time daily supervision of the Work. To comply with the Contractor's Safety Plan the crew supervisor shall speak English clearly and understand English clearly. No change in the foreman or Superintendent shall be allowed unless approved in writing by the Design Professional. No work shall take place without the Supervisor on site. In addition to the foreman responsible for management of the crew, there shall be a full time Superintendent on the site. The Superintendent shall be a senior employee speaking for the Contractor at all meetings.

1.17 EMERGENCY LEAK RESPONSE

- A. During construction, the Contractor shall provide the necessary personnel and equipment to stop leakage into the structure within 4 hours of notification that a leak is occurring. A contact person for the Contractor shall be designated to be available on 24 hours, 7 day per week basis to coordinate the emergency response. Emergency phone numbers for the contact person will be provided to the Owners Representative and Design Professional. The contact person shall not be changed without prior approval by the Design Professional.
- B. The Owner's Representative shall prepare a complete listing of all damages that result from water entry.
- C. The Contractor shall provide a written disaster relief plan designating their agent for emergency response management. The responder will be a company operating in good standing with the State of Georgia DOAS. Refer to:  
<http://www.usg.edu/publicsafety/documents/Pre-Qualified-Vendors.pdf> Such companies include, listed in alphabetical order:

BELFOR  
24 Hour Contact: 800-472-0030  
[www.belfor.com](http://www.belfor.com)

EPIC Response  
24 Hour Contact – Atlanta Area: 770-516-3491  
24 Hour Contact – Toll Free: 877-277-4647  
[www.epicresponse.com](http://www.epicresponse.com)

Full Circle Restoration  
24 Hour Contact: 770-232-9797

Nivek Services, Inc.  
24 Hour Contact: 866-977-3791  
Office: 678-454-3791  
[www.nivek247.com](http://www.nivek247.com)

North Ridge Restoration, LLC  
24 Hour Contact: 770-751-6500  
[www.northridgerestoration.com](http://www.northridgerestoration.com)

Rolyn Companies, Inc.  
24 Hour Contact: 800-808-1553

24 Hour Toll-Free Hotline: 877-238-5524  
[www.fullcircularrestoration.com](http://www.fullcircularrestoration.com)  
Parker-Young Construction  
24 Hour Contact: 888-303-9288  
[www.parkeryoung.com](http://www.parkeryoung.com)

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

Universal Restoration Services  
24 Hour Contact: 866-877-8979  
[www.4universal.com](http://www.4universal.com)

- D. The Contractor shall maintain at the jobsite a leak reaction kit including all material necessary for emergency leak response. The kit will include items such as 1 roll clear polyethylene, duct tape, 1 case sealant, caulk gun, razor knife, etc. The kit will be removed from the jobsite at the completion of work.

#### 1.18 CORRECTION OF OBSERVED DEFICIENCIES

- A. The Contractor shall correct deficiencies noted during the construction observation in no more than five days from receipt of the written notice.

#### 1.19 STORAGE AND PROTECTION

##### A. Protection

1. Limit size of work sections to safeguard adjacent materials, structures, etc., and to minimize dust and noise.
2. Protect existing facilities from damage during work. Do not overload existing paving, curbs, sidewalks, etc. with vehicle traffic. Do not overload new or existing construction with demolition debris, equipment, etc.
3. Protect existing facilities from fire as a result of construction operations. Contractor shall provide suitable and adequate fire extinguishers conveniently located at work areas, storage areas and at areas or equipment where an open flame is being used. Competent operators shall be in attendance at all times and shall be properly trained or instructed in fire protection.
4. At each location where an open flame is used, Contractor shall provide a watchman with a suitable fire extinguisher.
5. Walls, windows, roof edges, etc., hoists, and staging areas shall be protected using canvas tarpaulins. Plastic or felt will not be acceptable.
6. Plywood, minimum 3/4" thick, or other suitable materials shall be used to protect roof areas from damage that may be caused by concentrated equipment loads and foot traffic.
7. Construction traffic shall be confined to work areas. Contractor shall be responsible for leaks that develop in traffic areas during and after project completion.
8. Self-supporting ramps shall be used where expansion joints, area dividers, etc. are to be crossed.
9. Contractor shall protect interior operations from adverse weather during roofing.
10. The Contractor will be held liable for any damages to the building, building contents, its occupancy, grounds or landscaping resulting from work under the Contract. In the event of damage, Contractor will restore property to a condition equivalent to that at the time the project started.

11. The Contractor shall keep existing drainage facilities and associated leaders clear of debris and construction materials during the work. The Contractor will be required to use elastomeric plugs to protect leaders during demolition and construction operations.
12. Prior to the start of construction operations, the Contractor shall provide facility personnel with plastic bags/tarps which will be used by facility personnel to protect televisions, computers, and other associated equipment during the period of time that construction operations are occurring. Bags/tarps shall be provided a minimum of one week prior to the start of construction operations. Costs for providing such materials shall included in the Base Bid. Note: Contractor will still be required to provide any other additional protection to interior items as may be deemed necessary to comply with the requirements of the Contract Documents.

B. Material Protection

1. Products shall be transported by methods which avoid damage. Damaged material shall be subject to rejection by the Design Professional.
2. Store materials off of the ground covered with tarps. Factory-applied wrappings are not acceptable.
3. Wet materials shall be removed from the project site.

C. Storage

1. Contractor shall be responsible for proper storage of equipment, materials and devices furnished by himself and/or his subcontractors and suppliers.
2. To the maximum extent possible, the Contractor shall not store combustible or flammable materials inside the facility.
3. All storage areas are subject to approval by the Owner or his authorized representative.

1.20 TESTING

- A. The Contractor shall pay for the cost of testing mockups, work during construction and finished work prior to close-out. Include in the base bid the amount for testing as specified in each Technical Section. Special inspections, not required in the project technical sections, shall be paid by the Owner.

1.21 EXPERIENCE MODIFICATION FACTOR

- A. The Contractor shall submit their Experience Modification Certificate based on the most current edition of the Experience Rating Manual published by the National Council of Compensation Insurance (NCCI). The certificate shall be prepared by an insurance provider approved by the State of Georgia and shall cover the preceding year. The certificate is required to be listed in the name of the Contractor providing all labor, materials, equipment and services to complete the Work as specified in the Contract Documents.
1. The Contractor shall have a Workers Compensation Experience Rating experience modification factor (NCCI) of 1.1 or less.

1.22 HAZARDOUS WASTE REMOVAL RECORDS

- A. Submit a copy of the Contractor hazardous materials abatement license or subcontractor's abatement license when the scope of work requires hazardous materials abatement.
- B. Submit statement from a qualified supervisor the removal of ACM will not produce friable materials and will be in accordance with State and Federal requirements.
- C. Submit a copy of the "Asbestos Notification Requirements for Demolition & Renovation / Abatement Projects" form sent to the Georgia Environmental Protection Division.
- D. Refer to Section 017000 for Contract Close-out Document requirements.

1.22 MATERIAL FINISH AND COLOR

- A. Finishes and colors of new materials to match original or adjacent undisturbed finishes as applicable. Submit proposed finishes and colors of all materials to Owner for review and approval prior to installation.

PART 2 – PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Close-out procedures
- B. Cleaning
- C. Adjusting
- D. Project record documents
- E. Warranties
- F. Hazardous Materials Abatement Records

1.02 RELATED SECTIONS

- A. Section 013000 - Submittals
- B. Section 017410 - Contractor Warranty Form

1.03 CLOSEOUT PROCEDURES

A. Substantial Completion

1. The Contractor shall submit written certification to the Owner when the project or designated portion of the project is substantially complete. A list of major items to be completed or corrected shall be stated.
2. The Owner will make an inspection within ten (10) days after receipt of certification and issue a Certificate of Substantial Completion containing:
  - a. The Date of Substantial Completion.
  - b. The Contractor's list of items to be completed or corrected and any amendments by the Owner or Design Professional.
  - c. The time to be allowed for the Contractor to complete or correct listed items.
  - d. The time and the date Owner will assume possession of the work or designated portion thereof.
  - e. The signatures of the Owner, Design Professional and Contractor.
3. The Contractor shall then complete or correct those items so listed within the designated time and inform the Owner upon completion.
4. Should the Owner determine that the work is not substantially complete, the Owner shall immediately notify the Contractor in writing stating reasons. The Contractor shall then complete the work and send a second written notice to the Owner certifying that the project, or designated portion thereof, is substantially complete. The Owner will re-inspect the work within ten (10) days after receipt of certification.

B. Final Inspection

1. The Contractor shall submit written certification to the Owner that:
  - a. The Contract Documents have been reviewed.

- b. Work has been completed in accordance with the Contract Documents.
- c. The project has been inspected for compliance with the Contract Documents.
- d. The project is ready for final inspection.

2. The Owner will make a final inspection within ten (10) days after receipt of certification.
3. Should the Owner determine that the work is finally complete in accordance with the requirements of the Contract Documents, the Owner will request that the Contractor submit the appropriate project closeout documentation.
4. Should the Owner determine that the work is not finally complete, the Owner will immediately notify the Contractor in writing stating reasons. The Contractor shall then take immediate measures to remedy the stated deficiencies and send an additional written notice to the Owner certifying that the work is complete. The Owner will re-inspect the work within ten (10) days after receipt of certification.

C. Re-Inspection Costs

1. Should the Owner be required to perform additional inspections due to noncompliance of work with the certifications of the Contractor, the Contractor shall compensate the Owner for such additional services. Such costs will be deducted from final payment to the Contractor.

D. Final Application for Payment

1. The Contractor shall submit final application for payment in accordance with the specifications.
2. The Owner will issue a final certificate in accordance with the specification.

E. The final pay request from the Contractor shall include the following items:

1. Manufacturer's Warranty
2. Finish Warranty on Sheet Metal
3. Contractor's warranty
4. Signed Consultant Punch List completion statement
5. Non-Influence Affidavit (General Conditions)
6. Statutory Affidavit (General Conditions or AIA G706)
7. Consent of Surety Company to final payment (AIA G707)
8. Disposal records for non hazardous materials tear off and debris
9. Hazardous materials custody documents, transit documents and disposal receipt documents

1.04 CLEANING

A. Description

1. To maintain the buildings and site in a clean condition throughout the duration of the project. The Contractor shall comply with all requirements for cleanliness described in other sections of these Specifications.
2. The Contractor shall provide all required manpower, material and equipment to maintain the specified standard of cleanliness.
3. Contractor shall use only those materials and equipment which are compatible with the surface being cleaned as recommended by the manufacturer or approved by the Design Professional .

B. Progress Cleaning

1. Stored items shall be kept in an orderly arrangement allowing maximum access and shall not impede drainage or traffic.
2. Scrap, debris, waste material and other items shall not be allowed to accumulate and shall be removed from the work areas on a daily basis.
3. Contractor shall protect new installed materials from dirt and debris during the demolition of the remainder of the work. Areas with new installed materials shall be kept clean and free of debris during the duration of the work.
4. Contractor shall provide storage containers for all items awaiting removal from the site. Storage containers shall be approved by the Design Professional.
5. The Contractor shall conduct daily inspections to insure that the requirements for cleanliness are met.
6. Work may be stopped or delayed by the Owner should the Contractor fail to take appropriate measures to clean the site on a daily basis. Extensions to the project completion date for such delays will not be approved.
7. The Contractor shall inspect all arrangements of materials stored on the project site on a weekly minimum basis and shall service all arrangements in accordance with the requirements of Item A1 of this section.

C. Final Cleaning

1. Except as specifically provided otherwise, "clean" shall be interpreted as meaning the level of cleanliness generally attainable by skilled cleaners using commercially available building maintenance equipment and materials.
2. All tools, equipment, materials, scrap, debris and waste shall be removed from the project site and a final progress cleaning conducted in accordance with this Section.
3. Unless otherwise directed by the Design Professional, the Contractor shall clean all adjacent areas on the site and completely remove all resultant debris.
4. The Contractor shall clean out all drains and associated leaders of any debris prior to final acceptance by the Owner. Such work shall be performed at no additional cost to the Owner. Note: In the event that the Contractor fails to use appropriate methods to keep drains clear of debris during construction operations, the Design Professional may require that a water test and/or a video inspection of the leaders be performed to

evaluate the condition of drain leaders. Such costs for such evaluations and subsequent corrective measures shall be borne by the Contractor at no additional cost to the Owner.

5. Restore grass or planted areas by filling ruts, raking, seeding, planting, sodding, and fertilizing. Sweep paved areas.
6. Contractor shall visibly inspect all exterior surfaces and remove all traces of dirt, waste materials, smudges, splashed materials and other foreign matter. The Design Professional may require that light sandblasting or other cleaning be performed at no cost to the Owner. If such cleaning is required, the Contractor shall take all necessary precautions to prevent damage to adjacent materials, property and vegetation.

#### 1.05 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

#### 1.06 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
  1. Drawings
  2. Specifications
  3. Addenda
  4. Change Orders and other modifications to the Contract
  5. Reviewed Shop Drawings, Product Data, and Samples
  6. Manufacturer's instruction for assembly, installation, and adjusting
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
  1. Manufacturer's name and product model and number
  2. Product substitutions or alternates utilized
  3. Changes made by Addenda and modifications
- F. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
  1. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
  2. Field changes of dimension and detail.

3. Details not on original Contract drawings.

1.07 WARRANTIES

- A. Execute and assemble transferable warranty documents from Subcontractors, Suppliers, and Manufacturers.
- B. Submit warranty prior to final Application for Payment.
- C. At no additional cost to the Owner, install a plastic laminated 8 ½ inch x 11 inch sign with all warranty information at the interior side of the building access. The sign shall provide information on the roof system and the Manufacturer and Contractor warranty data.

1.08 HAZARDOUS MATERIALS ABATEMENT RECORDS

- A. General: Furnish two copies of documents prior to application for final payment.
  - 1. Daily project log from licensed Abatement Contractor where friable asbestos containing materials (ACM) removal is required.
  - 2. Daily record from air monitoring company where friable materials removal is required.
  - 3. Waste shipment record certification signed by Transporter and Waste Disposal Site acknowledging receipt of materials. This record is required for all ACM disposal.

PART 2 - PRODUCTS

2.01 NOT USED

PART 3 - EXECUTION

3.01 NOT USED

END OF SECTION

CONTRACTOR WARRANTY FORM

PROJECT: \_\_\_\_\_

LOCATION: \_\_\_\_\_

OWNER: \_\_\_\_\_

We, \_\_\_\_\_,  
(Company Name)

Contractor for the above-referenced project, do hereby warrant that all labor and materials furnished and work performed are in accord with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective workmanship for a period of \_\_\_\_\_ years from Date of Substantial Completion. This warranty commences on

\_\_\_\_\_  
(Dates of Substantial Completion affixed by Owner)

and expires on \_\_\_\_\_.  
(Expiration Date)

Should defects develop during the warranty period due to defective workmanship, the affected materials, including adjacent work damaged as a result of the sited defective workmanship, shall be made good by the undersigned at no expense to the Owner. The Owner will give Contractor written notice of defective work and Contractor agrees to respond within 24 hours. Should Contractor fail to correct defective work within 60 days after receiving written notice, the Owner may, at his option, correct defects and charge Contractor costs for such correction. Contractor agrees to pay such charges upon the Owner's demand.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner, Acts of God, Civil Disobedience or defects in the structure.

Scope of work is limited to: \_\_\_\_\_

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

Contractor of Record: \_\_\_\_\_  
(Company Name)

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

Subcontractor: \_\_\_\_\_  
(Company Name)

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

End of Contractor Warranty Form

<b>Section</b>	<b>Description</b>	<b>Warranty Term, years</b>
075423	Roofing Manufacturer	20
075423	Roofing Contractor	5
076000	Sheet Metal and Flashing Contractor	5
079200	Sealant Manufacturer	5 (urethane); 20 (silicone)
079200	Sealant Contractor	5
099100	Painting Manufacturer, material warranty	Standard
099100	Paint Contractor	5

**CONTRACTOR BID SUBMITTAL FORM**

Include with the bid and bid submittals. Failure to include this document may result in the bid being judged non-responsive.

List the manufacturer for each specified scope of work. The listed manufacturer will not be changed unless the material becomes unavailable thru no fault of the bidder.

<b>Specification Section</b>	<b>Manufacturer</b>

List any subcontractor to be utilized in the specified scope of work is the bid is accepted and awarded. The listed Subcontractor will not be changed unless the company becomes unavailable thru no fault of the bidder.

<b>Specification Section</b>	<b>Subcontractor Name and Phone</b>

The bidder agrees and accepts the above statements and submits the following statement of Bidder's qualifications for consideration of the Owner.

\_\_\_\_\_ (Authorized signature of Contractor)  
\_\_\_\_\_ (Printed Name and Title)  
\_\_\_\_\_ (Firm Name)  
\_\_\_\_\_ (Date)

**CONTRACTOR CHANGE ORDER PROPOSAL**

Submission of a change order proposal shall include a complete breakdown of all expense and cost itemized to include the following:

**1. Material**

\_\_\_\_\_ units at a unit cost of \$ \_\_\_\_\_  
\_\_\_\_\_ units at a unit cost of \$ \_\_\_\_\_  
\_\_\_\_\_ units at a unit cost of \$ \_\_\_\_\_  
\_\_\_\_\_ % sales tax \$ \_\_\_\_\_  
  
Total Material \$ \_\_\_\_\_

**2. Labor**

\_\_\_\_\_ hours labor at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_  
\_\_\_\_\_ hours labor at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_  
\_\_\_\_\_ hours labor at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_  
  
Total Material \$ \_\_\_\_\_

**3. Equipment**

\_\_\_\_\_ hrs. \_\_\_\_\_ at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_  
\_\_\_\_\_ hrs. \_\_\_\_\_ at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_  
\_\_\_\_\_ hrs. \_\_\_\_\_ at \$ \_\_\_\_\_ per hour \$ \_\_\_\_\_

**4. Total direct cost:**

Materials \$ \_\_\_\_\_  
Labor \$ \_\_\_\_\_  
Equipment \$ \_\_\_\_\_  
  
Grand total direct cost \$ \_\_\_\_\_  
  
Plus \_\_\_\_\_ % overhead and profit \$ \_\_\_\_\_  
  
Total cost for General Contractor \$ \_\_\_\_\_  
  
Plus \_\_\_\_\_ % for O&H for General Contractor \$ \_\_\_\_\_  
  
**5. TOTAL CHANGE ORDER PROPOSAL** \$ \_\_\_\_\_

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



## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. General

1. The Contractor is responsible to verify all field conditions that may affect their bid.

#### B. This Section includes the following:

1. Roof system moisture assessment.
2. Refer to Division 01 specification section "Summary of Work" for specific work to be included in the Base Bid. Coordinate Base Bid work summary with the requirements of Division 01 specification sections "Unit Prices" and "Alternates".

### 1.2 RELATED DOCUMENTS

- #### A. Project drawings, diagrams, key plans, and general provisions of the Contract including General and Supplementary Conditions and other Division 01-48 Specification Sections, apply to this Section.

### 1.3 THIRD PARTY MOISTURE ASSESSMENT WORK

- #### A. Contractor to provide third party moisture survey to identify currently wet roof system materials to be replaced by Unit Price.

1. The third-party moisture survey shall be in strict compliance with ASTM D7954, Standard Practice for Moisture Surveying of Roofing and Waterproofing Systems Using Non-Destructive Electrical Impedance Scanners.
2. The third-party moisture survey will be used to define the extent of additional wet abatement work.
3. Contractor to provide painted outlines of suspected wet areas on the existing roof surface.
4. Wet abatement within 12-inches of the contractor provided painted outlines is to be included in the Base Bid.
5. Wet insulation and roofing more than 12-inches outside the painted lines will be paid on a unit cost basis. Refer to Section 01 2300 – Price and Payment Procedures.

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION (NOT USED)

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. General

1. The Contractor is responsible to verify all field conditions that may affect their bid.
2. Demolition requires that all materials that affect the work specified in other technical sections be removed and/or prepared for the specified work.

#### B. Test cuts indicate the following:

1. Lower Roof Area: Mineral-surfaced modified bitumen cap sheet over built-up roof plies, ½" wood fiberboard, 1.0" polyisocyanurate insulation, bituminous base sheet, rosin paper, over cementitious wood fiber deck.
2. Upper Roof Area: Mineral-surfaced modified bitumen cap sheet over built-up roof plies, ½" wood fiberboard, 1.0" polyisocyanurate insulation, over precast concrete deck.

#### C. Base Bid scope of work items.

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

#### D. Hazardous Materials

1. No known asbestos containing material (ACM) is present; however, all materials have not been tested for ACM.
2. Added scope of work items may contain hazardous materials that were not identified in the construction documents. It is required the Contractor be experienced regarding ACM and other hazardous materials and recognize when work must be stopped to allow for proper removal, handling, and disposal.

### 1.2 RELATED SECTIONS

#### A. Base Bid

1. Section 012300 - Price and Payment Procedures
2. Section 022529 - Existing Roof System Moisture Assessment
3. Section 030131 - Rehabilitation of Concrete Decks
4. Section 030150 - Rehabilitation of Cementitious Wood Fiber Decks
5. Section 061000 – Rough Carpentry
6. Section 075423 – TPO Thermoplastic Roofing (inc. KEE Alternate)
7. Section 076000 - Flashing and Sheet Metal
8. Section 079200 – Sealants and Caulking
9. Section 099100 – Exterior Painting

10. Section 108213 – Equipment Screens

1.3 DEFINITIONS

- A. Remove: Remove and legally dispose of items except those indicated to be reinstalled.
- B. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations.

1.4 SUBMITTALS

- A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.
- B. Landfill records indicating receipt and acceptance of all wastes by a landfill facility licensed to accept hazardous wastes (as required) are required at the close of the project.
- C. Refer to Section 028200 Part 1 ASBESTOS REMEDIATION for additional requirements.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: The Contractor is solely responsible for complying with all relevant requirements of governing authorities. Comply with governing Federal EPA and State EPD notification regulations before starting roof demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
  - 1. The Contractor is not entitled to rely upon the services of the Design Professional as a competent person for the purposes of hazardous waste removal. Conduct demolition so that Owner's operations will not be disrupted. Provide not less than 48 hours' notice to Owner of activities that will affect Owner's operations.
- B. All demolition work shall comply with the requirements of NFPA 241, 2000 Edition "Standard for Safeguarding Construction, Alteration and Demolition Operations".
- C. Only qualified employees shall be involved in any asbestos repairs, maintenance, or removal. All unqualified employees shall be protected from exposure to asbestos fibers by isolating and controlling access to all affected areas during asbestos work. All tasks involving the disturbance of asbestos containing material will be conducted only after appropriate work controls have been identified and implemented. A qualified supervisor shall be available at asbestos controlled work sites during all activities. The Qualified Asbestos Supervisor shall be an employee of the Contractor or Subcontractor as required.

1.6 SCHEDULING

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

1.7 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.

PART 2 - PRODUCTS

2.1 RECYCLE MATERIALS: not used.

## 2.2 GRANULE-SURFACED CAP SHEET ROOF SURFACE PREPARATION

- A. At roof areas with granule-surfaced cap sheet covering, remove dirt, debris and loose granules via power-brooming, power washing, and blowing as required by the roof membrane manufacturer leaving the roof in a clean condition for installation of new roofing materials.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Inspect substrates and conditions under which the work of this section will be performed and verify that construction operations may properly commence. Do not proceed with the work until unsatisfactory conditions have been resolved fully.

### 3.2 PREPARATION

- A. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- B. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.
  - 1. Protect existing site improvements, appurtenances, and landscaping to remain.
- C. Protect the interior of the building from dust and debris resulting from tear off of the existing materials. An observer will be put inside the building to assure debris is properly contained. When debris is noted, work shall be stopped until suitable protection measures can be taken.
- D. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around and below selective demolition area and to and from occupied portions of building. Orange barricade fencing is required at egress doors, around staging areas, and ground level work areas.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect furniture, furnishings, and equipment.
- E. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
  - 1. Strengthen or add new supports when required during progress of selective demolition.

### 3.3 POLLUTION CONTROLS

- A. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas. Remove debris from roof of building by chute, or other covered device that will convey debris to grade level. Maintain dust covers and water sprays to keep dust spread to a minimum. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before start of selective demolition.

### 3.4 DEMOLITION

#### A. General

- 1. Removal, handling, temporary storage, and disposal shall be done in full compliance with State and Federal regulations.
  - 2. Dispose of all demolished items and materials promptly. On site storage of removed items is prohibited.
  - 3. Contractor shall provide all refuse containment resulting from demolition work, and refrain from using any on-site, existing refuse container.
  - 4. Where removal of roof membrane and insulation materials are required, back out the existing fasteners and plates. Do not rip fasteners from the roof deck or cause damage to the roof deck during the demolition process.
- B. Demolish and remove the existing roof components as specified. Use methods required to complete Work within limitations of governing regulations.
- 1. Refer to Part 1.1. and following.
- C. Demolition of roof drains, gutters, collector boxes, scuppers and downspouts shall be coordinated with the installation of the new components. The Contractor shall have controlled drainage installed at all times. Uncontrolled drainage is non-conforming work and subject to notification of the deficiency.
- D. Removal of gravel surfacing on BUR roofing systems that are being recovered by new roofing insulation and membrane will require that the existing roof surfaces are clean and properly prepared.
- 1. The prepared BUR roof shall comply with the membrane manufacturer's requirements. It shall have loose rock removed and dirt and contaminants removed. Surfaces that are not level shall be planed using a spud bar.
  - 2. Newly installed insulation board shall have a minimum of 75% of its adhesive solidly adhered to the substrate. Adhesion shall be tested by inserting a pry bar below the cured insulation and lifting the edges of the board. Any board with more than 25% of its insulation adhesive not solidly adhered to the BUR shall be termed failure. Failed areas shall be removed and replaced with new roofing materials.

### 3.5 UTILITY SERVICES AND ELECTRICAL/MECHANICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
  - 1. Refer to Section 011100 Summary of Work.

- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Building maintenance engineer will arrange to shut off services/systems, when possible, upon request of Contractor.
  - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  - 3. Disconnect, demolish, and remove plumbing, and HVAC systems, equipment, and components indicated to be removed.
    - a. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove; when appropriate, reinstall, reconnect, and make equipment operational.
- C. The Contractor shall provide all electrical disconnects and reconnects. All electrical taps must be accessible. All fans must have a service switch or disconnect. Install new exterior electric connection on curbed units where the electric conduit penetrates the curb without a junction box.
- D. Replace damaged disconnects as required. Extend the electrical, gas and freon lines as required. Install exterior connection boxes thru the sidewalls of curbed units. Install new foam insulation to replace damaged or missing insulation.
- E. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.
- F. All electrical and related work shall be performed by a third-party electrical contractor licensed by the State.
- G. All HVAC and related piping work shall be performed by a third-party mechanical contractor licensed by the State for non-restricted commercial work. Work requiring temporary disconnection and reconnection of gas service lines must be pressure tested following completion to confirm no leaks are present.

### 3.6 ADJUSTING AND CLEANING

- A. Sweep and remove chips, shavings, and dust from roof on a daily basis during installation period. Leave installed work clean, free from grease, finger marks and stains.
- B. Upon completion of installation, remove scraps and debris from project site. Clean adjoining building surfaces where stains have resulted from the Work.
- C. Replace damaged landscape and grass areas with landscape treatments comparable to the existing materials. Damaged grass shall be replaced with sod of the same variety unless otherwise agreed by the Owner.

### 3.7 PROTECTION

- A. Provide protection as required to assure the completed work of this section will be without damage or deterioration at date of substantial completion.
- B. Take suitable precaution to protect adjoining building surfaces from damage. Overlay adjoining roof surfaces with 1/2-inch plywood and other necessary protection during installation of metal roofing. Cover side walls of the building with plastic or canvas tarps.

- C. Protect landscape and planted areas from damage.

### 3.8 FINAL INSPECTION

- A. Upon completion of the scope of work an inspection shall be made by the Owner's Representative to ascertain that the Work has been installed according to the manufacturers published requirements. Observed defects shall be corrected as required to secure the manufacturer's warranty.

END OF SECTION

## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

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

### 1.02 SUMMARY

- A. Section includes rehabilitation of existing exterior concrete decks used as substrate for new roof systems.
- B. Concrete deck repairs shall be completed as required to create a sound substrate for new roof installation.
- C. Base Bid: Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

### 1.03 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that has been a manufacturer approved applicator in good standing for the past five (5) consecutive years prior to project bid date. Installer must have been in business under the same name for at least five (5) consecutive years.
  - 1. Installer's Field Supervision: Installer is required to maintain a full-time supervisor / foreman, with supervision-only responsibilities, on job site during times that Work is in progress. The individual shall be experienced in installation of materials used for this Project.
- B. Manufacturer Qualifications: Manufacturer shall have a minimum ten (10) years of successful manufacture of materials used on this project.
- C. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those specified for this Project.

### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by manufacturer. Protect stored liquid material from direct sunlight.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. All material must be protected from the weather by protective tarps. Manufacturer's plastic covers are not acceptable means of protection.
- D. Handle and store materials in a manner to avoid permanent deflection of deck.

### 1.05 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit materials to be installed according to manufacturer's written instructions.
- B. At the end of each day work areas shall be made weathertight, no exceptions.

1.06 WARRANTY

- A. Special Installer Warranty: Furnish a written warranty signed by the installer guaranteeing materials and workmanship for the Work of this section.
  - 1. Warranty Period: One year from date of Substantial Completion.
- B. Special Manufacturer Warranty: Provide manufacturer's warranty covering manufacturing and material defects, where items fail to perform as designed and manufactured.
  - 1. Warranty Period: Provide manufacturer standard warranty.

PART 2 PRODUCTS

2.01 CONCRETE DECK REPAIRS

- A. Basis of Design: Subject to compliance with project requirements.
  - 1. Meadows Patch T2 by WR Meadows Incorporated.
- B. Characteristics: Two-component, polymer-modified, cementitious concrete resurfacer and repair mortar.
  - 1. Designed to resurface concrete from 1/16" to 1/2" in depth.
  - 2. Premium-grade repair mortar capable of patching concrete from featheredge to 2" in depth on horizontal applications. It may also be used for vertical and overhead surface repairs.
  - 3. Produces repaired surfaces suitable for rubber-wheeled traffic.
  - 4. For overhead or vertical use, for smoothing rough surfaces, repairing honeycombs, and dressing up bug holes. Creamy consistency designed to provide skim coating for swimming pools, concrete walls, balconies, and similar locations.
  - 5. May be used in interior and/or exterior applications; below-, above- or on-grade.
  - 6. Not intended to be used as a self-leveling underlayment. Do not bridge moving cracks.
- C. Physical Properties: The following physical properties were determined using the mix ratio of 3.0 quarts (2.8 L) of ACRY-LOK per 50 lb. (22.7 kg) at 75° F (23.9 degrees C).
  - 1. Set Times per ASTM C 191.
    - a. Initial: 4 hours.
    - b. Final: 6 hours.
  - 2. Compressive Strength per ASTM C 109.
    - a. After 1 day: 2,000 psi (13.8 MPa).
    - b. After 28 days: 5,000 psi (34.5 MPa).
- D. Color: Manufacturer standard light gray.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine existing substrates and conditions for compliance with manufacturer recommendations and requirements.
- B. Proceed with installation only after unsatisfactory conditions have been corrected. Installation of materials of this section indicates acceptance of substrates and conditions.

3.02 CONCRETE DECK REPAIRS

- A. Install in accordance with repair product manufacturer instructions and recommendations.
- B. Remove spalled/deteriorated deck areas until sound base is reached at depth required by repair product manufacturer.
- C. Mix repair concrete products in accordance with manufacturer requirements.
- D. Fill prepared area flush with repair products according to manufacturer's directions. Allow to cure as recommended by manufacturer.

END OF SECTION

## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS:

- A. Project diagrams, key plans, and general provisions of the Contract, including General and Supplementary Conditions and Division 01-48 Specification Sections, apply to this Section.

### 1.02 SUMMARY

- A. Furnish labor, materials, equipment, and services necessary for the complete and proper replacement of damaged and/or deteriorated existing cementitious wood fiber deck materials.
- B. Repairs will be completed as required to create a sound substrate for new roof installation.
- C. Base Bid: Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

### 1.03 SUBMITTALS

- A. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements.
  - 1. Indicate compatibility of products with roof system to be installed.
- B. Manufacturer's Installation Instructions: Indicate installation procedures and interface required with adjacent construction.
- C. Shop Drawings: Submit detailed shop drawings including, but not limited to the following.
  - 1. Indicate layout and types of panels, sizes, patterns and conditions, laps, bearing points, finishes, supplementary framing, cut openings, special jointing and other accessories.
  - 2. Include performance calculations and securement data.
- D. Manufacturer Certificate: Provide written statement from manufacturer indicating acceptability of specified product for proposed project application. Indicate recommended accessory materials and procedures.

### 1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in the supplier's original unopened packages, fully identified as to manufacturer, brand or other identifying data.
- B. Store bagged patching products in a dry location until ready for application.

### 1.05 PROJECT/SITE CONDITIONS

- A. Do not install materials during periods of precipitation, when air temperatures are below 32 degrees F (0°C), or when air temperatures are expected to fall below 32 degrees F (0°C) any time within 24 hours following application of the product.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. Provide a cementitious deck form-board system and accessories supplied by a single manufacturer to match existing.
- B. Include all components and accessories required by the deck system manufacturer as

needed to complete the work of this section.

## 2.02 MANUFACTURERS

- A. Basis of Design: Tectum Roof Deck System by Armstrong World Industries.  
<https://www.armstrongbuildingsolutions.com/en-us/tectum-roof-deck.html>

## PART 3 EXECUTION

### 3.01 GENERAL

- A. Comply with the instructions and recommendations of the roof deck panel system manufacturer.

### 3.02 EXAMINATION

- A. Verify that site conditions are acceptable for installation of roof deck panel system.
- B. Proceed with installation only after unsatisfactory conditions have been corrected. Installation of materials of this section indicates acceptance of substrates and conditions.

### 3.03 PREPARATION

- A. Remove debris from the area and remove wet, damaged, and/or deteriorated roof deck material.

### 3.04 CLEANING

- A. Clean exposed surfaces of all deck surfaces.
- B. Remove and replace work that cannot be successfully repaired to permanently eliminate evidence of structural damage.

### 3.05 PROTECTION

- A. Protect installed work from damage due to weather related moisture.
- B. Protect installed work from damage due to subsequent construction activity on the site so that the work will be without damage and deterioration until date of Substantial Completion.

### 3.06 FIELD QUALITY CONTROL

- A. Provide inspection of completed material installation by manufacturer field technical representative. Provide report to Architect prior to installation of roof system. Immediately correct installation deficiencies at no cost to the Owner.

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. General

1. The Contractor is responsible to verify all field conditions that may affect their bid.

#### B. Base Bid

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

#### C. Alternate Bid: See Section 011100 and 012300.

### 1.2 RELATED SECTIONS

#### A. Related sections include:

1. Section 012300 - Price and Payment Procedures
2. Section 024000 – Demolition
3. Section 075423- TPO Thermoplastic Membrane Roofing (incl. KEE Alternate)
4. Section 076000 - Flashing And Sheet Metal

### 1.3 DEFINITIONS

- A. Remove: Remove and legally dispose of items except those indicated to be reinstalled.
- B. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations.

### 1.4 SUBMITTALS

- A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

### 1.5 QUALITY ASSURANCE

- A. Material installation shall proceed when weather conditions are in accordance with the manufacturer's written application instructions and no precipitation is anticipated. Materials installed during inclement weather conditions shall be subject to removal and replacement at no additional cost to the Owner.
- B. Regulatory Requirements: The contractor is solely responsible for complying with all relevant requirements of governing authorities. Comply with governing EPA notification regulations before starting roof demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
  1. The contractor is not entitled to rely upon the services of the Design Professional as a competent person for the purposes of material removal. Conduct Work Area demolition so that Owner's operations will not be disrupted. Provide not less than 48 hours' notice to Owner of activities that will affect Owner's operations.

2. Lumber Standards and Grade Stamps: DOC PS 20, American Softwood Lumber Standard, and inspection agency grade stamps.
  3. Construction Panel Standards: DOC PS 1, U.S. Product Standard for Construction, and Industrial Plywood; APA PRP-108.
  4. Wood Framing Standards: NFPA House Framing Manual.
  5. Preservative Treatment: AWWPA C2 for lumber and AWWPA C9 for plywood; waterborne pressure treatment. Provide for wood in contact with soil, concrete, masonry, roofing, flashing, dampproofing and waterproofing.
- C. Wood products shall be protected in accordance with the manufacturer's written guidelines.

#### 1.6 SCHEDULING

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

### PART 2 - PRODUCTS

#### 2.1 Materials

- A. Non-structural light framing and blocking.
1. Nominal 2 x 4 inch and 2 x 6-inch pine, shop pressure treated for above ground contact.
  2. Wood framing elements 2 x 4 inches by suitable length: No. 2 grade yellow pine or standard Douglas Fir.
- B. Wood Nailers
1. No. 2 grade yellow pine or standard Douglas Fir, pressure treated with waterborne salt preservatives, Wolman Osmose K-33 or approved substitution. Thickness as required to be flush with insulation, width to be six (6) inches.
- C. Sheathing
1. Plywood sheathing shall be CD-X Exterior Grade, nominal ½ inch thickness with 4 ply exterior grade plywood roof sheathing in 4 x 8-foot panel size.
- D. Fasteners
1. Stainless steel nails shall be annular ring or screw shank, minimum 3/8-inch diameter head, of sufficient length to penetrate through sheathing or 3/4 inch into solid decking. Used for the attachment of sheet metal to wood.
  2. Galvanized nails shall be 12d or 16d (11 or 12 gauge) ring shank or screw shank, minimum 3/8 diameter head; length as necessary to penetrate through sheathing or 3/4 inch into solid decking. Used for the attachment of sheet metal to wood.
  3. Steel and Wood Fastener: Used to attach components to wood and steel (18 gauge to 24 gauge) substrates. Thread diameter .215, shank diameter .170, head style #3 Philips truss head and corrosion resistant coating CR-10. 3-inch plastic plate used with insulation board. Products manufactured by Olympic Fasteners, Inc., or prior approved substitution. Used in the attachment of wood to wood and wood to decking.

E. Other Items

1. Flexible liner: Minimum 20 mil flexible PVC liner to be used in concealed applications under metal coping and expansion joint covers. Tensile strength MD 2,828, elongation MD 270%, shrinkage 5% max. Lexsuco Water Barrier by GAF or approved substitution.
2. Compressible Insulation: Fiberglass batt insulation shall be a minimum of four inches in thickness.
3. Galvanized steel double shear joist hanger to be used for installation of wood bracing at derelict curbed unit caps.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspect substrates and conditions under which the work of this section will be performed and verify that construction operations may properly commence. Do not proceed with the work until unsatisfactory conditions have been resolved fully.

3.2 PREPERATION

- A. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
  2. Deck openings resulting from the removal of derelict RTUs shall be covered prior to installation of the roof insulation. Seal all edges to prevent material spills into the building.
    - a. Openings 12 inches in width or smaller shall be covered with 20-gauge galvanized sheet steel, mechanically attached to the deck with fasteners spaced no more than 8 inches OC.
    - b. Openings that exceed 12 inches in width shall be covered with minimum 1/2-inch exterior plywood. Install wood blocking spaced no more than 16 inches OC to support the sheathing. Recess the blocking to allow the sheathing to be flush with the opening. Attach sheathing using galvanized annular nails spaced no more than 8 inches OC.
- B. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.
1. Protect existing site improvements, appurtenances, and landscaping to remain.
- C. Protect the interior of the building from dust and debris resulting from tear off of the existing materials. An observer will be put inside the building to assure debris is properly contained. When debris is noted, work shall be stopped until suitable protection measures can be taken.
- D. The Contractor is responsible for all electrical and Freon disconnects and reconnects. Coordinate shut down of units with the Owner's Representative before proceeding.

3.3 CURBED UNITS

- A. Furnish and install new wood blocking at all roof mounted equipment as required to provide a minimum base flashing height of 8 inches above the roof level. Blocking shall be installed to equipment curbs as required to maintain a full cant face above the roof level and attached to the curb with the appropriate fasteners spaced 12 inches OC maximum.

### 3.4 ROOF TO WALL EXPANSION JOINTS

#### A. General

1. Examine the condition of the existing wood blocking. Remove and replace damaged units taking care to document the quantities. Damage shall be defined as wood that has less than 75 percent of the original fastener withdraw resistance.

#### B. New blocking

1. Install new 2 x 6-inch wood blocking with the first layer fastened to the roof deck. Install subsequent layers fastened to the underlying wood blocking. Attachment shall be maximum 12 inches OC stagger nailed. Horizontal nailers shall be equal in height to the thickness of the roof insulation.
2. Install vertical 2 x 10-inch wood blocking toe nailed to the deck blocking. Bevel cut the top of the blocking to provide positive slope away from the wall.
3. Install wood cant nailed to the deck blocking and vertical wood blocking.

### 3.5 FIELD OF ROOF EXPANSION JOINT

#### A. General

1. Examine the condition of the existing wood blocking. Remove and replace damaged units taking care to document the quantities. Damage shall be defined as wood that has less than 75 percent of the original fastener withdraw resistance.

#### B. New blocking

1. Install new 2 x 6-inch wood blocking with the first layer fastened to the roof deck. Install subsequent layers fastened to the underlying wood blocking. Attachment shall be maximum 12 inches OC stagger nailed. Horizontal nailers shall be equal in height to the thickness of the roof insulation.
2. Install vertical 2 x 10-inch wood blocking toe nailed to the deck blocking. Bevel cut the top of the blocking to provide positive slope. The vertical wood member shall extend a minimum of 8 inches above the finished roof height. Construct joint allowing a minimum 2-inch separation between vertical wood members.
3. Nail treated wood cant at the base of vertical wood blocking on each side of the control joint.
4. Install flexible liner and compressible insulation in the gap between vertical wood blocking.

### 3.6 ADJUSTING AND CLEANING

- A. Sweep and remove chips, shavings, and dust from Work Area on a daily basis during installation period. Leave installed work clean, free from grease, finger marks and stains.

- B. Upon completion of installation, remove scraps and debris from project site. Clean adjoining building surfaces where stains have resulted from the Work.
- C. Replace damaged landscape and grass areas with landscape treatments comparable to the existing materials. Damaged grass shall be replaced with sod of the same variety unless otherwise agreed by the Owner.

### 3.7 PROTECTION

- A. Provide protection as required to assure the completed work of this section will be without damage or deterioration at date of substantial completion.
- B. Take suitable precaution to protect adjoining building surfaces from damage. Overlay adjoining roof surfaces with 1/2-inch plywood and other necessary protection during installation of metal roofing. Cover side walls of the building with plastic or canvas tarps.
- C. Protect landscape and planted areas from damage.

### 3.8 FINAL INSPECTION

- A. Upon completion of the scope of work an inspection shall be made by the Owner's Representative to ascertain that the Work has been installed according to the manufacturers published requirements. Observed defects shall be corrected as required to secure the manufacturer's warranty.

END OF SECTION

PART I - GENERAL

1.01 SUMMARY

A. General

1. The contractor shall field verify all conditions.

B. Base Bid - Refer to Summary of Work, Base Bid Scope of Work, Section 011100

1.02 RELATED SECTIONS

A. Related Sections include:

1. Section 012300 - Price and Payment Procedures
2. Section 024000 - Demolition
3. Section 022529 - Existing Roof System Moisture Assessment
4. Section 030131 - Rehabilitation of Concrete Decks
5. Section 030150 - Rehabilitation of Cementitious Wood Fiber Decks
6. Section 061000 – Rough Carpentry
7. Section 076000 - Flashing and Sheet Metal
8. Section 079200 – Sealants and Caulking
9. Section 099100 – Exterior Painting

1.03 SUBMITTALS

A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

B. Bid submittal

1. Approved Applicator letter from proposed roofing manufacturer.
2. Statement of roofing manufacturer's product and name of the subcontractors the bid is based upon. Manufacturer and subcontractors are not to be changed unless unavailable at no fault of the bidder.

C. Required Contractor Submittal Items:

1. Product data sheets for each material required, including:
  - a. Thermoplastic single ply membrane.
  - b. Caulks, mastics, and sealants
  - c. Bonding adhesive
  - d. Clad metal flashing

- e. Insulation, including tapered insulation
  - f. Insulation adhesive
  - g. Cover board
  - h. Cover board adhesive
  - i. Cover board
  - j. Cover board adhesive
  - k. Fasteners
  - l. Termination bar
  - m. Metal accessories
- 2. Samples: primary roof membrane sample.
  - 3. Shop Drawings: construction details, tapered insulation layout.
  - 4. Written certification from the primary roof system manufacturer that the specification is acceptable and stating their intent to supply the specified warranty at the successful completion of Work.
  - 5. Warranty Specimens:
    - a. Sample copy of Manufacturer's specified roofing warranty stating obligations, remedies, limitations, and exclusions of warranty.
    - b. Certified letter indicating intent to supply Contractor Warranty from Section 017000 at the completion of work.
  - 6. Schedule of Values, refer to Section 012300.
- D. Manufacturer's Safety Data Sheets (SDS) to be maintained by the Contractor at the worksite at all times.
- E. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

#### 1.04 QUALITY ASSURANCE

- A. Roofing system shall be UL (formerly Underwriters Laboratory Class A listed. The installed system shall comply with the wind uplift requirements of ASCE 7 and FM 1-90.
- B. The Contractor shall be trained and demonstrate proficient experience in the application of the specified materials having installed no less than three projects of similar scope within the past year. The Contractor shall be approved prior to bid date to install the materials of the specified manufacturer. Contractor shall certified by the manufacturer for the highest warranty level.
- C. The Contractor shall have a Workers Compensation Experience Rating experience modification factor (NCCI) of 1.1 or less.
- D. Pre-construction conference: Prior to the start of work, a conference to be attended by all affected parties shall be held at the jobsite with the intent of coordinating activities to minimize disruptions to the building tenants. Roofing foreman and Sheet metal foreman shall be present.
  - 1. The conference will not be held unless the Foremen are present. If the installation Foremen are different from those who attended the preconstruction conference, a new

preconstruction conference will be held prior to the start of work. The cost for each additional conference is \$1,100 and shall be paid by the Contractor via deductive change order.

- E. Inspection: Upon completion of the installation, an inspection shall be made by the Owner's representative to ascertain that the materials have been installed according to approved specifications and details. The inspection shall be scheduled only after receipt, by the Design Professional, of the Contractor's completed punch list. Upon approval of the project, the required warranties shall be issued. Work judged unsatisfactory requiring a second final inspection shall be charged to the Contractor at \$1,300 per inspection.
- F. Changes: Contractors are required to bid each listed line item as specified.
- G. Applicable standards:
  - 1. Standards of ASTM International (formerly the American Society for Testing and Materials) as referenced herein.
  - 2. National Roofing Contractors Association (NRCA) "Roofing and Waterproofing Manual", current edition.
  - 3. State of Georgia, EPA and local building codes with regard to asbestos abatement shall be included as part of this specification.
  - 4. Occupational Safety and Health Administration (OSHA) "Interim fall protection guidelines for residential construction", current standard.
  - 5. "The International Building Code", current edition adopted by the AHJ, as published by the International Code Council, Inc. and applicable local and State amendments.
  - 6. "Manual of Practice", published by the Construction Specifications Institute (CSI).
  - 7. ASTM Standard D6878 (current version).
- H. The application specifications of each material manufacturer's product shall be considered part of this specification and be followed if it is judged to be of higher quality in the completed roof system. In the event of a discrepancy between this specification and the manufacturer's specification, the Design Professional shall be the sole judge as to which procedure to follow. The roofing contractor shall contact the Design Professional noting any discrepancy a minimum of three days prior to the bid date.
- I. Products or materials containing asbestos are not acceptable for use on the project.

#### 1.05 WARRANTY

- A. General: Warranty shall be provided at no additional expense to the Owner.
- B. Provide a 20 year manufacturer's non-prorated warranty for single ply roofing system and roof insulation. Warranty shall cover labor and materials to correct leaks and defects encountered during the warranty period and shall take effect on the date of final completion. Warranty shall not be voided by emergency leak repairs or by ponding water conditions.
- C. Provide contractor's labor warranty from Section 017410. The warranty term shall be 5 years correcting leaks and defects resulting from workmanship on all installed materials. Contractor shall respond with correcting action within 24 hours of Owner's call.

## 1.06 SITE CONDITIONS

- A. Install roofing in dry weather when ambient temperature is above 40 degrees F.
- B. All roof surfaces shall be free of ponded water, ice, snow and other forms of moisture during installation.
- C. Protective tarps are required to cover materials stored out in the weather. These materials must be on pallets or blocking to raise them a minimum of 4 inches above any ponding water. Packaging labels shall indicate appropriate warnings, storage conditions, lot numbers, and usage instructions.
- D. Contractor shall field verify all dimensions. Roof Top Units (RTU) and penetration conditions shown on the roof drawings are representative of the conditions on the building. Contractor shall field verify the existing conditions.
- E. Bonding adhesive shall be stored in conditions that maintain a minimum temperature of 60 degrees F. With the Owner's permission, adhesive may be stored inside of the heated building or a temporary heated storage area.

## 1.07 DEFINITIONS

- A. Contractor: The business entity providing all labor, materials, equipment and services to complete the Work as specified in the Contract Documents.
- B. Roofing Terminology: Refer to ASTM D 1079 for definitions of terms related to roofing work not otherwise defined in this Section.
- C. Ponding water shall be considered to occur when free water remains on the roof longer than 48 hours.
- D. Leaks in the roof system shall be considered to occur when free water enters the roof assembly from defects in the waterproofing integrity of the installed roofing materials.

## 1.08 PRECAUTIONS

- A. Adhesives, primer and caulks as indicated are extremely flammable and/or toxic. Use precautions indicated by manufacturer.
- B. Surfaces to be bonded shall be dry and clean. Suitable surfaces are usually considered to be smooth, solid masonry, wood, metal and cellular insulating concrete that is considered water resistant and accepted for application by membrane manufacturer.
- C. All fasteners shall be installed with depth-sensing screw guns to prevent overdriving.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. General: All material shall be furnished, specified or approved in writing by the membrane manufacturer.

- B. Basis of Design: Carlisle Syntec Sure-Weld TPO fleeceback 115 mil (Alternate: Carlisle Sure-Flex KEE HP Fleeceback 105 mil).
- C. Available Manufacturers: Subject to compliance with the specified requirements, including UL Class A fire rating for the existing conditions and roof slope, the following manufacturers are approved:
  1. Carlisle Syntec, PO Box 7000, Carlisle, PA 17013, Tel. 800-479-6832, [www.carlisesyntec.com](http://www.carlisesyntec.com)
  2. Siplast; 1000 Rochelle Blvd., Irving TX 75062, +1 (469) 995-2200, 1.800.922.8800 [www.siplast.com](http://www.siplast.com)
  3. GAF Materials Corporation, 1361 Alps Road, Wayne, NJ 07470, Tel. 800-766-3411, [www.gaf.com](http://www.gaf.com)
  4. Johns Manville Corporation, PO Box 5108, Denver, CO 80217, Tel 303-978-2000, [www.jm.com](http://www.jm.com)
  5. Elevate (formerly Firestone Building Products), 250 West 96th Street, Indianapolis, IN 46260, Tel. 800-428-4442
- D. Requests for approved substitutions must be made in writing no later than 10 days prior to bid date. Submit complete product and test data as specified under Submittals for each proposed substitution.

2.02 TPO MEMBRANE: TPO Fleeceback membrane shall be 0.115 inch nominal thickness with minimum 0.060 inch over fleece backing, scrim-reinforced white, tan or light grey (Owner's option) thermoplastic non-curing single ply, minimum 72.5 in. wide by appropriate length, that meets UL Class A for the as-installed conditions, with the following minimum physical properties:

A. Table: Physical properties of TPO membrane

Physical Property	Test Method	Specification
Weight, minimum	ASTM D-751	0.43 lbs/sf
Thickness tolerance	ASTM D-751	60 mil nominal (exclusive of fleece backing)
Breaking Strength	ASTM D-751	275 lbs min.
Tear Strength	ASTM D-751	55 lbs min.
Low Temperature Bend	ASTM D-2136	Pass, -40 F (-40C) Pass 1/8 in. mandrel
Shore A Hardness	ASTM D-2240	80 +- 5
Heat Aging	ASTM D-573	7 days maintains 100% @ 200 F of original
Volatility, max. loss	ASTM D-1203A	0.5%
Hydrostatic res., min.	ASTM D-751A	300 psi
Ozone resistance *	ASTM D-1149	no effect 3 ppm @ 30% strain @ 104F: 72 & 2500 hrs.
Emmiqua 3 million lang.	ASTM E-838	no visible surface cracking
Dimensional stability	ASTM D-1204	24 hrs 0.1% @ 129.2 F
Puncture Res., min.	FTM 101 B,	#2031 325 lbs

\* Test performed on non-reinforced material only.

- B. KEE MEMBRANE: KEE Fleeceback membrane shall be 0.105 inch nominal thickness with minimum 0.050 inch over fleece backing, scrim-reinforced white, tan or light grey (Owner's option)

thermoplastic non-curing single ply, minimum 72.5 in. wide by appropriate length, that meets UL Class A for the as-installed conditions, complying with ASTM D4434 Type III or IV.

## 2.03 RELATED MATERIALS

- A. Flashing: Flashing shall be same membrane as in 2.02 except for perimeter use of sheet metal Membrane Clad Metal. Unreinforced 0.055 in. thick membrane shall be supplied for field fabricated vent stacks, pipes and corners or as premolded accessories. Membrane shall be compatible for direct contact with bitumen materials (asphalt and coal tar pitch) or suitable separation shall be provided.
- B. Bonding Adhesive: Membrane manufacturer Bonding Adhesive shall be provided to hold field sheet and flashing in place. Not to be used in the seams.
- C. Low-rise Foam Membrane Adhesive: Roof membrane manufacturer's recommended two-part urethane low-rise foam adhesive, FM approved; Basis of Design Carlise Flexible FAST Adhesive.
- D. All Purpose Sealant: Provided to serve as water cut-off mastic, pitch-pan sealer and as a caulk to seal membrane to metal.
- E. Primer and Solvent: Primer and Solvent are provided for purposes of preparing membrane for hot-air welding.
- F. Seam Caulk: Seam Caulk shall be provided for the purpose of sealing any cut edge of reinforced membrane.
- G. Overnite Seal: Tie-off that are effective in preventing moisture penetration under newly installed membrane shall be made at the end of each workday and when weather threatens.
- H. Fastener Attachment:
  - 1. Steel and Wood Fastener: Used to attach termination bar, insulation and other components to wood and steel (18 - 24 gauge) substrates. Thread diameter .215, shank diameter .170, head style #3 Phillips truss head and corrosion resistant coating CR-10. 3 inch plastic plate used with insulation board. Membrane manufacturer, OMG Roofing Products, phone 800-633-3800, or prior approved substitution
- I. Termination Bar: Used in the exposed attachment of flashing materials. Extruded aluminum bar with formed caulk edge with pre-drilled holes spaced 6 inches OC. Bar size 1/8 inch thick, 1 inch x 10 foot lengths.
- J. Protection pad: Manufactured by the primary roof membrane supplier and used for the protection of roof membrane and base flashing. The approximate size shall be 30 x 30 x 80 mils min.
- K. Retrofit Drains (only as permitted for use in advance by Design Professional): .U-Flow Hercules RetroDrain as manufactured by Olympic Manufacturing Group, phone 800-633-3800. One-piece seamless body manufactured from 11 gauge spun aluminum. 17 inch flange, cast aluminum strainer and clamping ring.
- L. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer for intended use.

## 2.04 INSULATION/COVER BOARD MATERIALS

- A. All roof areas unless noted otherwise: Rigid polyisocyanurate foam insulation board with factory bonded fiberglass facers as approved by the membrane manufacturer and manufactured in compliance with ASTM C1289-95. Minimum compressive strength 20 psi, Moisture absorption <1%, dimensional stability 2% maximum linear change when conditioned at 158 F and 97% relative humidity for seven days. UL Class A listed and FM Class 1 approved. Curing time shall be 24 hours minimum, plus an additional 24 hours minimum per 1 inch of thickness at a minimum of 60F degrees before shipment from the manufacturer.
  - 1. Flat insulation size 4 x 8 feet, 1-1/2" min thick – Provide thicknesses as required to provide overall R-value for the insulation assembly of R-25 min.
  - 2. Tapered insulation sizes as required to achieve required slope
  - 3. Tapered insulation drain sumps, crickets and saddles shall be 1/2 inch minimum thickness with 1/4 per foot slope
- B. The cover board basis of design is the roofing manufacturer's standard high-density polyisocyanurate cover board, 1/2" thick, min. R-value 2.5.
  - 1. Alternate cover board: "Dens Deck Prime" as manufactured by Georgia Pacific Corporation. Gypsum roof board manufactured as a nonstructural glass mat faced board with water resistant gypsum core for use in commercial roof assemblies. Flexural strength min. 45, flute spanability 2 5/8 inch, water absorption ASTM C473 10.0%, compression 500 psi, flame spread ASTM E84 0.0. 1/2" thickness unless noted otherwise.
- C. Low-rise Foam Insulation Adhesive: "Insta-Stik" one part urethane adhesive as manufactured by, Dow Chemical Corp., 800/800-3626, OlyBond 500 Adhesive as supplied by Olympic Fasteners, 800/633-3800, or the roof membrane manufacturer's prior approved equal.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine all substrates, areas, and conditions under which roofing will be applied, for compliance with requirements. Verify that positive slope to drain exists on each roof area.
- B. Verify that roof openings and penetrations are in place and set and braced and that roof drains are properly clamped into position.
- C. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at roof penetrations and terminations and match the thickness of insulation required.
- D. All roof drains perform properly. Immediately notify the Owner's representative if drainage is deficient before proceeding with work.
- E. Where skylight domes or glass are present within the roof areas, immediately notify the Owner's representative if glass is broken or cracked before proceeding with work.
- F. Do not proceed with installation until unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Clean substrate of dust, debris, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Block off or shut down air intake locations where smoke or odor may be drawn into building ventilation systems during application. Coordinate with the building's representative.
- D. Raise the height of curbed units to a minimum of 8 inches above the finished roof height.
- E. Loose, delaminated or blistered areas must be removed and replaced with insulation of equal thickness. Insulation may be mechanically fastened or adhered with adhesive approved by the roofing manufacturer; refer to roofing manufacturer's technical guides for fastening density and/or bead spacing.

### 3.03 SELECTIVE DEMOLITION

- A. Refer to Section 024000.
- B. TAKE CARE TO REMOVE ONLY AS MUCH OF THE EXISTING ROOF SYSTEM AS CAN BE COMPLETELY COVERED OVER BY INSULATION AND ROOF MEMBRANE IN A WATERTIGHT MANNER BY THE END OF EACH DAY.

### 3.04 GENERAL INSTALLATION REQUIREMENTS

- A. Install single roofing membrane system according to roofing system manufacturer's written instructions and applicable recommendations of NRCA "Roofing and Waterproofing Manual".
- B. Cooperate with inspecting and testing agencies engaged or required to perform services for installing single ply roofing membrane system.
- C. Coordinate installing roofing system components so insulation and roofing plies are not exposed to precipitation or left exposed at the end of the workday or when rain is forecast.
  - 1. Provide cutoffs at end of each day's work to cover exposed insulation with a temporary water tight seal acceptable to the membrane manufacturer. For aggregate-surfaced roofs, spud gravel from the roof area where the tie-in will be made.
  - 2. Complete terminations and base flashing and provide temporary seals to prevent water from entering completed sections of roofing system.
  - 3. Remove and discard temporary seals before beginning work on adjoining roofing.
  - 4. Inspect all roof drains at the completion of work to assure that water flows correctly. Replace all missing or damaged components. Notify the Owner's Representative of any drainage problem conditions prior to the final inspection of the Work.

### 3.05 INSULATION/COVER BOARD SYSTEM APPLICATION

- A. General:
  - 1. Coordinate installing roofing system components so insulation/cover board is not exposed to precipitation or left exposed at the end of the workday.
  - 2. Comply with roofing system manufacturer's written instructions for installing roofing insulation/cover board.

3. Install insulation/cover board under area of roofing to conform to slopes indicated and to Roof Drawings.
- B. Low-slope areas: Install required insulation/cover board materials (base and cover board) in 1 layer with long joints of insulation in continuous straight lines with end joints staggered approximately  $\frac{1}{2}$  the board length between rows, abutting edges and ends between boards. Fill gaps exceeding  $\frac{1}{4}$  inch (6 mm) with insulation.
1. Adhere cover board and insulation over roof area to receive fully adhered roofing using low-rise foam adhesive specifically approved by the roof membrane manufacturer for installation and warranty purposes.
  2. For metal deck areas, mechanically fasten the insulation board layer (excluding cover board) in accordance with the manufacturer's requirements.

### 3.06 ROOF MEMBRANE INSTALLATION

- A. General: Install membrane according to roofing system manufacturer's written instructions, starting at low point of roofing system. Terminate field sheets at the base of parapet walls or curbs.
1. Align sheets without stretching. Membrane shall be unrolled on an area to be covered with adjoining rolls of membrane overlapped 2  $\frac{1}{2}$  inches and installed in shingle fashion to shed water.
  2. Membrane shall be overlapped and hot-air welded. Detail work and repairs can be done with a hand welder, however, automatic welders are to be used for field seaming.
  3. The entire lap must be probed each day soon after it has cooled to verify that the welder set-up is effective. The membrane must be allowed to cool. Cut edges shall be caulked by applying Seam Caulk.
  4. The top surface of the membrane shall be kept clean during installation. Any adhesive, bitumen stains or other foreign materials shall be cleaned from the membrane on a daily basis.
  5. Mechanically fasten roof membrane securely at terminations, penetrations, and perimeter of roofing.
  6. Apply roofing with side laps shingled with slope of roof deck where possible.
- B. Roof membrane is to be completely adhered to the substrate without voids or wrinkles.
1. Bonding adhesive shall be applied to the top surface of the substrate material and the underside of the roof membrane.
  2. Low-rise foam adhesive shall be applied to the substrate only and the membrane rolled into the wet adhesive once it has foamed-up as recommended by the manufacturer and begins to "string" when touched. Membrane shall be rolled with a weighted roller to set the membrane into the adhesive.
- C. Position membrane rolls so that no longitudinal seam results in the drain valley. Use a full roll centered in the valley line.
- D. Contractor shall use a water-filled, foam covered lawn roller to consistently and evenly press the membrane into the adhesive layer.

### 3.07 BASE FLASHING AND STRIPPING INSTALLATION

A. Perimeter, drain and other details shall be flashed as shown in Project Drawings. Membrane shall be mechanically fastened 12 inches OC into wood nailers. Each roof section shall be completely sealed; no flashing shall be left in an open condition at the end of work each day.

1. Base Flashing:

- a. Membrane shall be mechanically fastened into deck. Fastening shall occur at parapet wall, curbs, skylights, expansion joints and any other roof penetrations that exceed 24 inches in dimension.
- b. Install clad metal flashing fastened into wood nailers with two rows of annular ring nails spaced 4 inches OC. Space metal sections ¼ inches apart. Cover the gap with 2 inch wide aluminum tape. Install 4 inch wide membrane flashing hot air welded over the joint. Apply tape sealant to the back of the metal and tool the sealant installed at the top of the metal.

2. Install expansion joints using flexible foam pipe and membrane as indicated in the construction drawings.

3. Bonding Adhesive shall be applied to both the substrate and the membrane and allowed to dry to finger touch until it does not string or stick.

4. All flashing shall be mechanically fastened at the top, under or through appropriate counter flashing, with approved fasteners as shown in detail drawings. Laps shall extend a minimum of 2 1/2 in. beyond fasteners onto field sheet.

5. Gravel stop and drip edge stripping shall be hot air welded to roof membrane. Use of self adhesive stripping is not acceptable.

6. Apply the membrane manufacturer's recommended primer to the inside face of metal pitch pans and around the outside of penetrations.

B. Flashing height and termination:

1. Extend flashing under metal fascia to the outside nailer face fastened minimum 12 inch OC.

2. Flashing on walls, parapets and curbed units to extend a minimum of 6 inches above the roof membrane. Install clad metal flashing where the finished flashing height is less than 6 inches.

### 3.08 ADDITIONAL ITEMS

A. Install walkpad adhered according to the manufacturer's instructions.

1. Install at indications noted on drawings and where required by the roof membrane manufacturer.

### 3.09 FIELD QUALITY CONTROL

A. Bonding Adhesive: Apply continuous application of bonding adhesive in all instances. Roof membrane and flashing coverage to be 70 square feet per gallon when applied to both surfaces; varies with substrate materials.

1. Membrane shall be fully bonded to the insulation and wrinkles in the sheet caused by lack of adhesion are unacceptable. Any area 100 sf in size that has 5 percent or more un-adhered surface area will be removed and replaced.
  2. Bonding adhesive shall be stored in conditions that comply with the manufacturer's requirements. Maintain a minimum temperature of 40F. Storage in cold temperatures may require interior building space (when approved by the Owner), use of hot boxes, or heated trailers.
  3. Wrinkles in field seams are unacceptable and shall be cut out and covered by a membrane patch that extends a minimum of six inches beyond the area of damaged material.
- B. Mechanical Fasteners: Used in the attachment of insulation. Verify fastener pattern complies with project-specific fastening patterns provided by the manufacturer per the submittals.
- C. Install the membrane manufacturer's seam caulk at all cut edges of membrane installed in the field of the roof. Seam caulk is not required on vertical cut edge seams.
- D. All flashings, lap seams and tie-off shall be completed and made water tight each day. The Contractor shall probe each seam at the end of work each day. All deficiencies shall be corrected each day before the crew leaves the jobsite.

### 3.10 PROTECTION

- A. Protect completed roof system from damage, the roofing contractor shall coordinate the use of temporary plywood walkways, wood planking and other precautions to protect the roof and other building surfaces from damage.
- B. Correct deficiencies in or remove and replace roof membrane that inspections and test reports indicate does not comply with specified requirements.
- C. Provide a minimum of two (2) fire extinguishers within 20 feet of each open flame and two (2) fire extinguishers within 20 feet of each rooftop location judged by Owner's Fire Safety Representative to be a possible fire danger.

### 3.11 ADJUSTING and CLEANING

- A. Clean-up: Immediately upon completion of all work specified, the roof and jobsite area shall be cleared of all debris resulting from the Work. Temporary protection shall be removed. Proper disposal of all materials shall be the responsibility of the Contractor.
- B. Dirt stains, bitumen, and other stains to the surface of the newly installed roof membrane shall be removed using citrus cleaner or Tide brand detergent recommended by the roof membrane manufacturer. Heavy stains shall be "spot cleaned" with agent recommended by the roof membrane manufacturer prior to use of citrus cleaner. Cleaning shall continue until the Design Professional's acceptance is secured.
- C. Damage or staining to the building or grounds resulting from the Work shall be cleaned or corrected to the original condition. Replace landscape plantings damaged during construction with comparable size and quality.

### 3.12 FINAL INSPECTION

- A. Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Design Professional. Notify Design Professional and Owner 48 hours in advance of the date and time of inspection.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. General

1. The Contractor shall field verify all conditions that may affect their bid.

B. Base Bid

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

C. Alternate Bid: See Section 011100 and 012300.

1.2 RELATED SECTIONS

A. Related Sections include:

1. Section 012300 - Price and Payment Procedures
2. Section 061000 – Rough Carpentry
3. Section 030131 - Rehabilitation of Concrete Decks
4. Section 030150 - Rehabilitation of Cementitious Wood Fiber Decks
5. Section 075423 – TPO Thermoplastic Roofing (inc. KEE Alternate)
6. Section 079200 – Sealants and Caulking
7. Section 099100 – Exterior Painting

1.3 SUBMITTALS

A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

B. Required Contractor Submittal Items:

1. Sheet metal supplier's written technical information which demonstrates that materials to be installed comply with contract documents.
2. Manufacturer's standard color chart for selection of finish.
3. Warranty Specimens:
  - a. Sample copy of specified metal finish specified warranty stating obligations, remedies, limitations, and exclusions of warranty.
  - b. Certified letter indicating intent to supply Contractor Warranty from Section 017410 at the completion of work.
4. Provide a certified letter with test results demonstrating compliance with ANSI/SPRI standard ES-1 for coping covers, gravel stop and drip edge sheet metal.

5. Provide a certified letter with test results demonstrating coping covers, gravel stop, and drip edge sheet metal is FM approved per FMG standard 4435 for FM insured buildings.

#### 1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials in unopened boxes or uncut lengths and bundles.
- B. Weatherproof tarpaulins are required to cover materials stored out in the weather. These materials must be on pallets with all plastic wrappers removed to prevent condensation. Packaging labels shall indicate appropriate warnings, storage conditions, lot numbers, and usage instructions.

#### 1.5 DEFINITIONS

- A. The Contractor is the business entity providing all labor, materials, equipment, and services to complete the Work as specified in the Contract Documents.
- B. Leaks shall be considered to occur when free water enters the roof assembly from defects in the waterproofing integrity of the installed roofing materials.

#### 1.6 PROJECT CONDITIONS

- A. Follow manufacturer's instructions regarding acceptable conditions for installation of materials.
- B. Substrate: Before starting installation work, complete substrate installation. Substrate shall be smooth, dry, securely anchored, and free of construction debris.
- C. In reroof applications the Contractor shall investigate all field conditions where sheet metal flashing and wood blocking are required. Where existing wood nailers are in acceptable condition they may be incorporated into the new work. Deteriorated nailers shall be replaced at the Unit Cost established in the bid form. The Contractor is responsible for including all required wood nailers in their bid.

#### 1.7 QUALITY ASSURANCE

- A. All materials to be applied shall be compatible with the interfacing components of the existing building.
- B. The Contractor shall be trained and demonstrate proficient experience in the application of the specified materials. The Contractor shall be approved to install the materials of any manufacturer with a warranty still in effect on roof areas included in this scope of work.
- C. Changes: Contractors are required to bid each listed line item as specified.
- D. The application specifications of each material manufacturer's product shall be considered part of this specification and be followed if it is judged to be of higher quality in the completed roof system. In the event of a discrepancy between this specification and the manufacturer's specification, the Design Professional shall be the sole judge as to which procedure to follow. The contractor shall give written notice to the Design Professional of any discrepancy a minimum of three days prior to the bid date.
- E. Perimeter metal system shall be installed to meet Factory Mutual (FM) Class 1, 1-60 requirements at a minimum.

#### 1.8 APPLICABLE STANDARDS:

- A. Standards of ASTM International, formerly American Society for Testing and Materials, as referenced herein.
- B. National Roofing Contractors Association (NRCA) "Roofing and Waterproofing Manual".

- C. State of Georgia, EPA, and local building codes with regard to asbestos abatement shall be included as part of this specification.
- D. Occupational Safety and Health Administration (OSHA) "Interim fall protection guidelines for residential construction", most current standard.
- E. "The International Building Code", as published by the International Code Congress, Inc., and applicable local and State amendments as adopted by the local Authorities Having Jurisdiction (AHJ).
- F. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) "Architectural Sheet Metal Manual", current edition.

#### 1.9 WARRANTY

- A. General: Warranty shall be provided at no additional expense to the Owner.
- B. Manufacturer's 20-year finish warranty on panels and components finished with minimum 70% Kynar 500 fluoropolymer coating. Warranty from coating Manufacturer and coating Applicator shall cover color retention, adhesion, and freedom from chalking.
- C. Provide Contractor's labor warranty from Section 017410. Term shall be 5 years correcting leaks and defects resulting from workmanship on all installed materials. Contractor shall respond with correcting action within 24 hours of Owner's call.

### PART 2 - PRODUCTS

#### 2.1 GENERAL

- A. General: Provide for expansion and contraction of system components due to air temperature and solar heat gain. Provide systems that will accommodate movement due to temperature change without buckling, failure of seals, undue stress on structural elements, reduction of performance or other detrimental effect. Refer to Fabrication for metal thicknesses.
- B. Expansion joint covers, counter flashing, scuppers, pitch pans, copings and other sheet metal items shall be fabricated as specified and shown in the construction drawings and applicable SMACNA standard.
- C. Refer to roof membrane Specification Sections for additional sheet metal requirements.
- D. Coping covers, gravel stop, and drip edge sheet metal shall be manufactured and tested to demonstrate compliance with ANSI/SPRI standard ES-1.

#### 2.2 SHEET MATERIALS - GENERAL

- A. Provide sheet materials in type, thickness, finish, and locations indicated on Drawings and specified herein. The minimum allowable thicknesses shall be within the ranges indicated below.
- B. Galvanized Steel, Factory Finished: ASTM A653/A653M, with G90/Z275 zinc coating.
  - 1. Thickness: 14 ga/.0785 inch/1.9939 mm.
  - 2. Thickness: 16 ga/.0635 inch/1.6129 mm.
  - 3. Thickness: 18 ga/.0516 inch/1.310 mm.
  - 4. Thickness: 20 ga/.0396 inch/1.005 mm.
  - 5. Thickness: 22 ga/.0336 inch/.853 mm.
  - 6. Thickness: 24 ga/.0276 inch/.701 mm.

7. Finish: Factory applied PVDF (Polyvinylidene Fluoride) coating; superior performance organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
8. Color: As selected by Architect from manufacturer full range.

C. Aluminum, Factory Finished: ASTM B209 (ASTM B209M).

1. Thickness: 12 ga/.08081 inch/2.053 mm.
2. Thickness: 14 ga/.06408 inch/1.628 mm.
3. Thickness: 16 ga/.05082 inch/1.291 mm.
4. Thickness: 18 ga/.04030 inch/1.024 mm.
5. Thickness: 20 ga/.03196 inch/.812 mm.
6. Finish: Factory applied PVDF (Polyvinylidene Fluoride) coating; superior performance organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
7. Color: As selected by Architect from manufacturer full range.

D. Stainless Steel, Mill Finish: ASTM A666, Type 304 alloy, soft temper.

1. Thickness: 18 ga/.050 inch/1.270 mm.
2. Thickness: 20 ga/.0375 inch/.9525 mm.
3. Thickness: 22 ga/.03125 inch/.7937 mm.
4. Thickness: 24 ga/.0235 inch/0.5969 mm
5. Thickness: 26 ga/.0178 inch/0.452 mm.
6. Finish: Type 2B - Mill finish.

## 2.3 EXPANSION JOINT

A. Covers: Tapered to shed water with concealed splice plates, miters, transitions, and end caps.

1. Outside and inside faces to extend a minimum of 2 inches beyond the wood blocking.
2. Metal components fabricated in the specified metal.
  - a. Aluminum, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 0.032 inch thickness.
  - b. Galvanized, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 24 gauge thickness.
3. Cleats shall be fabricated from sheet metal one gauge heavier than the specified cover metal.

B. Miters shall be fabricated with standing seam and cover component parts shall be fabricated with sealed seams. Maximum section length on each side of miter shall be 24 inches.

## 2.4 COUNTER FLASHING

A. Counter flashing: Flashing shall have 3-inch notched end lap and 5-inch flashing face.

1. Metal components fabricated in the specified metal.
  - a. Aluminum, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 0.032 inch thickness.
  - b. Galvanized, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 24 gauge thickness.
2. One piece: fabricated with surface mount attachment.

3. Two-piece: with "snap lock" attachment between receiver and counter flashing with reglet attachment. Fabricate the receiver for 1 ½ inch penetration into masonry joints and 4-inch penetration into concrete block joints where applicable.

## 2.5 THRU WALL SCUPPERS, CONDUCTOR HEADS AND DOWNSPOUTS

- A. Design to be fabricated with roofing manufacturer's clad metal or shop fabricated with single top seam formed with sealant and pop riveted (steel) or soldered (copper). Roof side flange shall be minimum 3-inch width, outside wall flange shall be minimum 2-inch width. Drip edge shall extend a minimum of 3/4 inches beyond the exterior flange. Hemmed metal edges shall be attached and sealed with sealant. Scupper size to be 8 inches wide by 4 inches in height where new scuppers are installed.
  1. Metal components fabricated in the specified metal.
    - a. Aluminum, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 0.032 inch thickness.
    - b. Galvanized, factory finish. Thickness: In accordance with SMACNA recommendations, including SMACNA Table 1-5, "Recommended Minimum Gages for Gutter" recommendations. Minimum 24 gauge thickness.

## 2.6 HOT STACKS

- A. Minimum 24-gauge stainless steel or 16 oz. copper. The stack shall be constructed with a 6-inch roof flange and a vertical tube that extends 8 inches above the roof height. The seam between the flange and tube shall be continuously welded and watertight.
- B. Storm Collars: Minimum 24-gauge stainless steel or 16 oz. copper extends a minimum of 1 inch below the top of the pan.

## 2.7 PITCH PANS

- A. The metal components to be electrogalvanized G90 steel in the membrane manufacturer's clad metal. Constructed with 4-inch roof flange and metal top edge hemmed to the inside.
- B. Storm Collars: Minimum 24-gauge stainless steel or 16 oz. copper extends a minimum of 1 inch below the top of the pan.

## 2.8 OTHER MATERIALS

- A. Fasteners: Shall be of compatible material to the sheet metal components to avoid dissimilar metal corrosion.
  1. Used in the attachment of fascia as furnished by the sheet metal manufacturer are corrosion resistant high domed capped with hexagonal head and 5/8-inch bonded washer with EPDM washer seal.
  2. Nails: 1 ¼-inch ring shank galvanized roofing nails.
- B. Epoxy Seam Sealer: 2-part noncorrosive metal seam cementing compound, recommended by metal manufacturer for exterior/interior nonmoving joints including riveted joints.
- C. Metal Accessories: Provide clips, straps, anchoring devices, and similar accessory units as required for installation of work, noncorrosive, size and gauge required for performance. Use materials compatible with fabricated metal to avoid dissimilar metal corrosion.

1. Continuous cleat to be galvanized steel one gauge heavier than fascia metal.
- D. Conductor-Head Guards: 20-gauge bronze mesh or fabricated units, with selvaged edges and noncorrosive fasteners.
- E. Joint Filler: Used as the first component filling pitch pans and for filling cracks, voids, and large openings. Insta-Foam "Froth Pak" two component polyurethane foam Dow Chemical., Joliet, IL. 800/800-FOAM, or approved substitution.
- F. Pourable Sealer: Self-leveling two-part polyurethane for use in pitch pans approved by the Roofing Manufacturer.
- G. Cementitious fill material: One part non shrinking grout. 80 lbs. per bag., coverage at approximately 20 board feet per bag. Used for the purpose of creating a level substrate condition and as the bottom filler in pitch pans. US Gypsum Co., Pyrofil gypsum or approved substitution.
- H. Termination Bar: Used in the exposed attachment of flashing materials.
  1. Inside face of parapet walls: Extruded aluminum bar with formed caulk edge with pre-drilled holes spaced 6 inches OC. Bar size 1/8-inch thick, 1-inch x 10-foot lengths.
- I. Pipe stand: Pillow block pipe stand manufactured from polycarbonate resin use in the support of gas line, condensate line and conduit. Miro Industries, Inc., phone 800/768-6978, or approved substitution.
  1. Model No. 1.5                    2-inch OD or smaller
  2. Model No. 3-R                    4-inch OD or smaller
  3. Model No. 4-RAH                5-inch OD or smaller
- J. Conduit Support: Conduit stand with adjustable support up to 7 inches in height for multiple conduits. Miro Industries, Inc. "2.5 AH or 24 Base Strut", phone 800/768-6978 and Cooper B-Line, Inc. "CB Series or Ce Series" phone 800/6851-7415.
- K. Replacement Roof Debris Screen: Aluminum adjustable drain guard as manufactured by Marathon Roofing Products, phone 800-828-8424.
- L. PVC condensate line: PVC line and fittings shall be Schedule 40 complying with ASTM D1785.
- M. Pre-fabricated side entry portal covers: RPH – VAULT Penetration Protection, RPH, 935 Isom Road, San Antonio, TX 78216, 1 (800) 994-0945
- N. Vent extender: Tubos Vent Extender, prefabricated plumbing vent extension with integral six inch long joint splice sleeve insert in 2, 3, 4 and 5 inch diameters as manufactured by Tubos, Inc. P.O. BOX 4663, CLEARWATER, FL 33758.
- O. Flashing/Subflashing Membrane: To be used under expansion joints covers, copings and similar flashings. Self-adhering polymeric flashing membrane protected by release paper, 40 mil nominal thickness, high-temperature grade. GRACE ICE & WATER SHIELD HT, as manufactured by GCP Applied Technologies, Inc., or equal.

## 2.9 FABRICATION

- A. To the greatest extent practicable, shop fabricate all metal flashing, trim, expansion joints and similar items to comply with profiles and sizes indicated. Comply with industrial standards and the SMACNA "Architectural Sheet Metal Manual."

1. All exposed edges of sheet metal shall be hemmed.
2. Angle the bottom edges of exposed vertical surfaces to form drip edges.

B. EJ Cover and counter flashing sheet metal thicknesses

Face Height	Galvanized Steel	Formed Aluminum	Cold Rolled Copper
Up to 4 inches	26 gauge	.032 inch	16-ounce
4 – 8 inches	24 gauge	.050 inch	16-ounce
8 – 10 inches	22 gauge	.063 inch	20-ounce
10 – 16 inches	20 gauge	.080 inch	N/A

PART 3 - EXECUTION

3.1 GENERAL

- A. Provide for thermal expansion in all exposed sheet metal work exceeding 15'-0" in running length, except place flashing and trim expansion joints on 10'-0" maximum spacing. Locate expansion joints no closer than 2'-0" from corners and intersections. Conceal fasteners and expansion provisions wherever possible.
- B. To the greatest extent practicable, shop fabricate all metal flashing, trim, expansion joints and similar items to comply with profiles and sizes indicated. Comply with industrial standards and the SMACNA "Architectural Sheet Metal Manual." Install in strict compliance with the manufacturer's printed recommendations, modified only as necessary to adapt the system to special conditions of the work.
- C. No attachment or penetrations through the exposed top surface of sheet metal is allowed. All field cuts and trimming shall be smooth and uniform without jagged edges or burs.
- D. Where sheet metal flashings abut a vertical surface, install protective counterflashing with minimum three (3) inch vertical face and minimum three (3) inch concealed transition. Secure vertical face to the substrate as a surface mount attachment using the appropriate fastener. Apply sealant at the top caulk edge and tool to shed water.

3.2 EXAMINATION

- A. Examine substrate of the entire area to receive new roofing to determine that it is dry, free of debris and other irregularities and meets the material manufacturer's requirements for application of their product.
- B. Prior to the installation, the contractor shall inspect the existing treated wood nailers to determine suitability for attachment of the perimeter metal system. Contractor is responsible for adding new wood nailers as required to construct specified details.
- C. Notify the Owner's representative regarding unsuitable conditions before proceeding with installation. Commencing installation signifies acceptance by Contractor of substrate.

3.3 PREPARATION

- A. Selective Demolition: Removal and disposal in accordance with State and Federal regulations. Refer to Section 024000 for additional demolition requirements.
- B. Make all necessary corrections, repairing or replacing substrate materials, prior to application of flashing and sheet metal. Substrate materials shall be in a suitable condition recommended by the materials manufacturer.

- C. Store existing concrete splash pans from all downspouts for reinstallation beneath new downspouts at the completion of work.
- D. Where the existing sheet metal cap on a curb is cut to install new roofing materials, each corner shall have a new sheet metal corner cap installed. The cap shall be fabricated from the same material as the cover and shall extend a minimum of three inches beyond each side of the corner. Install sealant between the cap and cover and pop rivet the cap to the cover.
- E. The Contractor shall provide all electrical disconnects and reconnects. All electrical taps must be accessible. All fans must have a service switch or disconnect. Install new exterior electric connection on curbed units where the electric conduit penetrates the curb without a junction box.
- F. Extend the electrical, gas and freon lines as required. Install exterior connection boxes thru the sidewalls of curbed units.

### 3.4 EXPANSION JOINT COVERS

- A. Fasteners exposed to public view are not acceptable. Install to shed water towards roof surface. Provide concealed transition between coping covers and other metal or wall elements a minimum of 3 inches. Install sealant and fasten at terminations.
  - 1. Install flexible liner to support fiberglass batt insulation set within the cavity. Install additional liner to shed water that may enter past the metal cover. Do not penetrate the horizontal surface of the liner. Double fold seams to restrict water entry. For inspection purposes, the liner shall extend a minimum of 1 inch beyond the metal cover on the inside and outside face. Cut back the liner to the edge of cover after the final inspection.
  - 2. Install continuous metal cleat fastened maximum 12-inch OC to outside face of expansion joints. Attach other side using high-domed, capped, gasketed fasteners spaced approximately 18 inches OC.
  - 3. Begin installation starting from miters or end walls towards center. Extend curbed joints completely to the edge of each roof section.
  - 4. Turn the cover a minimum of three inches upward onto end walls. Install sealant between cover and end wall substrate. Mechanically attach covers to each end wall using two fasteners of a type appropriate to the wall material.
  - 5. Install counter flashing over the end wall termination.
  - 6. Install concealed splice plates and coping sections allowing 3/8-inch space for cover joints.

### 3.5 COUNTER FLASHING

- A. General: Counter flashing shall cover the terminating edge of base flashing. Where exposed fasteners are used, neoprene gasket is required.
  - 1. Align counter flashing metal so that a level line is kept across masonry walls or curbs.
  - 2. Form outside and inside corners by breaking counter flashing to extend twelve (12) inches onto each side. Install full length sections over corner pieces.
  - 3. Prior to installing counter flashing, remove the protective vinyl film. Lap ends of counter flashing three (3) inches at joints.
  - 4. Install copper counter flashing where the existing substrate is copper.

- B. For surface mounted flashing install compressible elastomeric tape behind receiver to span substrate irregularities. Apply sealant at top edge of metal and tool to shed water.
  - 1. Install fasteners spaced a maximum of 12 inches OC into substrates.
- C. Two-piece reglet attached counterflashing is required at walls above roofs.
  - 1. For reglet cuts where new metal is installed, clean joint and insert receiver to a depth of 1 ½ inches into masonry joints. Install foam backer rod into the joint and apply sealant, tooled to complete closure.
  - 2. Where existing counter flashing is used, carefully bend the metal upwards to allow new base flashing to be installed. Fold metal down and fasten to the substrate with appropriate fasteners spaced no greater than 24-inch OC. Where existing joints is caulked, rake the joint between the wall and receiver and apply sealant tooled to shed water.

### 3.6 THRU WALL SCUPPERS

- A. Where exposed fasteners are used, neoprene gasket is required. For reglet cuts where new metal is installed, clean joint and insert receiver. Install lead wedges into joint and apply sealant into joint tooled to complete closure. For surface mounted flashing install compressible elastomeric tape behind receiver to span substrate irregularities. Apply sealant at top edge of metal and tool to shed water. Joints in metal shall be overlapped 3 inches.
  - 1. Construct the wall opening at the indicated locations.
  - 2. Insert scupper sleeve through wall opening and attach to substrate using required fasteners. Fill the gap between the wall and metal scupper using Insta-Foam joint filler.
  - 3. Install metal flange on outside to attach scupper to wall. Apply silicone sealant and anchor to exterior wall using appropriate fasteners.
  - 4. Install existing conductor head and downspout at locations where scupper is primary drainage for roof area. Where scupper provides emergency drainage, spout shall extend 2 inches, ± 1/2 inch from the wall.

### 3.7 HOT STACK

- A. General application
  - 1. Install wood nailers to picture frame the sheet metal duct.
  - 2. Nail thru the flange to attach the sheet metal flashing to the wood nailers. Center the nails in the flange and space nails no more than 8 inches OC.
  - 3. Install the membrane target patch around the stack extending a minimum of 12 inches beyond the flange. Apply seam sealer at the base of the tube and tool to shed water.
  - 4. Install storm collar, draw band and sealant tooled to shed water.

### 3.8 PITCH PANS

- A. Solvent wipe the top and bottom flanges. Set pans in a full bed of sealant and install strip flashing. Install filler and topping/sealer, sloped to shed water. Install sheet metal storm collar or covering as specified.

### 3.9 OTHER ITEMS

- A. Install replacement metal roof drain debris screens/strainers at all locations where the existing screen/strainer is plastic, broken or missing.
- B. Extend PVC condensate line to the nearest drainage element, roof drain or exterior gutter. Install new line and fittings as required to provide drainage across the surface of the roof. Raise line on pillow block supports spaced to provide a minimum of 1-inch clearance above the surface of the roof. Provide roof membrane straps to position the supports and prevent shifting.

### 3.10 PROTECTION

- A. Protect completed roof system from damage, the roofing contractor shall coordinate the use of temporary plywood walkways, wood planking and other precautions to protect the roof from damage by other trades.
- B. Provide two (2) fire extinguishers within 20 feet of each rooftop location judged by Owner's Fire Safety Representative to be a possible fire danger.

### 3.11 ADJUSTING AND CLEANING

- A. With the Owner's representative present, Contractor shall water test all gutters to demonstrate leak free performance. Any leakage shall be corrected by disassembling the deficient section, applying new sealant and new pop rivet attachment. Retest for leak free performance.
- B. Clean-up: Immediately upon completion of all work specified, the roof and jobsite area shall be cleared of all debris resulting from Work. Temporary protection shall be removed.
- C. Damage or staining to the building or grounds resulting from the Work shall be cleaned or corrected to the original condition. Replace landscape plantings damaged during construction with comparable size and quality.

### 3.12 FINAL INSPECTION

- A. Upon completion of the scope of work, an inspection shall be made by the Design Professional, to ascertain that the materials have been installed according to the specified requirements. Observed defects shall be corrected as required to secure the specified warranty(s).
- B. Work noted as deficient during Final Inspection shall be repaired and corrected by the applicator and made ready for reinspection within 5 working days.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. General

1. The Contractor shall field verify all conditions that may affect their bid.

B. Base bid

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

C. Alternate bid: See Section 011100 and 012300.

1.2 RELATED SECTIONS

A. Work related in other sections includes:

1. Section 012300 - Price and Payment Procedures
2. Section 02400 - Demolition
3. Section 075423 – TPO Thermoplastic Roofing (incl. KEE Alternate)
4. Section 076000 - Flashing and Sheet Metal
5. Section 099100 – Exterior Painting

1.3 SUBMITTALS

A. General: Submit in electronic format under provisions of Section 013000. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.

B. Required Contractor Submittal Items:

1. Product data sheets for each material required.
2. Color samples:
  - a. Submit samples of custom color sealant materials matching color sample provided by the Design Professional.
  - b. Samples shall be actual materials or literature depicting actual colors of standard color materials. Design Professional reserves the right to reject work not in conformance with selected colors, based upon samples submitted.
3. Shop Drawings: not required.
4. Certified letter indicating intent to supply Contractor Warranty from Section 017410 at the completion of work.
5. Schedule of Values, refer to Section 013000.

6. Contractor reference list of no less than three (3) projects of similar scope, successfully completed within the past year.
- C. Adhesion compatibility test results: Submit a letter from sealant manufacturer indicating that adhesion and compatibility testing has been performed on actual samples of building and wall components. The letter shall state that materials are compatible and that adhesion is acceptable. Indicate requirements for primers or special preparation.
- D. Manufacturer's Material Safety Data Sheets (MSDS) to be maintained by the Contractor at the worksite at all times.
- E. Submit proposed substitution a minimum of 10 days prior to bid date.
  1. Latest edition of manufacturer's application instructions. Descriptive list of materials proposed and certificate of analysis reporting tested values of physical properties meet or exceed specified materials. Letter signed by manufacturer's corporate officer certifying that system and individual components meet all specification requirements. Make substitution request using the Construction Specifications Institute (CSI) Form 1.5C "Substitution Request (During the Bidding Stage)".

#### 1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in their original unopened containers; display product name, type, grade and mixing instructions.

#### 1.5 JOB CONDITIONS

- A. Weather conditions:
  1. Install no materials under adverse weather conditions or when temperatures are below or above those recommended by the manufacturer's product data or when substrate moisture content is above manufacturer's recommended level.
  2. Proceed with work only when forecast weather conditions are favorable for joint cure and development of high early bond strength. Wherever joint width is affected by ambient temperature variations, install materials only when temperatures are in lower third of manufacturer's recommended installation temperature range.
- B. Protection of adjacent surfaces:
  1. Protect by applying masking material or manipulating application equipment to keep materials in joint. If masking materials are used, allow no tape to touch cleaned surfaces to receive sealant. Remove tape immediately after caulking, before surface skin begins to form.
  2. Remove misapplied materials from surfaces by using solvents and methods recommended by manufacturer.
  3. At surfaces from which materials have been removed, restore to original condition and appearance.

#### 1.6 QUALITY ASSURANCE

- A. Definitions:

1. Sealant: A weatherproof elastomer used in filling and sealing joints, having properties of adhesion, cohesion, extensibility under tension, compressibility, and recovery; designed to make joints air and watertight. Material is designed generally for application in exterior joints and for joints subject to movement.
2. Caulking compound: A material used in filling joints and seams, having properties of adhesion and cohesion; not required to have extensibility and recovery properties, generally for application in interior joints not subject to movement.
3. Caulk: The process of filling joints, without regard to type of material.
4. Joint failure: A caulked joint exhibiting one or more of the following characteristics:
  - a. Air and/or water leakage
  - b. Migration and/or reversion
  - c. Loss of adhesion
  - d. Loss of cohesion
  - e. Failure to cure
  - f. Discoloration
  - g. Staining of adjacent work
  - h. Development of bubbles, air pockets or voids
5. Contractor: The business entity providing all labor, materials, equipment, and services to complete the Work as specified in the Contract Documents.

B. Standards

1. Standards of ASTM International, formerly American Society for Testing and Materials, as referenced herein.
2. State of Georgia, EPA, and local building codes with regard to asbestos abatement shall be included as part of this specification.
3. Occupational Safety and Health Administration (OSHA) "Interim fall protection guidelines for residential construction", most current standard.
4. "The International Building Code", as published by the International Code Congress, Inc. and applicable local and State amendments, as adopted by local Authorities Having Jurisdiction (AHJ).
5. "Manual of Practice", published by the Construction Specifications Institute (CSI).

1.7 WARRANTIES

- A. Installer's warranty: Warrant work to be watertight and free from defects in materials and workmanship, including joint failure. Refer to Section 017410.
- B. Exterior sealant material warranty: Warrant exterior sealant to be free from defects in materials for a period of five (5) years except for silicone-based products, which shall be twenty (20) years for gun-applied silicone sealants and ten (10) years for preformed silicone sealants.
- C. Warranties shall begin at Date of Substantial Completion

PART 2 - PRODUCTS

## 2.1 MANUFACTURERS

- A. General: All material shall be furnished, specified, or approved in writing by the manufacturer.
- B. Available Manufacturers: Subject to compliance with the specified requirements, products of the following manufacturers are approved:
  - 1. Sika/ Master Builder's Solutions 201 Polito Avenue, Lyndhurst, NJ, 07071 Tel: 201-933-8800, fax: 201-804-1076.
  - 2. Tremco, Inc., 3735 Green Road Beachwood, OH 44122, Tel: 216-292-5000, fax: 216-766-5543.
  - 3. Dow Silicones Corporation, Corporate Center, 2200 W. Salzburg Rd., PO Box 994 Auburn MI 48611, Tel. 800-248-2481 [www.dowcorning.com](http://www.dowcorning.com)
  - 4. Pecora Corporation, 165 Wambold Road, Harleysville, PA 19438, Tel. 800-523-6688, [www.pecora.com](http://www.pecora.com)
- C. Requests for approved substitutions must be made in writing no later than 10 days prior to bid date. Submit complete product and test data as specified under Submittals for each proposed substitution.

## 2.2 ONE COMPONENT POLYURETHANE

- A. Sika/MasterBuilders NP1, Sika Sikaflex 15 LM or Tremco Dymonic Smooth.
- B. Characteristics
  - 1. Type: One component moisture curing polyurethane. ASTM C 920, Type X, Grade NS, Class 25, use NT, M, A, G and O. 25% joint movement.
  - 2. Colors: Standard colors as selected by Design Professional.

## 2.3 HYBRID SILYL-TERMINATED (STPE/STPU) SEALANT

- A. Sika/Master Builders Solutions (formerly BASF) MasterSeal NP 100 Hybrid, or approved equal.
- B. Characteristics
  - 1. Type: One-part, low- to medium-modulus silyl-terminated polyether/polyurethane (STPE/STPU) sealant meeting ASTM C920, Type S. Grade NS, min. Class 50.
  - 2. Colors: Standard colors as selected by Design Professional.

## 2.4 MEDIUM MODULUS SILICONE SEALANT

- A. Acceptable products:
  - 1. Dow Silicones Corp., DowSil 795.
  - 2. Pecora Corp., #895
  - 3. Tremco, Inc., Spectrem 2.
- B. Characteristics

1. Type: One-part silicone rubber; meeting ASTM C920-94, Type S. Grade NS, Class 50.
2. Colors: Standard colors as selected by Owner/Design Professional.

## 2.5 LOW MODULUS SILICONE SEALANT

### A. Acceptable products:

1. Dow Silicones Corp., DowSil 790.
2. Pecora Corp., #890
3. Tremco, Inc., Spectrem 1.

### B. Characteristics

1. Type: One-part silicone rubber; meeting ASTM C920-94, Type S. Grade NS, Class 50/100.
2. Colors: Standard colors as selected by Owner/Design Professional.

## 2.6 PRE-CURED SEALANTS/PREFORMED SILICONE SEAL

### A. Acceptable products:

1. Dow Silicones Corp., Dowsil 123 Silicone Seal, phone 877-732-5268, [www.dowcorning.com](http://www.dowcorning.com)
2. Pecora Corp., Sil-Span
3. Tremco, Inc., Spectrem Simple Seal.

### B. Characteristics

1. Type: High strength precured silicone manufactured in the specified profiles. Provide width to provide ½" bondline each side of the joint, with notches and ridges as indicated.
2. Colors: Standard colors as selected by Owner/Design Professional.

## 2.7 ACCESSORY MATERIALS

- A. Joint cleaner: Type recommended by material manufacturer for substrates indicated.
- B. Joint primer/sealer: Type recommended by material manufacturer for substrates, conditions and exposures indicated.
- C. Bond breaker tape: Plastic tape applied to contact surfaces where bond to substrate or joint filler must be avoided for material performance.
- D. Sealant backer rod: Open-cell polyurethane foam; no closed cell or modified closed cell rods allowed. Provide size and shape of rod to control joint depth.
- E. Tooling agent: Agent recommended by material manufacturer to ensure contact of material with inner joint faces.
- F. Primer: solvent based surface preparation materials used for priming joints and substrates.

## PART 3 - EXECUTION

### 3.1 JOB MOCK-UP

- A. Prepare, caulk and finish one mock-up sample of each joint condition.
- B. Sample joints shall be approved by the Design Professional prior to beginning work. Approved, undamaged mock-up joints shall serve as a standard of quality for the remainder of the work.

### 3.2 JOINT SURFACE PREPARATION

- A. Clean joint surfaces immediately before caulking joints. Remove dirt, insecure coatings, moisture, and other substances that would interfere with bond. Saw cut loose mortar and joint filler removing deficient materials to the substrate.
- B. Etch concrete and masonry joint surfaces to remove excess alkalinity unless material manufacturer's product data indicates that alkalinity does not interfere with bond and performance. Etch with 5% solution of muriatic acid; neutralize with dilute ammonia solution; rinse with clean water and allow to dry before caulking.
- C. Consult the manufacturer where primer is required. Metal surfaces such as copper, stainless steel and galvanized steel typically require use of primer. Kynar paint finished surfaces require use of Primer 733.

### 3.3 APPLICATION

- A. Comply with caulking material manufacturer's product data, except where more stringent requirements are specified. Install sealant materials prior to the elastomeric wall coating have been applied.
- B. Prime joint surfaces where recommended by material manufacturer. Do not allow primer/sealer to spill or migrate onto adjacent surfaces.
- C. Install backer rod for caulking materials, except where recommended by material manufacturer to be omitted for application indicated.
  - 1. Place backer rod to maintain recommended sealant thickness and profile.
  - 2. Place rod at depth to provide sealant manufacturer's recommended sealant depth.
  - 3. Do not twist rod during installation.
  - 4. Place rod to minimize possibility of extrusion when joint is compressed.
  - 5. Install bond breaker tape in lieu of backer rod for shallow, closed joints and as recommended by manufacturer's product data.
- D. Employ installation techniques that will ensure materials are deposited in uniform, continuous ribbons without gaps or air pockets, with complete wetting of joint bond surfaces. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form slight cove so that joint will not trap moisture and debris.
- E. Do not allow materials to overflow onto adjacent surfaces. Prevent staining of adjacent surfaces.

- F. Remove excess and misplaced materials as work progresses. Clean the adjoining surfaces to remove misplaced materials, without damage to adjacent surfaces or finishes.
- G. Tool joints of non-sag sealant to concave profile and smooth, uniform surface, flush with edges of substrate. Maintain sealant depth-to-width ratio in accord with manufacturer's product data.
- H. Pre-Formed Silicone Seals
  - 1. Clean substrate with two rag solvent wipe, as per joint manufacturer's guidelines.
  - 2. Apply masking tape to each side of joint.
  - 3. Apply a 1/4" diameter bead of bonding adhesive/ sealant to each side of the joint. Minimum bonding area shall be 3/8".
  - 4. Within ten minutes of bonding adhesive/sealant application (prior to detrimental curing or skinning), press extrusion into the sealant wetting the extrusion, substrate and sealant. Apply consistent pressure to joint to ensure uniform contact.
  - 5. Remove masking tape and excess sealant.
  - 6. At horizontal joints intended to weep, adhere preformed seal along top and side edges only, to allow bottom edge to drain.
- I. Exposed Fasteners: Seal heads of exposed fasteners, providing bond overhead and out minimum 3/8" onto adjacent materials.
- J. Cure sealant and caulking compounds in accord with manufacturer's product data to obtain high early bond strength, internal cohesive strength, and surface durability. Protect uncured surfaces from contamination and physical damage.

### 3.4 CAULKING SCHEDULE

- A. Permanently exposed sealants above roofing, not otherwise specified: one-part silicone.
- B. Miscellaneous roofing applications, not otherwise specified: one-part polyurethane.
- C. Exterior vertical expansion joints: low-modulus silicone.
- D. Exterior joints at concrete, masonry, stucco, EIFS, including control joints and other porous surfaces: low-modulus silicone sealant.
- E. Exterior metal-to-metal joints and other non-porous surfaces: medium-modulus silicone sealant.
- F. Exterior joints at substrates to receive non-silicone coatings: Hybrid Silyl-Terminated (STPE/STPU) Sealant for non-silicone coatings or silicone sealant for silicone coating.
- G. Other joints not specified: low-modulus or medium-modulus silicone sealant to suit substrates.

### 3.5 ADJUSTING AND CLEANING

- A. Remove wet primers, patching repair compounds and finish products from tools and equipment with water. Remove dried materials mechanically.
- B. Clean-up: Immediately upon completion of all work specified, the jobsite area shall be cleared of all debris resulting from the Work. Temporary protection shall be removed. Proper disposal of all materials shall be the responsibility of the Contractor.
  - 1. Prior to curing, clean one component polyurethane using warm soapy water.

2. Prior to curing, clean two component polyurethane using manufacturer's recommended product or xylene.

C. Damage or staining to the building or grounds resulting from the Work shall be cleaned or corrected to the original condition. Replace landscape plantings damaged during construction with comparable size and quality.

### 3.6 FINAL INSPECTION

A. Upon completion of the Work an inspection shall be made by the Design Professional to ascertain that the Work has been completed according to the contract documents and the manufacturers published requirements. Observed defects shall be corrected as required to secure the specified warranty (s).

B. Work noted as deficient during the Final Inspection shall be repaired and corrected by the Contractor and made ready for reinspection within 5 working days.

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY

- A. Base Bid work consists of:
  - 1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.
- B. Alternate Bid: Not Used.

### 1.2 RELATED SECTIONS

- A. Section 024000 –Demolition
- B. Section 061000 – Rough Carpentry
- C. Section 075423 – TPO Thermoplastic Roofing (incl. KEE Alternate)
- D. Section 076000 – Flashing and Sheet Metal
- E. Section 079200 – Sealants and Caulking

### 1.3 REFERENCES

- A. The Society for Protective Coatings
  - 1. SSPC-SP10 / NACE 2 Near-White Blast Cleaning: When viewed without magnification shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products and other foreign matter of at least 95% of each unit area. Staining shall be limited to no more than 5 percent of each unit area, and may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied coatings. Unit area shall be approximately 3 in. x 3 in. (9 sq. in.).
  - 2. SSPC-SP 12/NACE No. 5, Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating, current edition. This standard describes the use of waterjetting to achieve a defined degree of cleaning of surfaces prior to the application of a protective coating or lining system.
  - 3. SSPC-SP 3, Power Tool Cleaning, current edition. This specification covers the requirements for power tool cleaning of steel surfaces.

### 1.4 QUALITY ASSURANCE

- A. Removal of the existing paint materials shall be the responsibility of the Painting Contractor.
- B. All materials shall be mixed, thinned, modified, and applied only as specified by the manufacturer's directions on the container.
- C. All materials shall be applied under adequate illumination, evenly spread and smoothly flowed on with the proper type and sizes of brushes, roller covers, bucket grids and spray equipment to avoid runs, sags, holidays, brush-marks, air bubbles and excessive roller stipple.
- D. Remove and protect hardware, accessories, device plates, lighting fixtures, factory finished work, and similar items; or provide ample in-place protection. Upon completion of each space,

carefully replace all removed items. This work shall be done only by skilled mechanics using adequate tools that are commensurate with the work to be done.

- E. All coats shall be thoroughly dry before applying succeeding coats.

#### 1.5 SUBMITTALS

- A. General: Submit in electronic format under provisions of Section 013110. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named. When either a single named product or system is specified, substitutions will be allowed only if the specified product or system becomes unavailable through no fault of the Contractor.
- B. Required Contractor Submittal Items
  - 1. Product data sheets for each material required, including product specifications, and mixing and installation instructions for each manufactured product.
  - 2. Warranty Specimens
    - a. Certified letter indicating intent to supply Contractor Warranty.
- C. Submit proposed substitution a minimum of 10 days prior to bid date.
  - 1. Latest edition of manufacturer's application instructions. Descriptive list of materials proposed, and certificate of analysis reporting tested values of physical properties meet or exceed specified materials. Letter signed by manufacturer's corporate officer certifying that system and individual components meet all specification requirements. Make substitution request using the Construction Specifications Institute (CSI) Form "Substitution Request (During the Bidding Stage)".
  - 2. Reference list of no less than 5 completed projects of similar scope and no less than 5 successful projects a minimum of 5 years old with the requested substitution system within 100 miles of the specified project jobsite.
- D. For each type of coating specified, only one brand shall be used throughout project.
- E. Applicable standards: Standards of ASTM International (formerly the American Society for Testing and Materials), as referenced herein.
- F. The Contractor shall be trained and demonstrate proficient experience in the application of the specified materials having installed no less than five projects of similar scope within the past year. The Contractor shall be approved prior to bid date to install the materials of the specified manufacturer.
- G. Pre-construction conference: Prior to the start of work, a conference to be attended by all affected parties shall be held at the jobsite with the intent of coordinating activities to minimize disruptions to the building tenants.
- H. The application specifications of each material manufacturer's product shall be considered part of this specification and be followed if it is judged to be of higher quality in the completed system. In the event of a discrepancy between this specification and the manufacturer's specification, the Design Professional shall be the sole judge as to which procedure to follow. The Contractor shall give written notice to the Design Professional of any discrepancy a minimum of three days prior to the bid date.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in original factory packaging bearing identification of product, manufacturer, batch number, and expiration date as applicable. Provide Material Safety Data Sheets for each product.
- B. Store product in a location protected from freezing, damage, construction activity, precipitation, and direct sunlight in strict accordance with manufacturer's recommendations.
- C. Condition products to approximately 60 to 70 degrees F (16 to 21 degrees C) for use in accordance with manufacturer's recommendations.
- D. Handle all products with appropriate precautions and care as stated on Material Safety Data Sheet.

1.7 PROJECT CONDITIONS

- A. Perform no coating work when temperature of surrounding air has dropped below 65 degrees F., unless it is rising; and at no time when it has dropped below 50 degrees F.
- B. Prior to application of primer and finish coats, the substrate shall be dry and with-in the manufacturer's application temperature range. The temperatures will not exceed either maximum or minimum temperature range before cure time has expired for recoat.
- C. Protect all adjacent work from contamination due to mixing, handling, and application of preparation and repair products and elastomeric coating.
- D. Provide adequate ventilation for types of materials being applied.
- E. A minimum of 50-foot candles of illumination (at floor level) is required in all areas where painting is in process.

1.8 SEQUENCING

- A. Coordinate sequence of work with other Trades.
- B. Downspouts and other mechanical equipment, electrical access boxes and other wall penetrations shall be installed after painting, or sufficient room shall be provided for application of coating behind equipment.

1.9 WARRANTY

- A. General: Warranty shall be provided at no additional expense to the Owner.
- B. Provide Contractor's labor warranty. The warranty term shall cover correcting deficiencies resulting from workmanship on installed materials. Contractor shall respond with correcting action within 24 hours of Owner's notification. Refer to Section 017410.

PART 2 - PRODUCTS

2.1 PAINT

- A. Ready-mixed in factory-sealed containers. Use materials as delivered, except for minimal thinning only required by temperature and humidity.

- B. Meet or exceed the requirements of applicable Federal Specification Standards, especially in regard to lead content.

## 2.2 MANUFACTURERS

- A. Available manufacturers: Subject to compliance with the specified requirements, products of the following manufacturers are approved:
  1. Benjamin Moore & Company, 101 Paragon Drive, Montvale, NJ 07645 Tel: 201-573-9600 Fax: 201-573-9046, [www.benjaminmoore.com](http://www.benjaminmoore.com)
  2. Rust-Oleum Corporation, 11 Hawthorn Parkway, Vernon Hills, IL 60061, Tel. 847•367•7700, [www.rustoleum.com](http://www.rustoleum.com),
  3. Sherwin Williams Company, 101 Prospect Avenue, Cleveland, OH 44115, Tel. 800-524-5979, [www.sherwin-williams.com](http://www.sherwin-williams.com).
- B. Requests for substitutions prior to the bid will be considered in accordance with provisions of SUBMITTALS 1.5 C.

## 2.3 MATERIALS

- A. Priming coats, intermediate coats and finish coats applied to the same surface shall all be produced by same manufacturer. The standard of quality is based on materials manufactured by Benjamin Moore Paint Company.
- B. Ferrous Metal Surfaces
  1. Primer: "Super Spec HP Universal Alkyd Metal Primer" as manufactured by Benjamin Moore & Company, phone 201-573-9600, "HS1573402 or HS1573300" primer as manufactured by Rust-Oleum Corporation Phone: 847•367•7700, [www.rustoleum.com](http://www.rustoleum.com), "KEM Flash Prime" Sherwin Williams Paint.
  2. Intermediate/Finish Coat: "Super Spec P20 Rapid Dry Gloss Enamel" as manufactured by Benjamin Moore & Company, phone 201-573-9600, "1500 System Speedy-Dry Alkyd Enamel" as manufactured by Rust-Oleum Corporation Phone: 847•367•7700, [www.rustoleum.com](http://www.rustoleum.com), "Industrial Enamel" as manufactured by Sherwin-Williams, phone 800-524-5979
- C. Wood Surfaces, the standard of quality and Basis of Design is based on materials manufactured by Sherwin Williams Company.
  1. First coat: SW Exterior Latex Wood Primer, B42W8041 Series.
  2. Second coat: SW A-100 Exterior Latex Satin, A82 Series.
  3. Third coat: SW A-100 Exterior Latex Satin, A82 Series.
- D. Rusted Steel Surfaces
  1. Rust Inhibitive Primer: "M04 Acrylic Metal Primer" as manufactured by Benjamin Moore & Company.
  2. "7400 System" heavy duty rust inhibitive primer as manufactured by Rustoleum.
  3. "Steel Spec" rust inhibitive primer as manufactured by Sherwin Williams.

## 2.4 MISCELLANEOUS MATERIALS

- A. Thinners for various paints: As recommended in type or maximum permissible dilution by manufacturer of paint to be thinned.
- B. Filling compound: Factory pre-mixed and adapted for use on specific surfaces.

## 2.5 COLORS

- A. Manufacturer's standard color as approved by the Owner. The primer and finish paint shall be a minimum of two shades of difference in color.

## 2.6 OTHER MATERIALS

- A. All other materials and accessories not specifically described or called for, but which are required for a complete and finished installation for the work of this Section shall be furnished and installed by the Contractor at no additional cost to the Owner. These materials shall be selected by the Contractor, subject to the approved the Design Professional.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Inspect all areas involved in work to establish extent of work, access, and need for protection of surrounding construction, windows, and shrubbery.
- B. Protect all surroundings from primers, patching repair compounds, and finish products including, but not limited to, windows, roofs, walkways, drives, and landscaping.
- C. Conduct all pre-application inspections of site verification with an authorized manufacturer's representative.

### 3.2 PREPARATION

#### A. General

1. Surfaces shall be clean, dry, and adequately protected from dampness. Washing with water and a mild detergent will usually remove dust and dirt. Allow the surface to dry before painting.
2. Mechanically remove foreign material that will adversely affect adhesion or appearance of applied coating.
3. Retouch or refinish painted surfaces damaged by subsequent work.

#### B. Concrete surfaces

1. Remove dirt and grease with power washing and scraping equipment. Remove surface irregularities with mechanical abrasion.

#### C. Existing metal surfaces

1. Surfaces to be re-painted shall first be thoroughly scrubbed with wire brushes to remove all dirt and loose and peeling paint. Use power equipment when hand equipment is not

sufficient.

- D. Inspect substrate joints to ensure no gaps, cracks, or voids greater than 2 mils (0.05 mm); repair gaps, cracks or voids greater than 2 mils (0.05 mm).
- E. Inspect through-wall penetrations, including electrical, lighting, signage, plumbing, HVAC, and fire sprinkler piping for watertight seals. Repair such deficiencies with Crack Preparation Materials.
- F. Remove loose particles, laitance, and other foreign material from the substrate in the area where work will be done.

### 3.3 EXTENT OF COATING APPLICATION

- A. The extent of work is as specified and indicated on the construction drawings.

### 3.4 WARNING LABELS

- A. Prepare a stencil for use to apply a warning label over each of three insulated metal wall panel roof areas. Label shall be "Do not stand on this roof area. Not intended for structural support."

### 3.5 SEALANT APPLICATION

- A. General: Clean joint surfaces immediately before caulking joints. Remove dirt, insecure coatings, moisture, and other substances that would interfere with bond.
- B. Application
  - 1. Comply with caulking material manufacturer's product data, except where more stringent requirements are specified.
  - 2. Prime joint surfaces where recommended by material manufacturer. Do not allow primer/sealer to spill or migrate onto adjacent surfaces.
  - 3. Install backer rod for caulking materials, except where recommended by material manufacturer to be omitted for application indicated.
    - a. Place backer rod to maintain recommended sealant thickness and profile.
    - b. Place rod at depth to provide sealant manufacturer's recommended sealant depth.
    - c. Do not twist rod during installation.
    - d. Place rod to minimize possibility of extrusion when joint is compressed.
    - e. Install bond breaker tape in lieu of backer rod for shallow, closed joints and as recommended by manufacturer's product data.
  - 4. Employ installation techniques that will ensure materials are deposited in uniform, continuous ribbons without gaps or air pockets, with complete wetting of joint bond surfaces. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form slight cove so that joint will not trap moisture and debris.
  - 5. Do not allow materials to overflow onto adjacent surfaces. Prevent staining of adjacent surfaces.
  - 6. Remove excess and misplaced materials as work progresses. Clean the adjoining surfaces to remove misplaced materials, without damage to adjacent surfaces or finishes.

7. Tool joints of non-sag sealant to concave profile and smooth, uniform surface, flush with edges of substrate. Maintain sealant depth-to-width ratio in accord with manufacturer's product data.
8. Cure sealant and caulking compounds in accord with manufacturer's product data to obtain high early bond strength, internal cohesive strength, and surface durability. Protect uncured surfaces from contamination and physical damage.

### 3.6 PRIMER AND PAINT APPLICATION

- A. General: Prepare surfaces and apply paint materials in strict accordance with the manufacturer's published application instructions.
  1. Apply primer the same day wire brushing and surface preparation is done. Do not allow bare metal to remain unprimed for more than 8 hours.
- B. Do not paint
  1. Damp surfaces, during rain or frost, or surfaces likely to freeze within 24 hours of application or on surfaces heated by direct sun.
  2. Bright-plated metal, non-ferrous metal, glass, or surfaces noted or scheduled as not requiring paint.
- C. Surfaces shall be clean, structurally sound, and fully cured. Power wash all surfaces to remove foreign materials and provide a substrate meeting the manufacturer's requirements.
- D. Prime coat and finish coat: Apply a pinhole-free coat.
  1. Application Rate: 200 square feet per gallon to achieve a minimum 3 dry mil dry finish. Application by roller, brush or spray shall be in accord with the manufacturer's instructions.
  2. Apply one coat of finish over the primed substrate. Evenly spread and smoothly flowed on without runs, sags, brush marks, holidays, air bubbles, or excessive stipple, OTHERWISE WORK MUST BE RE-DONE at no additional cost to the Owner.

### 3.7 PAINTING SCHEDULE

- A. All materials shall be painted as follows:
  1. One (1) coat primer, one (1) intermediate coat and one (1) coat finish coat.

### 3.8 ADJUSTING and CLEANING

- A. Remove wet primers, uncured patching repair compounds and wet finish products from tools and equipment with the appropriate thinner recommended by the Manufacturer. Remove dried materials mechanically.
- B. Clean-up: Immediately upon completion of all work specified, the jobsite area shall be cleared of all debris resulting from the Work. Temporary protection shall be removed. Proper disposal of all materials shall be the responsibility of the Contractor.
- C. Damage or staining to the building or grounds resulting from the Work shall be cleaned or corrected to the original condition. Replace landscape plantings damaged during construction with comparable size and quality.

3.9 FINAL INSPECTION

- A. Upon completion of the Work an inspection shall be made by the Design Professional to ascertain that the Work has been completed according to the contract documents and the manufacturers published requirements. Observed defects shall be corrected as required to secure the specified warranty (s).
- B. Work noted as deficient during the Final Inspection shall be repaired and corrected by the Contractor and made ready for reinspection within 5 working days.

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. Section Includes:

1. Steel screening for enclosing roof top mechanical equipment.
2. Steel assembly framing for direct attachment of screening panels to mechanical equipment; no base or curb required unless shown otherwise on drawings.
3. Telescoping steel supports to permit easy access to mechanical equipment for servicing.

#### B. Products Not Installed or Furnished in This Section:

1. Touch-up painting required for scratches and screw heads.
2. Field painting of prime painted screens

#### C. Base Bid Scope of Work items:

1. Refer to Summary of Work, Base Bid Scope of Work, Section 011100.

### 1.2 RELATED SECTIONS

#### A. Section 024000 – Demolition

#### B. Section 075423 – TPO Thermoplastic Roofing (inc. KEE Alternate)

### 1.3 REFERENCES

#### A. American Society of Civil Engineers.

1. ASCE 7-10 - Minimum Design Loads for Buildings and Other Structures.

#### B. International Building Code. 1.

IBC 2012.

### 1.4 STEM DESCRIPTION

#### A. Design Criteria:

1. Manufacturer is responsible for the structural design of all materials, assembly, and attachments to resist snow, wind, suction, and uplift loading at any point without damage or permanent set.
2. Framing shall be designed in accordance with the ASCE to resist the following loading:
  - a. ASCE 7-10 - Minimum Design Loads for Buildings and Other Structures;  
American Society of Civil Engineers.

### 1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's catalog data, detail sheets, specification, and other data sufficient to indicate compliance with these specifications.
- B. Shop Drawings: Indicate layouts heights, component connection details, and details of interface with adjacent construction. Mark data to indicate:
  - 1. Roof top mechanical equipment to be enclosed.
  - 2. As-built site conditions and dimensions and indicate unit size and adjacent construction clearly on shop drawings.
  - 3. Indicate access location to area behind the screen.
- C. Samples:
  - 1. Color Selection: Submit paint chips with full range of colors available for Architect's selection.
- D. Closeout Submittals: Warranty documents, issued and executed by manufacturer, with continued care instructions.

### 1.6 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with requirements of building authorities having jurisdiction in Project location.
- B. Manufacturer Qualifications: Minimum seven (7) years documented experience producing systems specified in this section.
- C. Pre-Installation Meeting:
  - 1. Convene seven (7) calendar days prior to scheduled beginning of construction activities of this section to review requirements of this section.
  - 2. Require attendance by representatives of the installing subcontractor, (who will represent the system manufacturer) and other entities directly affecting or affected by construction activities of this section.
  - 3. Notify Architect four (4) calendar days in advance of scheduled meeting date.

### 1.7 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly indicating manufacturer and material.
- B. Storage and Handling: Protect materials and finishes during handling and installation to prevent damage.

### 1.8 PROJECT CONDITIONS

- A. Field Measurements: Take measurements of actual Roof top unit for fit without gaps. Indicate

measurements on shop drawings fully documenting any field condition that may interfere with the screen system installation.

## 1.9 COORDINATION

- A. Installer for work under this Section shall be responsible for coordination of panel and framing sizes and required options with the Contractor's requirements.
- B. Request information on sizes and options required from the Contractor.
- C. Submit shop drawings to the Contractor and obtain written approval of shop drawing from the Contractor prior to fabrication.
- D. Review proposed materials and installation with the Owner and Owner's HVAC Contractor to confirm acceptability of installation and impacts on Owner's roof top equipment and facility.

## 1.10 WARRANTY

- A. If any part of the rooftop equipment screen fails because of a manufacturing defect within one year from the date of substantial completion, the manufacturer will furnish without charge the required replacement part(s). Any local transportation, related service labor or diagnostic call charges are not included.
- B. This warranty does not cover failure of the rooftop equipment screen if it is damaged by the Owner, or if the failure is caused by improper installation. In no event shall Warrantor be liable for incidental or consequential damages.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Linea Screens by ModWerks

2. Manufacturer Contacts: Ross Wojcik (502) 939-4110  
ModWerks@hts.com www.LineaScreen.com

### 2.2 MATERIALS

- A. Framing: Galvanized steel tubing.
- B. Brackets: galvanized steel, welded and galvanized painted.
- C. Panel material [Contractor to confirm with Owner options indicated prior pricing]:
  - 1. Solid metal panel, 26 gauge, [U-Panel]. Panel to be painted and suitable for outdoor installation. Corrugation direction should be [horizontal] to meet Architect's specifications.
  - 2. Open-air louver [Contractor to confirm with Owner options indicated prior pricing]:

a. 453, 53% open, 4" blades.

3. Custom filler panel, TBD.

D. Hardware for installation including bolts, nuts, washers, screws, and plates to be stainless steel or galvanized steel, suitable for outdoor use.

## 2.3 FABRICATION

- A. Framing: Provide fully welded tube framing with adjustable attachment points. Individual frames shall not be wider than 96". Intermediate cross supports shall be horizontal and/or vertical to meet design loads and to provide additional stiffness, support, or attachment points. Frames shall be true and square, with flush edges.
- B. Top and side trim shall be galvanized steel. Trims shall be painted to match the panel material or to meet Architect's specifications.
- C. Panel materials to be cut to size for fitment into the top and side trim. Panel materials shall be mechanically fastened to the framing. Fasteners shall be located a minimum of 24" o/c in one direction and 24" o/c in the perpendicular direction.
- D. Vertical and horizontal support members shall be an adjustable, telescoping design to allow:
1. Adjustment due to sloping roofs.
  2. Unobstructed pathways for service personnel, minimum 48" wide, around the perimeter of the mechanical equipment, or as specified.
- E. Attachment bracket to the mechanical equipment shall not allow penetration of the walls or flat roof of the equipment. Attachment shall only penetrate the roof overhang, base rails, or other corner members that do not compromise the weatherproof cabinet.
- F. The screening system shall extend flush to the top of the mechanical equipment.
- G. The screening system shall extend to the bottom of the mechanical equipment, or to a predetermined point below that level.
- H. Weighted ballast boxes (where required) shall rest on the roof surface with a protective pad beneath.
1. Boxes shall be galvanized steel construction with galvanized or stainless-steel hardware. Ballast boxes fasten to the screen frames with horizontal and diagonal members.
  2. Boxes shall be located and sized to offset wind loads throughout sections of screening that are not otherwise stabilized. Wind loads determined as specified on plans or by calculated wind load charts.

## 2.4 FINISHES

- A. Color: Selected by Owner from Manufacturer's Standard color chart.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

Examine conditions under which construction activities of this section are to be performed.

1. Submit written notification to Architect and Screen manufacturer if such conditions are unacceptable.
2. Beginning erection constitutes installer's acceptance of conditions.

### 3.2 INSTALLATION

A. Installation is to be performed only by manufacturer's certified installers.

B. Install units in accordance with the manufacturer's instructions and approved shop drawings. Keep perimeter lines straight, plumb, and level. Provide brackets, anchors, and accessories necessary for a complete installation.

C. Fasten structural supports to mechanical equipment without damaging operation of the unit.

D. Attachment bracket to the mechanical equipment shall not allow penetration of the walls or flat roof of the equipment. Attachment shall only penetrate the roof overhang or other corner members that do not compromise the weatherproof cabinet.

E. Provide vertical and horizontal supports as required by approved shop drawings so that the panels are supported uniformly.

### 3.3 ERECTION TOLERANCES

A. Maximum misalignment from true position: 1/4".

### 3.4 CLEANING AND PROTECTION

A. Remove all protective masking from material immediately after installation.

B. Protection:

1. Ensure that finishes and structure of installed systems are not damaged by subsequent construction activities.
2. If minor damage to finishes occurs, repair damage in accordance with manufacturer's recommendations; provide replacement components if repaired finishes are unacceptable to Architect.
3. Prior to substantial completion, remove dust or other foreign matter from component surfaces; clean finishes in accordance with manufacturer's instructions.

END OF SECTION

# POP AUSTIN RECREATION CENTER ROOF PROJECT

1331 ALEXANDER STREET, COLUMBUS, GA 31904

MERIK, INC.  
BUILDING CONSTRUCTION CONSULTANTS  
MERIK PROJECT NO. 24CCGU23RR367  
01/30/26 - ISSUE FOR BID

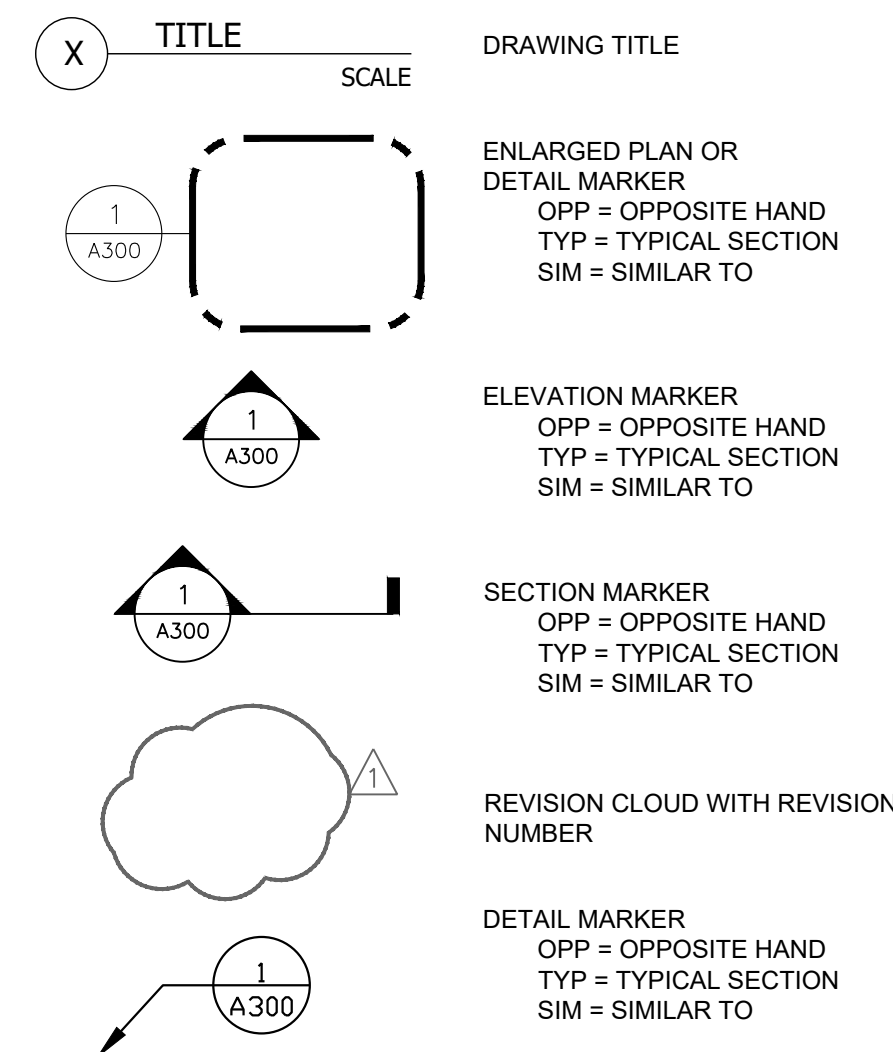
3225 SHALLOWFORD ROAD  
SUITE 520  
COLUMBUS, GA 30062  
770-565-3016  
MERIK SOUTH  
P.O. BOX 1080  
BYRON, GA 31008  
478-954-3971



**GENERAL NOTES:**

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE DESIGN PROFESSIONAL VIA RFI OF ANY ERRORS, OMISSIONS, INCONSISTENCIES, DISCREPANCIES, AND CONFLICTS WITHIN THE DRAWINGS AND SPECIFICATIONS AND FIELD CONDITIONS NO LESS THAN 72 HOURS BEFORE THE BID IS DUE.
- CONTRACTOR IS TO VERIFY LAYOUT AND DIMENSIONS AND ALL CONDITIONS IN THE FIELD WHICH MAY AFFECT THEIR BID.
- THE CONTRACTOR AND SUBCONTRACTORS SHALL BE REQUIRED TO VISIT THE PREMISES TO INSPECT EXISTING CONDITIONS, BECOME FAMILIAR WITH LOCAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND CORRELATE OBSERVATIONS WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ADEQUATE PRECAUTIONS TO PROTECT THE BUILDING OCCUPANTS, MATERIALS AND EXISTING PROPERTY AND FINISHES. EXISTING-TO-REMAIN CONSTRUCTION, MATERIALS OR EQUIPMENT DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO ORIGINAL CONDITION. CONTRACTOR TO DOCUMENT EXISTING CONDITIONS PRIOR TO THE START OF WORK AND SUBMIT RECORDS TO OWNER'S REPRESENTATIVE.
- DRAWINGS ARE INTENDED TO BE PRINTED AT 24x36
- ALL MATERIALS TO BE NEW UNLESS NOTED OTHERWISE.
- DO NOT SCALE DRAWINGS - VERIFY ALL DIMENSIONS IN FIELD

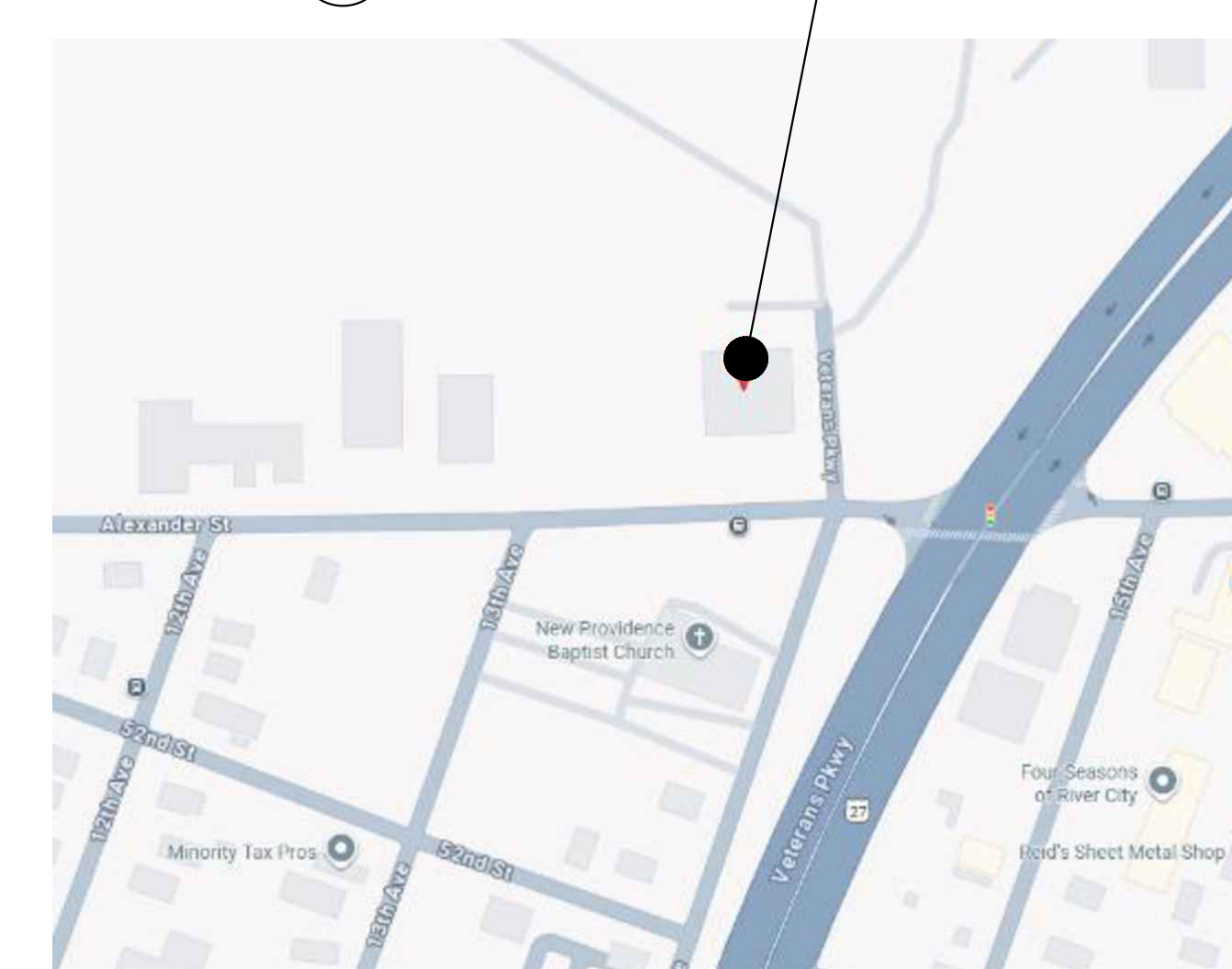
**SYMBOLS:**



**ABBREVIATIONS:**

<b>A</b>	ANCHOR BOLT	<b>E</b>	EACH	<b>P</b>	PLATE
AB	ABOVE	EJ	EXPANSION JOINT	PL	PLYWOOD
ABV	ABOVE	EL	ELEVATION	PT	PRESSURE TREATED
ADD	ADDENDUM	ELEC	ELECTRICAL	<b>Q</b>	QTY QUANTITY
ADJ	ADJACENT	EQ	EQUAL	<b>R</b>	RADIUS
AFF	ABOVE FINISHED FLOOR	EQUIP	EQUIPMENT	RCP	REFLECTED CEILING PLAN
ALT	ALTERNATE	EW	EACH WAY	REF	REFERENCE
ANG	ANGLE	<b>F</b>	FLOOR LEVEL	REQ'D	REQUIRED
APX	APPROXIMATELY	FTG	FOOTING	REV	REVISION
ASP	ASPHALT	<b>G</b>	GALVANIZED	RH	RIGHT HAND
ASPS	ASPHALT SHINGLE	<b>H</b>	HORIZONTAL	<b>S</b>	SELF-ADHERING FLASHING
AWB	AIR AND WATER RESISTIVE BARRIER	<b>I</b>	INSIDE DIAMETER	SIM	SIMILAR
<b>B</b>	BOARD	IE	INVERT ELEVATION	SPUF	SPRAYED POLYURETHANE FOAM
BD	BELOW	IL	INVERT LEVEL	SQ	SQUARE
BEL	BELOW	IO	INSPECTION OPENING	SS	STAINLESS STEEL
BIT	BITUMINOUS	IP	INTERSECTION POINT	SSM	STANDING SEAM METAL
BLDG	BUILDING	<b>J</b>	JOINT	STD	STANDARD
BL	BUILDING LINE	JT	JOINT	<b>T</b>	THICK
BLKG	BLOCKING	<b>K</b>	KEY JOINT	THK	TASK ITEM
BM	BEAM	K.J.	KEY JOINT	TI	TOP OF
B.M.	BENCHMARK	<b>L</b>	LIGHTWEIGHT INSULATING CONCRETE	TO	TOP OF
BOT	BOTTOM	LWC	LIGHTWEIGHT INSULATING CONCRETE	TS	TUBE STEEL
BPL	BEARING PLATE	<b>M</b>	MAXIMUM MANUFACTURER MINIMUM MISCELLANEOUS	TYP	TYPICAL
BTJT	BUTT JOINT	<b>N</b>	NOT IN CONTRACT NOMINAL NOT TO SCALE	<b>U</b>	UNDER SIDE UNLESS NOTED OTHERWISE
BUR	BUILT-UP ROOFING	<b>O</b>	ON CENTER	<b>V</b>	VERTICAL
BW	BOTH WAYS	OC	ON CENTER	V.I.F.	VERIFY IN FIELD
<b>C</b>	CEMENTITIOUS BOARD	OD	OUTSIDE DIAMETER	<b>W</b>	WATER PROOF
CBD	CEMENTITIOUS BOARD	OPT	OPTIONAL	WRB	WEATHER RESISTIVE BARRIER
CF	CUBIC FOOT	OPP	OPPOSITE HAND	<b>SPECIAL CHARACTERS</b>	
CIP	CAST IN PLACE			° = DEGREES	
CJ	CONTROL JOINT			Ø = DIAMETER	
CL	CENTER LINE			# = NUMBER	
CMU	CONCRETE MASONRY UNIT				
CO	CLEAN-OUT				
CONC	CONCRETE				
CONST	CONSTRUCTION				
CONT	CONTINUOUS				
CT	CERAMIC TILE				
CY	CUBIC YARD				

**VICINITY MAP**



**INDEX OF DRAWINGS**

- A000 COVER SHEET
- A001 PROJECT INFORMATION
- A100 ROOF PLAN
- A150 WIND UPLIFT PLAN
- A300 DETAILS - TYPICAL
- A301 DETAILS - PERIMETER & DRAINAGE
- A302 DETAILS - PENETRATIONS
- A303 DETAILS - MISC.

**APPLICABLE CODES AND STANDARDS**

WORK SHALL BE IN ACCORDANCE WITH THE CURRENT BUILDING CODE FOR THE STATE OF GEORGIA, INCLUDING LOCAL AMENDMENTS. THE PUBLICATIONS LISTED BELOW ARE THE GOVERNING CODES AND STANDARDS AND ARE REFERENCED BY THE BASIC DESIGNATION. IN THE CASE OF CONFLICTING REQUIREMENTS THE BUILDING CODE (IBC) SHALL GOVERN.

- IBC INTERNATIONAL BUILDING CODE, 2018 WITH GEORGIA AMENDMENTS
- IECC INTERNATIONAL ENERGY CONSERVATION CODE, 2015 WITH GEORGIA SUPPLEMENTS AND AMENDMENTS
- OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- ASTM ASTM INTERNATIONAL
- ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
- SMACTA SHEET METAL & AIR CONDITIONER CONTRACTOR'S NATIONAL ASSOCIATION
- NRCA NATIONAL ROOFING CONTRACTORS ASSOCIATION

ALL DEMOLITION WORK SHALL COMPLY WITH THE REQUIREMENTS OF 2019 NFPA 241, "STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS".

POP AUSTIN RECREATION CENTER  
ROOF PROJECT  
1331 ALEXANDER STREET, COLUMBUS, GA 31904

Project: 24CCGU23RR367  
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Issues:  
01/30/2026 Issue for Bid

COVER SHEET

A000

**PROJECT NOTES:**

**1. Extent of Work Includes:**

**A. General**

1. The Contractor shall provide a written disaster relief plan designating their agent for emergency response management. The responder will be a company operating in good standing with the State of Georgia DOAS. Refer to Section 013000 Part 1.
2. Contractor shall be responsible for protecting the existing adjacent roof areas that are trafficked over for executing this work.
3. Provide protection for interior spaces below work areas and ensure roof work, penetrations, fasteners, etc. do not damage existing ceiling fixtures, finishes and other appurtenances.

**B. Section 022529 - Existing Roof System Moisture Assessment**

1. Provide third-party moisture survey of all low slope bituminous roof sections.
2. Execute a moisture scan of all insulated, low slope roof surfaces in this contract for moisture content in accordance with ASTM C1153-97, Standard Practice for Location of Wet Insulation in Roofing Using Infrared Imaging, and, or ASTM D7954/D7954M-15A, Moisture Surveying of Roofing and Waterproofing Systems Using Non-Destructive Electrical Impedance Scanners.
  - a. Mark the boundary of each section of confirmed wet insulation with a solid line using aerosol marking paint, in yellow or a similar high contrast color.
  - b. Confirm anomalies are actually wet.
  - c. Number and catalogue the sections as they are found.
  - d. Measure and plot the sections onto a roof diagram.
  - e. Provide a scaled diagram of all wet found.

**C. Section 024000 - Demolition**

1. Remove loose granules and other materials and residues not acceptable for adhesion of new roofing and prepare the surface of all existing low-slope modified bitumen roof for installation of the new roof system.
2. Remove existing wet roofing materials based on moisture survey.
  - a. Where exposed, inspect existing concrete deck; replace defective decking on a unit cost basis.
  - b. Where exposed, inspect existing cementitious fiber deck; replace defective decking on a unit cost basis.
3. Remove the existing sheet metal perimeter, drainage and penetration flashings, including copings, expansion joint caps, counter flashings, pitch pans, metal edge, scuppers, conductor heads, gutters and downspouts, etc.
4. Inspect and remove existing damaged blocking and nailers at gutters, roof edges, equipment, or other locations.
5. Remove existing roof accessories, including expansion joint membranes and flashings, ridge caps, multi-port HVAC penetrations, etc.
6. Adjust conduits, curbs, stacks, gas piping, etc. as necessary to accommodate new roofing elevations.

**D. Section 061000 - Rough Carpentry**

1. Install new wood nailers equal in thickness to the height of the new roof system.
2. Raise curbs to a height 8 inches above the finished roof height.
3. Install wood nailers as required on the top of parapet walls to receive sheet metal coping/edge metal.
4. Install replacement wood nailers and blocking at damaged areas.
5. Install plywood substrate for boxed-in existing duct work at walls above low roof.

**E. Section 075423 - TPO Thermoplastic Membrane Roofing (incl. KEE Alternate)**

1. Abate wet thermal insulation and roofing at all wet areas as indicated on Section 02 2529. Match existing materials and comply with new roof system manufacturer requirements.
2. Prepare all substrates for new roof membrane system installation, in accordance with new membrane manufacturer technical recommendations for specified warranty, including but not limited to removal of loose mineral granules and other materials and residues not acceptable for adhesion of new thermoplastic membrane roofing system.
3. Provide any warranting manufacturer required third party pull testing in accordance with thermoplastic membrane roofing system specified requirements.
4. Install standard color, fully-adhered, 115 mil TPO fleeceback thermoplastic roof membrane and all membrane flashings and accessories as specified and shown in the construction drawings and specified herein.
  - a. Alternate: Install standard color, fully-adhered, 105 mil KEE fleeceback thermoplastic roof membrane and all membrane flashings and accessories as specified and shown in the construction drawings and specified herein
5. Install new roof membrane curb flashings, base flashings, and penetration flashings; paint any flashings and accessories not available in custom color to match field sheet.
6. Install liquid-applied flashings/custom flashings at low flashing height conditions per roofing manufacturer requirements as required for warranty coverage.
7. Picture frame motorized RTUs with roofing manufacturer's premium walkway/protection pad. Install walkway protection pad at roof access points, at the base of roof ladders, roof hatches, and downspout discharges. Provide protection pad between roof access points and other access points, ladders, and motorized RTUs to provide continuous pathway.
8. At existing sheet metal HVAC ducts embedded in the precast concrete panel walls, box in existing duct openings with plywood sealed watertight around the openings and install roof membrane wall flashings over plywood, terminated per roofing manufacturer requirements and provided with new prefinished sheet metal skirt counterflashing shingle-lapped and sealed below existing sheet metal flashing. At existing sheet metal flashings to remain, install silicone sealant at all metal-to-metal and metal-to-concrete joints.
9. Roof drains and subsurface downspout discharge locations:
  - a. Inspect and water test all roof drains and subsurface downspout discharge to remain to confirm they are watertight and functioning properly (notify Owner's representative of any damaged or improperly functioning drainage features prior to roofing those areas).
  - b. Inspect and secure drain bodies, boots and couplings below the deck as required.
10. At existing internally piped roof drains reuse existing drains, clean drain bowl and clamping rings, and replace missing or damaged hardware as required, or install retrofit roof drains at existing drain locations (Contractor's Option).
11. Replace sheet metal perimeter, drainage, and flashing components, including copings, metal edge, counterflashings, trim, gutters downspouts and conductor heads, etc. Refer to Section 076000.
12. Coordinate and flash new replacement HVAC unit with Owner's HVAC contractor.
  - a. All HVAC and related piping work shall be performed by a third-party mechanical contractor licensed by the State for non-restricted commercial work.
13. Install new tapered polyisocyanurate insulation at crickets and saddles between drainage points, sumps, and at up-slope side of rooftop equipment. Overbuild existing crickets and saddles to provide additional slope. Sump through-wall scuppers with three-sided tapered edge application.

**F. Section 076000 - Flashing and Sheet Metal**

1. General: Sheet metal expansion joint covers, copings, edge metal, counter flashing, pitch pans, scupper sleeves, gutters/downspouts, throughwall flashings, etc. shall be fabricated as specified and shown in the construction drawings and per SMACNA requirements otherwise, and where applicable, meet ANSI/SPRI requirements.
2. Install perimeter and penetration sheet metal flashing materials.
3. Replace sheet metal copings, edge metal, counterflashing and trim.
4. At counterflashing conditions, provide two-piece counterflashing consisting of pre-finished sheet metal receiver with lower pre-finished sheet metal counterflashing skirt attached to the receiver.
5. Provide new membrane-clad through-parapet open-top scuppers at high roof, lapped by parapet copings and terminated at the face with sheet metal face plate, caulked watertight to the wall panels with silicone sealant.
6. Provide watertight sheet metal rain collars over pitch pockets/pitch pans.
7. Install pillow block supports under conduit, gas, pipe and condensate lines.
8. Plumb condensate lines to nearest drain, gutter, throughwall-scupper or downspout leader, or off the building at a location approved by the Owner.
9. At sheet metal copings and edge metal provide continuous, watertight underlayment consisting of roof flashing membrane.
10. Provide pre-fabricated side entry portal covers for HVAC line hoods at existing HVAC/condensing units, with concrete pad over roofing protection course under units.
11. Replace sheet metal gutter and downspouts at locations indicated on the drawings and specified herein. Provide prefinished sheet metal gutter and downspouts sized one-inch larger than existing, with two downspouts per gutter with separate leaders and discharges at grade (maximum downspout elbow angle 75 degrees). Provide concrete splashblocks at downspout discharge locations.

**G. Section 079200 - Sealants and Caulking**

1. Install the specified sealant at locations indicated on the construction drawings and as specified herein.
2. Seal exposed non-gasketed fasteners, rivets, and other wall or flashing penetrations and fasteners above the roofing.
3. Install pre-formed silicone seals at terminations of sheet metal copings that abut other components.
4. Recaulk precast concrete panel joints above roofs with silicone sealant.
5. Recaulk window and wall penetrations above roofs with silicone sealant and wet-seal window metal-to-metal and metal-to-glass joints with silicone sealant.

**H. Section 099100 - Exterior Painting**

1. Prep, prime and paint steel components within the roof work areas, including equipment supports, roof hatch frames and covers, steel vent/stacks, curb covers, etc.
2. Repaint fixtures, fasteners, tie-backs and other metal items above the roof areas and attached to the roof structure that are presently painted; repaint downspout boots at grade.

**I. Section 108213 - Equipment Screens**

1. Remove and dispose of existing HVAC screen wall and mounts.
2. Replace screen wall with specified unit-mounted screen wall (Linea Equipment Screen by ModWerks).

\* SEE SPECIFICATIONS FOR FULL EXTENT OF WORK.

2. Existing structure to remain. Contractor to verify integrity of existing structure and notify owner if any of the proposed new work will adversely affect the existing structure.
3. Protect from damage existing finish work that is to remain in place. If it becomes damaged during demolition promptly repair damage caused to facilities by demolition.
4. Conduct demolition operations and debris removal to ensure minimum interference with walks, roads, and occupied spaces, and adjacent facilities.
5. Contractor shall verify existing structure prior to submittal of bid and prior to any demolition operations.
6. Contractor to verify all conditions and elements prior to submitting bid.
7. DO NOT SCALE DRAWINGS - VERIFY ALL DIMENSIONS IN FIELD.

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POP AUSTIN RECREATION CENTER  
ROOF PROJECT  
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PROJECT  
INFORMATION

A001

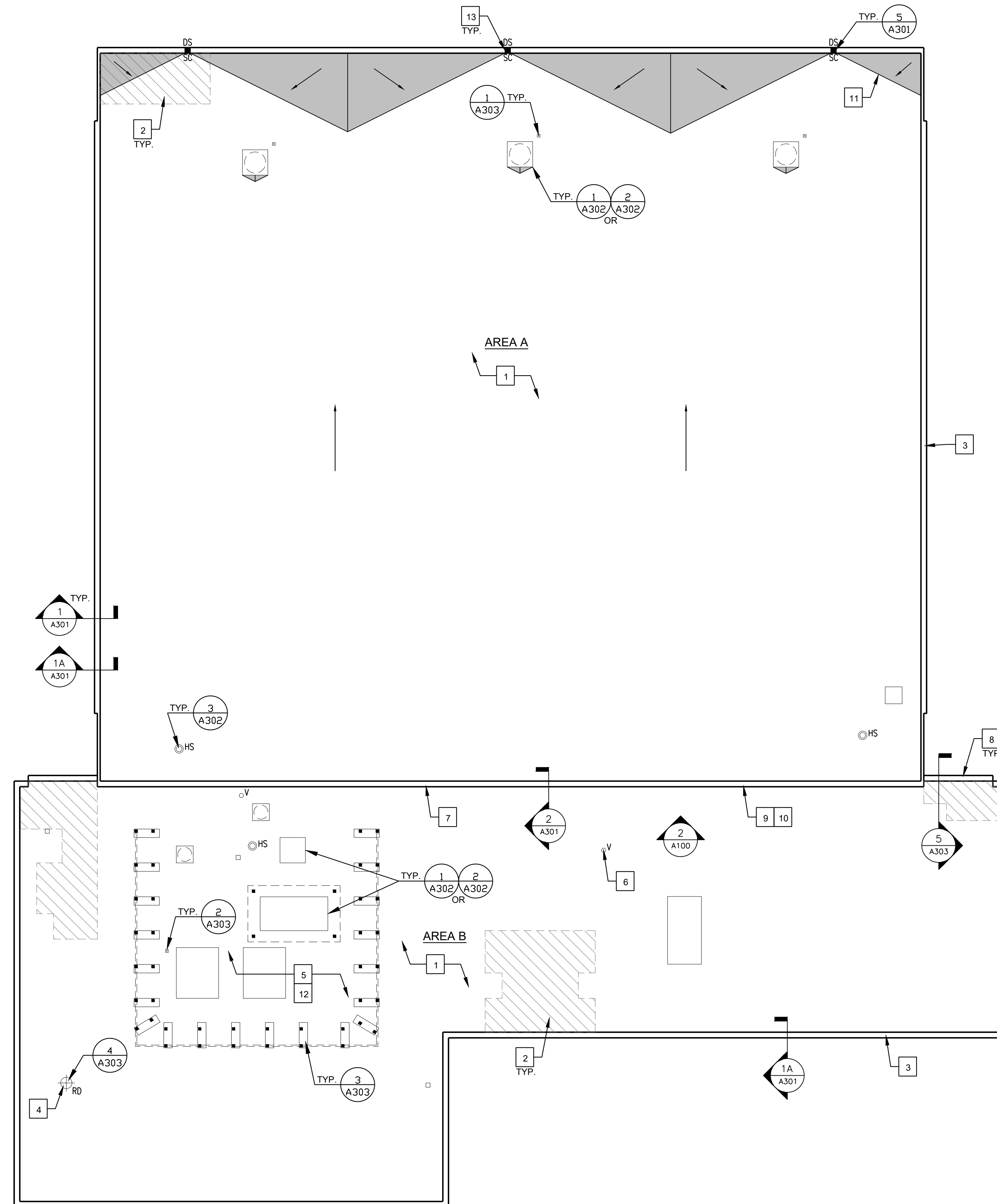


2 SEALANT & FLASHING WORK  
NOT TO SCALE

KEY NOTES:

- 1 Remove loose granules and other materials and residues not acceptable for adhesion of new roofing and prepare the surface of all existing low-slope modified bitumen roof for installation of the new roof system. Fully adhere the TPO Thermoplastic Fleeceback Membrane Roofing system (Alternate: provide KEE Fleeceback roof membrane in lieu of the TPO roof membrane.)
- 2 Provide third-party roof moisture survey of all low-slope roof areas and remove wet roofing materials based on the results of the moisture survey. Match existing materials and comply with new roof system manufacturer requirements.
- 3 Extend roof membrane up and over parapet and install new shop-fabricated prefinished sheet metal coping or prefabricated factory edge metal (Contractor's Option except at low roof, which requires factory edge metal).
- 4 At existing internally piped roof drains reuse existing drains, clean drain bowl and clamping rings, and replace missing or damaged hardware as required, or install retrofit roof drains at existing drain locations (Contractor's Option).
- 5 Remove and dispose of existing HVAC screen wall and mounts and replace with specified unit-mounted screen wall. Coordinate and flash new replacement HVAC unit with Owner's HVAC contractor. Coordinate and flash two new HVAC units with nominal curb dimensions 14"x66"x42" (to be verified with HVAC contractor).
- 6 Replace missing or damaged components of roof penetration sheet metal and cap.
- 7 At existing sheet metal HVAC ducts embedded in the precast concrete panel walls, box in existing duct openings with plywood sealed watertight around the openings and install roof membrane wall flashings over plywood, terminated per roofing manufacturer requirements and provided with new prefinished sheet metal skirt counterflashing shingle-lapped and sealed below existing sheet metal flashing. At existing sheet metal flashings to remain, install silicone sealant at all metal-to-metal and metal-to-concrete joints.
- 8 Replace existing gutters and downspouts. Provide prefinished sheet metal gutter and downspouts sized one-inch larger than existing, with two downspouts per gutter with separate leaders and discharges at grade (maximum downspout elbow angle 75 degrees). Provide concrete splashblocks at downspout discharge locations.
- 9 Recaulk precast concrete panel joints above roof with silicone sealant.
- 10 Recaulk window and wall penetrations with silicone sealant and wet-seal window metal-to-metal and metal-to-glass joints with silicone sealant.
- 11 Install supplemental tapered insulation (1/8" per foot min.) at existing crickets and saddles at high roof to enhance surface drainage to scuppers. Install tapered insulation at upslope side of curbs.
- 12 Install condensate lines as needed to plumb condensate water off the roof assembly and into a downspout leader on the lower roof.
- 13 Provide new through-parapet open-top scuppers at high roof, lapped by parapet copings and terminated at the face with sheet metal face plate, caulked watertight to the wall panels with silicone sealant.

LEGEND:	
	ROOF DRAIN
	OVERFLOW SCUPPER W/ COLLECTOR BOX & DOWNSPOUT
	RAISED CURB
	CURB MOUNTED EQPM (VENT OR FAN)
	HOT STACK
	VENT THROUGH ROOF
	HATCH
	SLOPE DIRECTION
	DENOTES AREA OF LIKELY WET INSULATION TO BE REPLACED
	TAPERED INSULATION



DO NOT SCALE DRAWINGS - VERIFY ALL DIMENSIONS IN FIELD

1 OVERALL ROOF PLAN  
SCALE: 1/8" = 1'-0"  
PROJECT NORTH

3225 SHALLOWFORD ROAD  
SUITE 520  
MARIETTA, GA 30062  
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1331 ALEXANDER STREET, COLUMBUS, GA 31904

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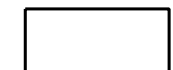

ROOF PLAN

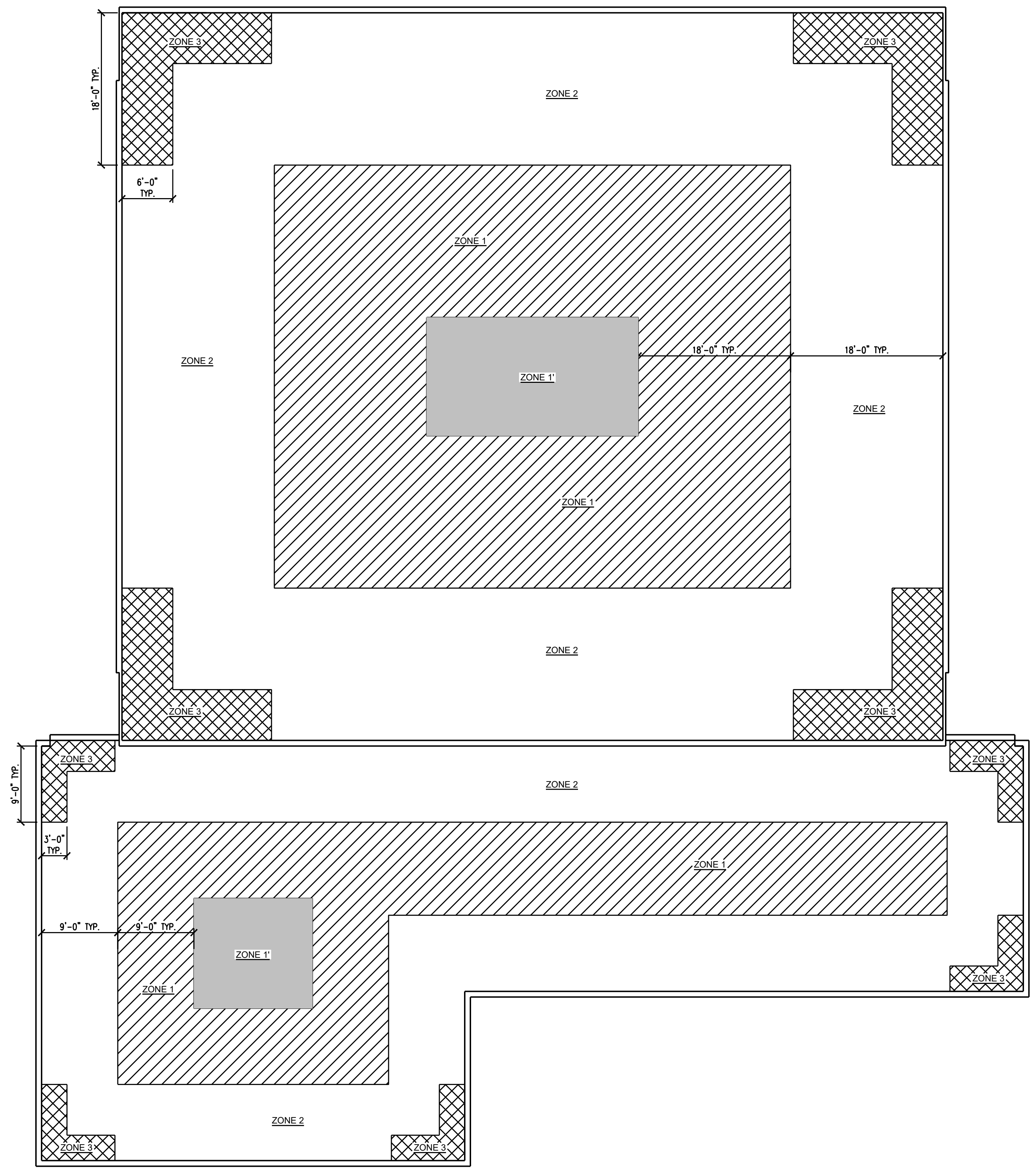
A100

The wind uplift forces are in accordance with the current ASCE 7-16 Standard and are used for the resistance of the designed roofing systems to resist these forces. The analysis of the structures to resist these forces is not included nor a part of this scope of work.

Wind pressures shown are allowable wind pressures and are to be used for the design of the roof assembly. These wind pressures are based on ultimate wind pressures reduced by a factor of 0.6 for wind and increased by a safety factor of 2.0.

Risk Category II  
 Exposure Category B  
 Basic Wind Speed = 110 mph

WIND UPLIFT ZONES AND PRESSURES	
(pounds per square foot - psf)	
	ZONE 1' -23.9 psf
	ZONE 1 -41.6 psf
	ZONE 2 -54.8 psf
	ZONE 3 -74.8 psf



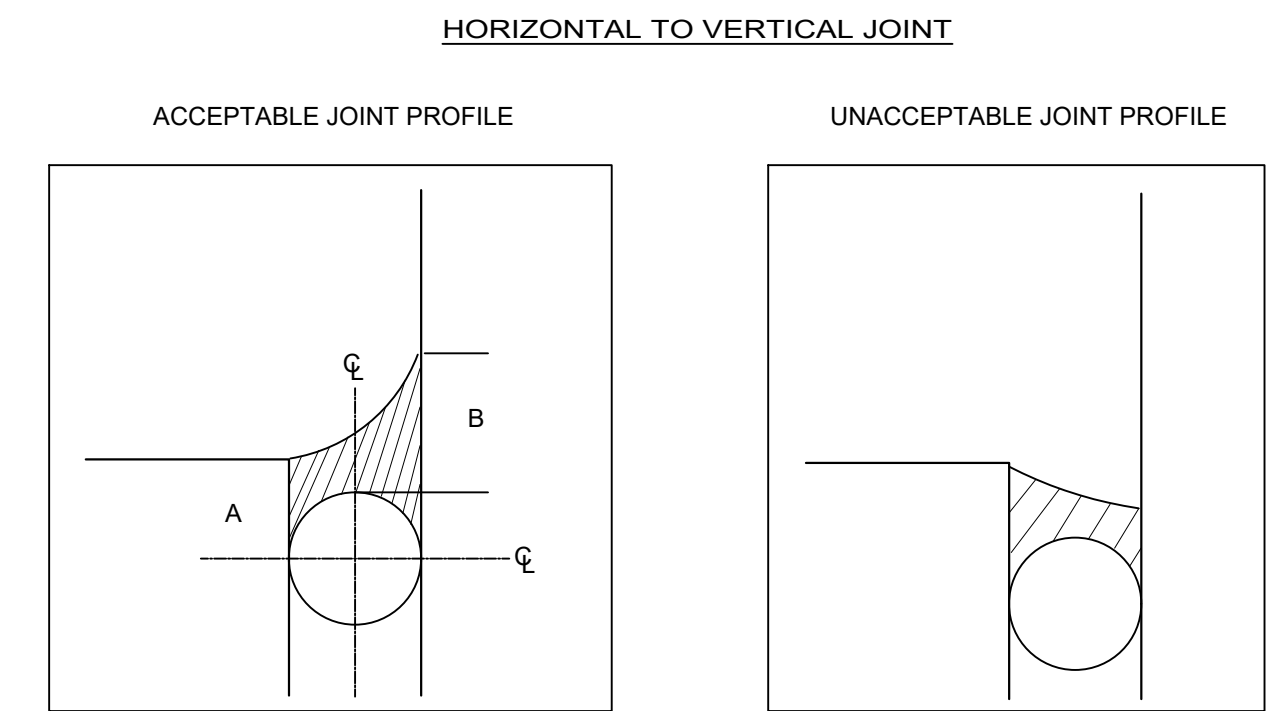
DO NOT SCALE DRAWINGS - VERIFY ALL DIMENSIONS IN FIELD

1 WIND UPLIFT PLAN  
 SCALE: 1/8" = 1'-0"  
 PROJECT NORTH



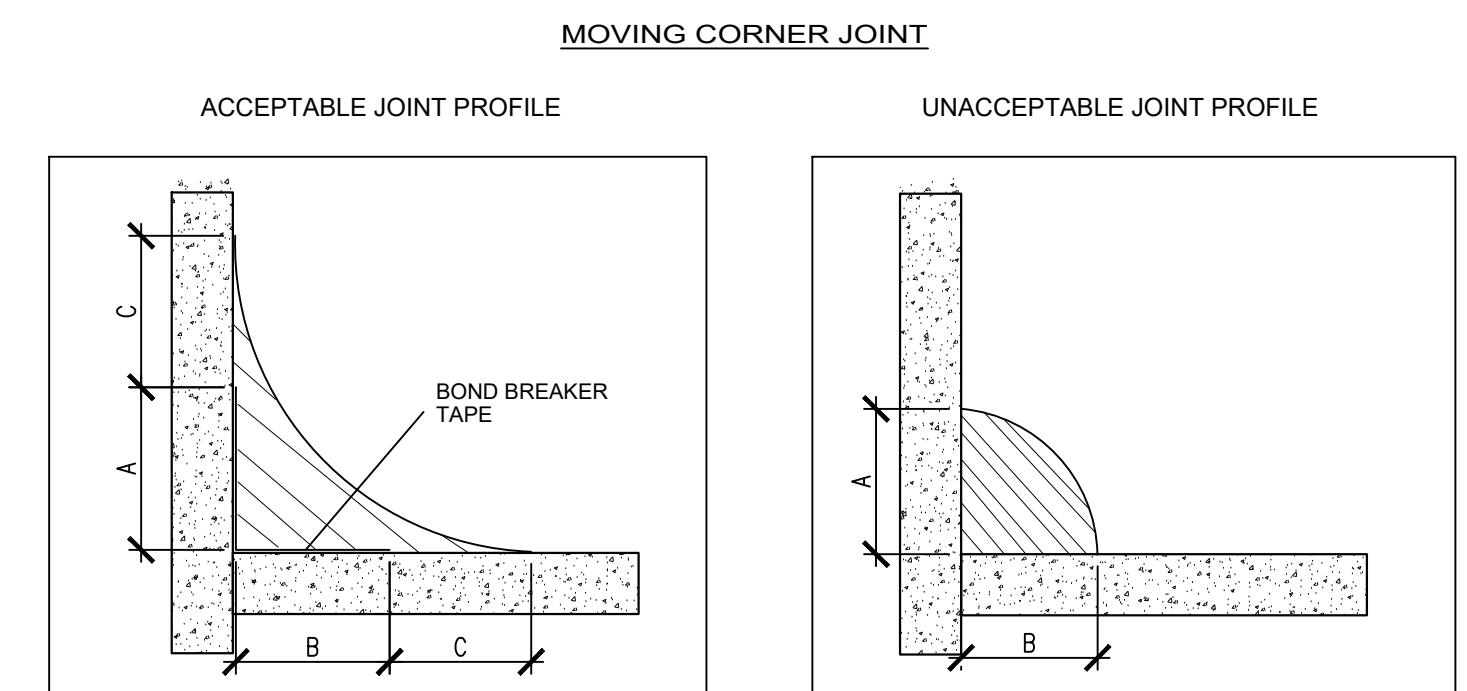
TYPICAL FASTENING AND ADHESIVE ATTACHMENT PATTERNS ARE FOR REFERENCE PURPOSES ONLY. REFER TO MANUFACTURER'S TESTING, APPROVALS, AND REQUIREMENTS. CONFIRM ATTACHMENT PATTERNS MEET SPECIFIED WIND UPLIFT VALUES FOR EACH ZONE BASED ON APPROVED ROOF SYSTEM MANUFACTURER.

3 EXAMPLE ADHESIVE ATTACHMENT PATTERNS  
NOT TO SCALE



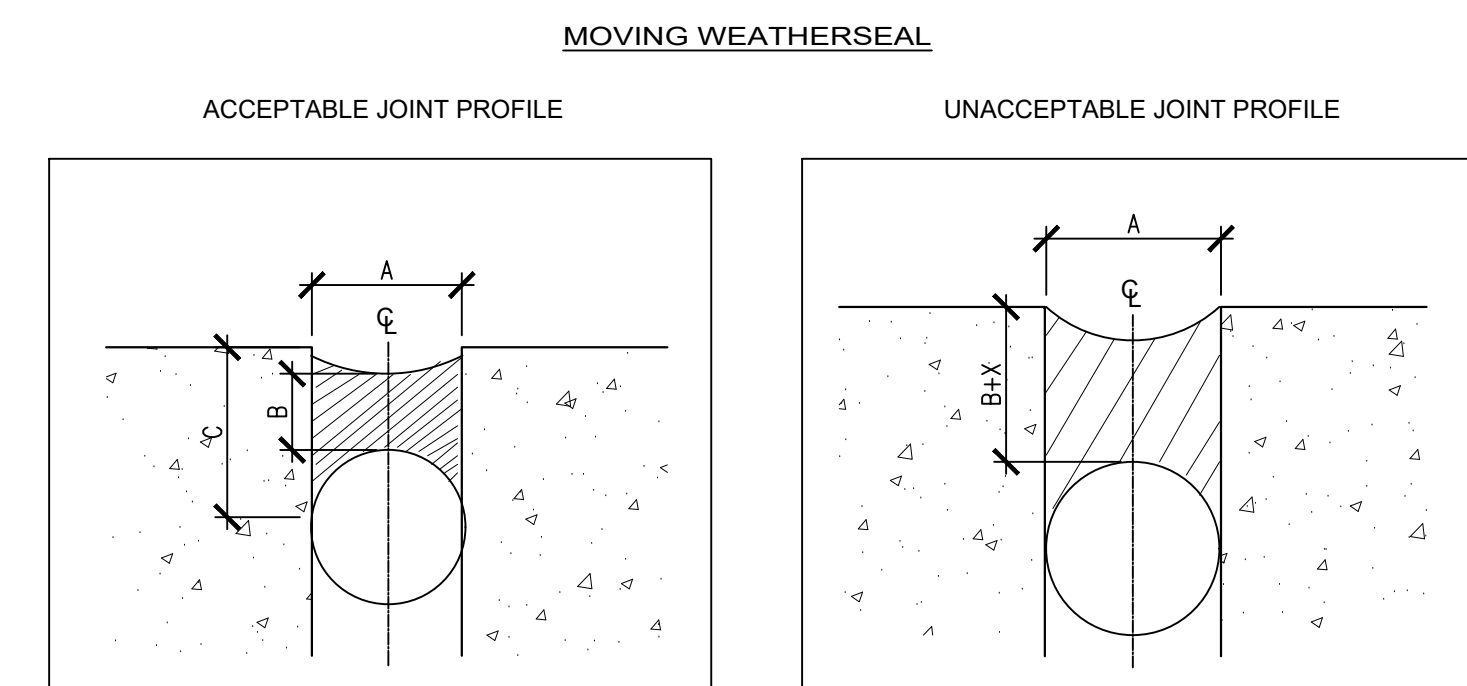
KEY POINTS:  
1. DIMENSIONS A AND B ARE BOTH GREATER THAN 1/4"  
2. SEALANT TOOLED TO ENSURE POSITIVE RUNOFF OF WATER.

CONCERNS:  
1. WATER COULD ACCUMULATE ON TOP OF JOINT INCREASING PROBABILITY OF JOINT FAILURE.  
2. DIFFICULT ACCESS/ BACKER ROD DEPTH CONTROL.



KEY POINTS:  
1. DIMENSION A AND B MUST BE AT LEAST 1/4".  
2. A BOND BREAKER TAPE OR BACKER ROD MUST BE PRESENT IF JOINT MOVEMENT IS ANTICIPATED.  
3. JOINT MUST BE TOOLED INTO A CONCAVE SURFACE.  
4. DIMENSION C MUST BE AT LEAST 1/4".  
5. MINIMUM SEALANT THICKNESS OF 1/8".

CONCERNS:  
1. DIMENSION A AND B LESS THAN 1/4".  
2. JOINT NOT TOOLED INTO CONCAVE SURFACE.  
3. NO BOND BREAKER MATERIAL, JOINT WILL NOT ACCEPT MOVEMENT.



KEY POINTS:  
1. DIMENSION A AND B MUST BE AT LEAST 1/4".  
2. RATIO OF A/B SHOULD BE 2:1 MINIMUM.  
3. JOINT SURFACE TOOLED CONCAVE.  
4. DIMENSION B SUGGESTED MAXIMUM = 3/8"  
5. DIMENSION A MAXIMUM CONSULT SEALANT MANUFACTURER.

CONCERNS:  
1. A DEEP SEALANT JOINT WILL NOT HAVE THE SAME MOVEMENT CAPABILITY AS A PROPERLY DESIGNED JOINT.  
2. SLOW CURE DUE TO EXCESSIVE SEALANT DEPTH.

1 TYPICAL SEALANT DETAILS  
NOT TO SCALE

3225 SHALLOWFORD ROAD  
SUITE 520  
MABLETOWN, GA 30062  
770-565-3016

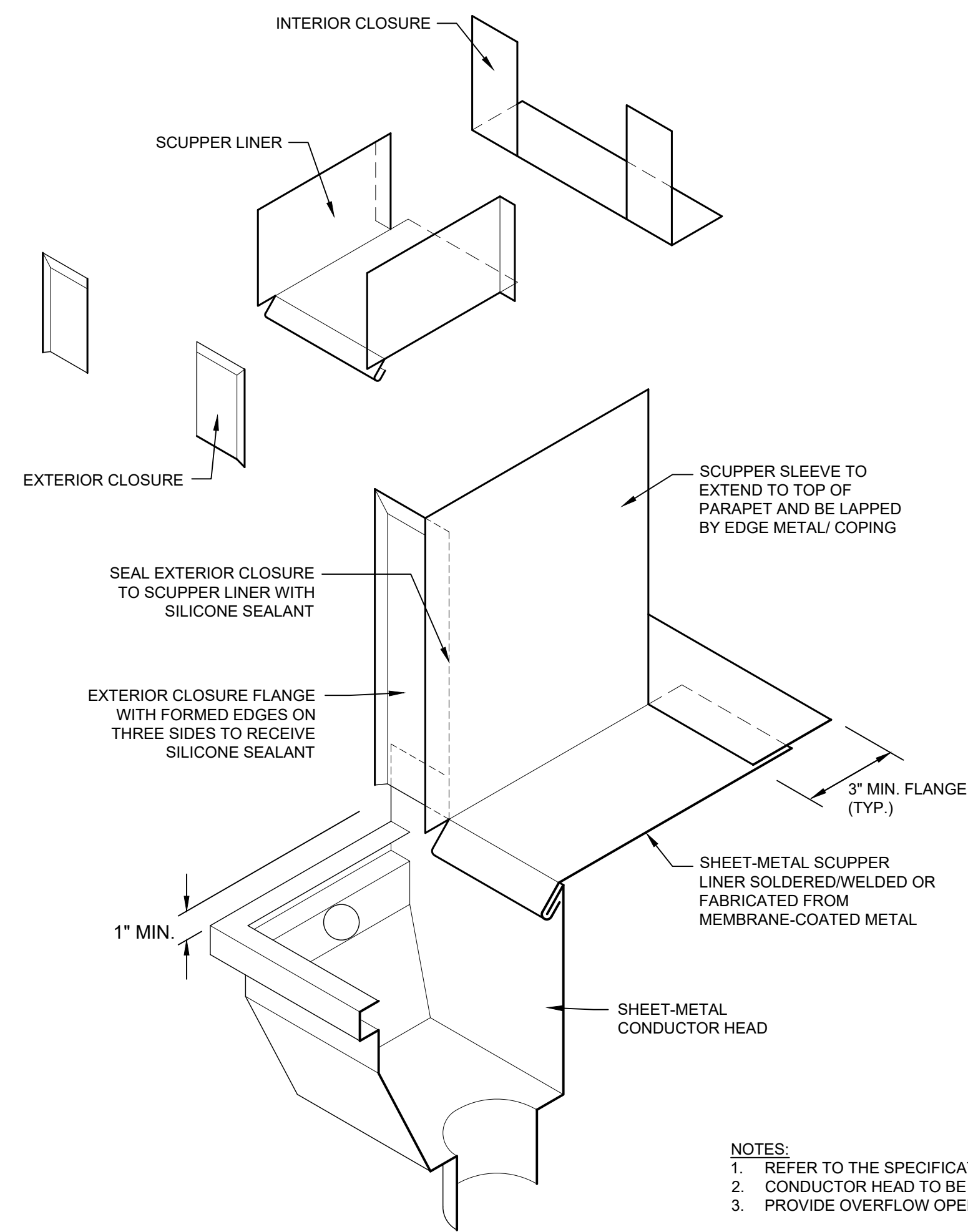
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POP AUSTIN RECREATION CENTER  
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1331 ALEXANDER STREET, COLUMBUS, GA 31904

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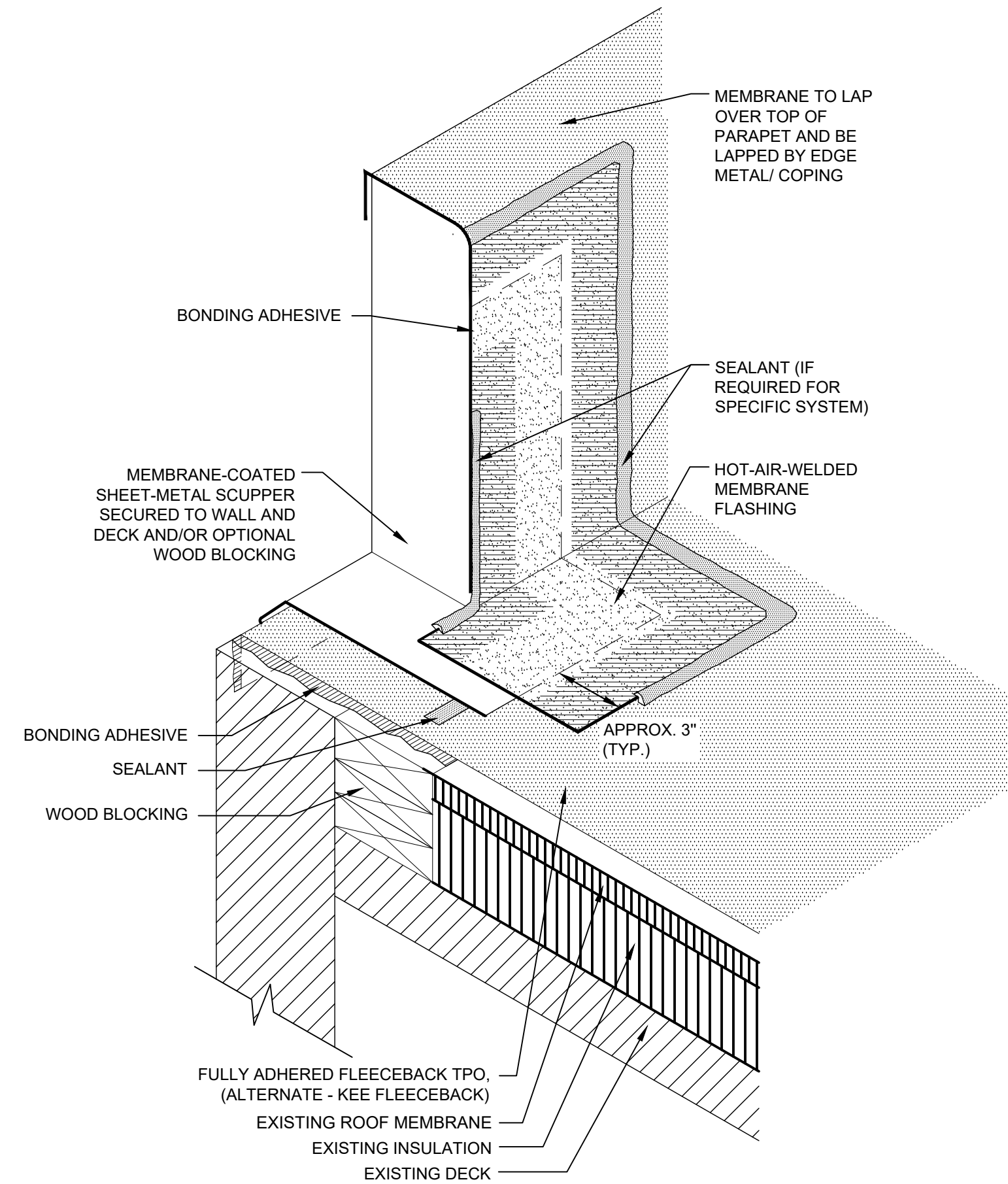
DETAILS -  
TYPICAL

A300

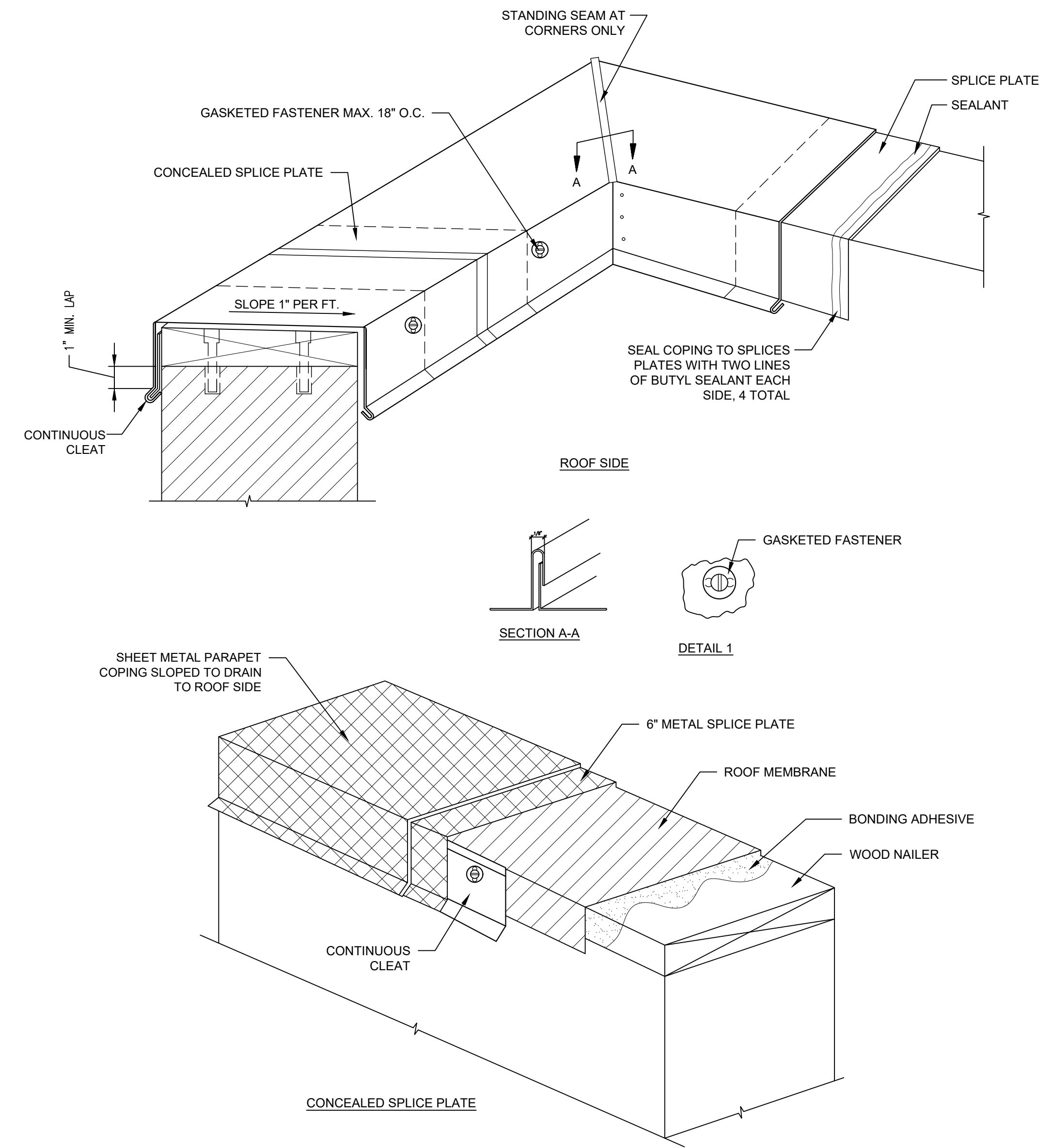


- NOTES:
1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.
  2. CONDUCTOR HEAD TO BE 1 INCH MINIMUM BELOW BOTTOM OF THROUGH-WALL SCUPPER.
  3. PROVIDE OVERFLOW OPENINGS AT SIDES OF CONDUCTOR HEAD.

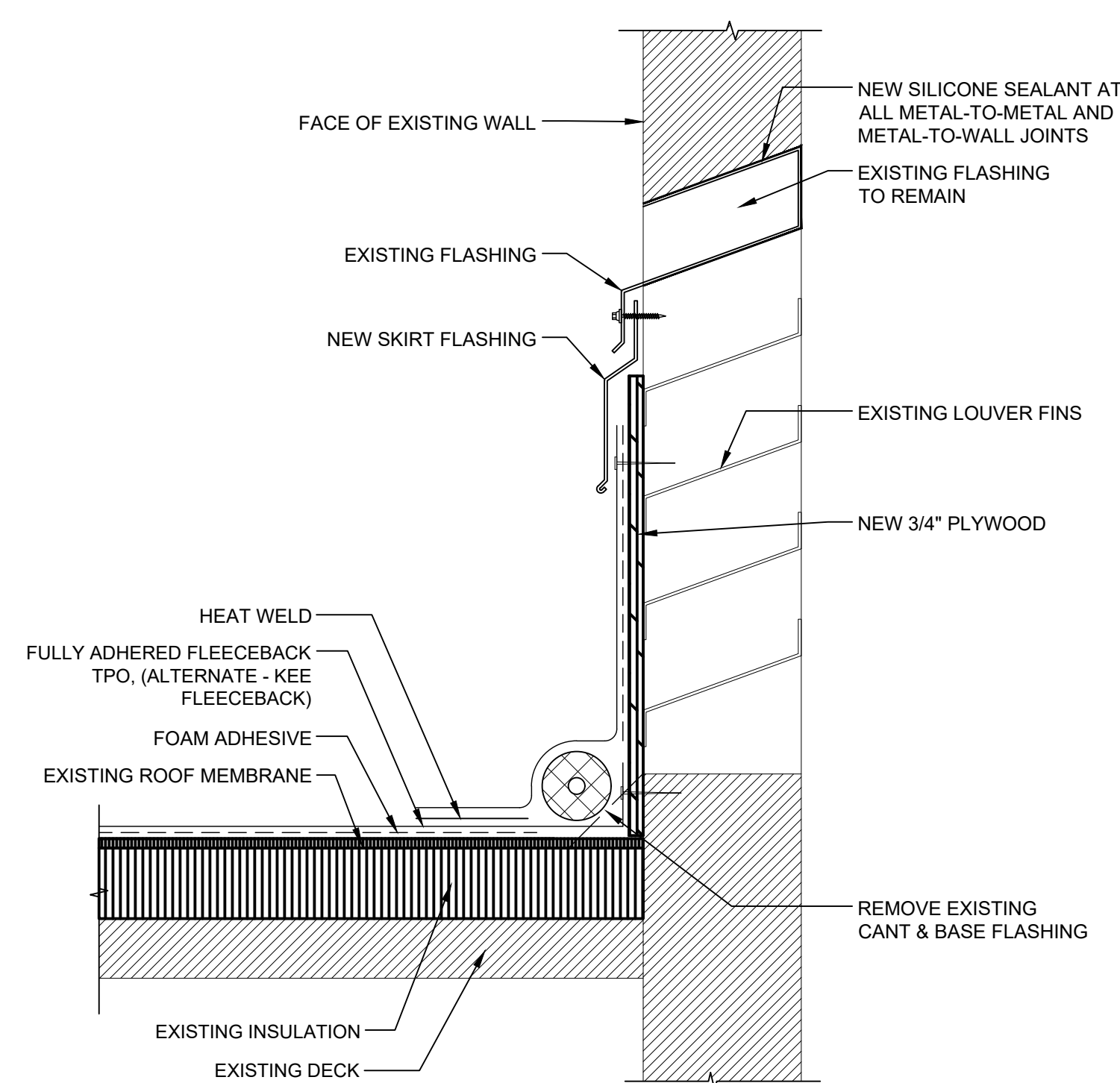
5 SCUPPER DETAIL  
NOT TO SCALE



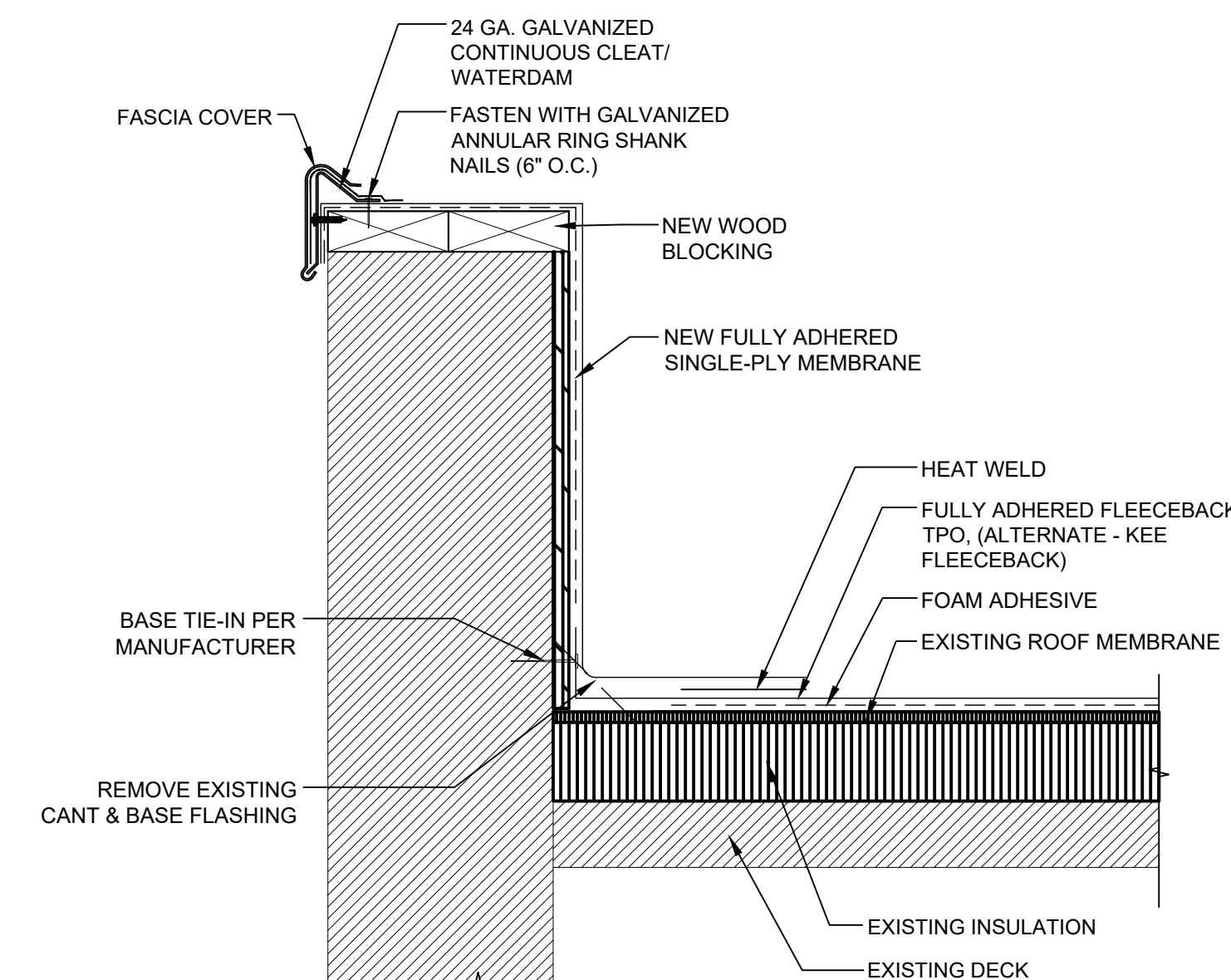
1A OPTION - FACTORY EDGE METAL  
NOT TO SCALE



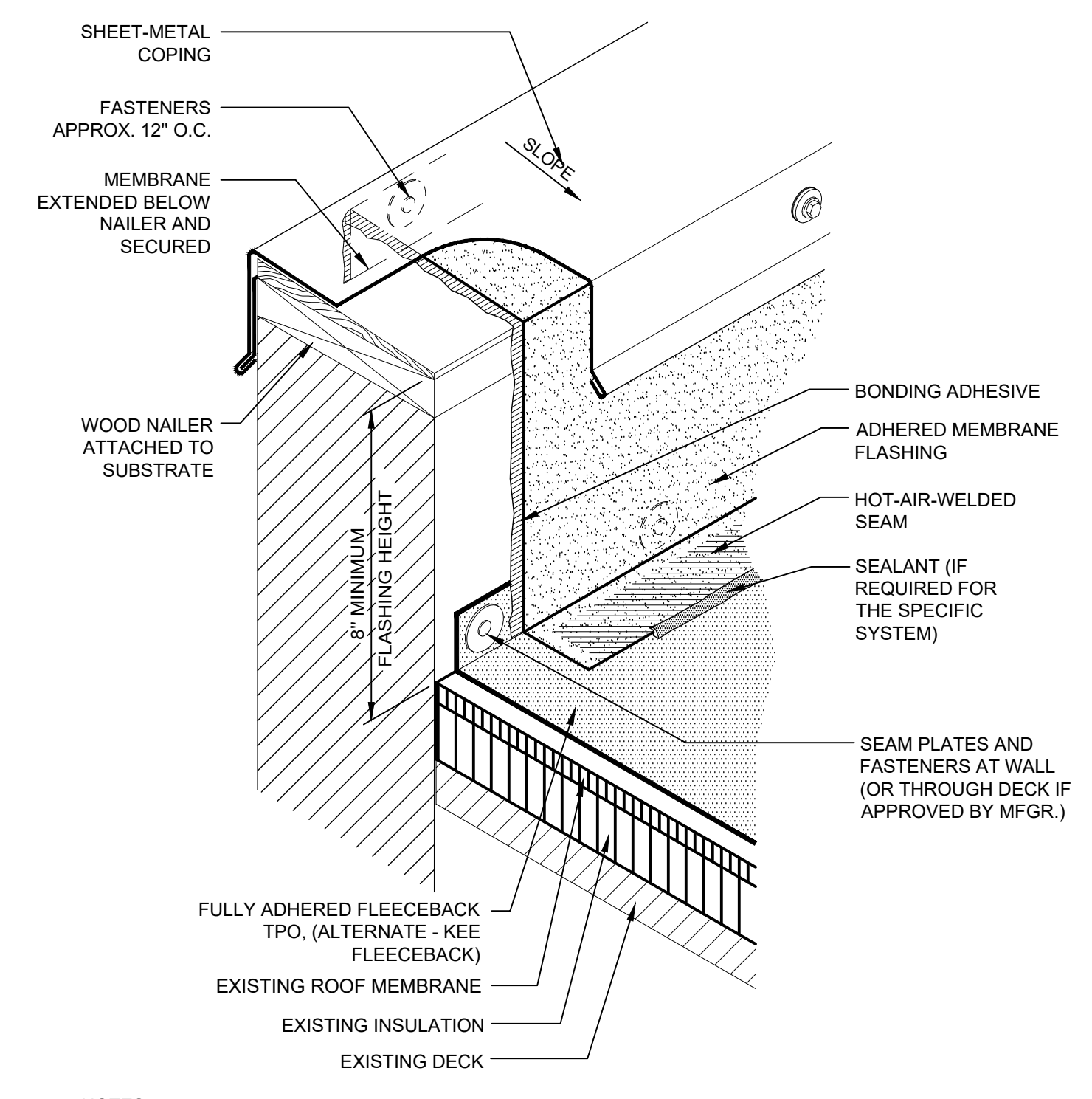
2 TYPICAL METAL COPING DETAILS  
NOT TO SCALE



3 BASE FLASHING  
NOT TO SCALE



1 PARAPET WITH METAL COPING  
NOT TO SCALE



- NOTES:
1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.
  2. REFER TO TYPICAL COPING CAP DETAIL FOR FURTHER REQUIREMENTS.

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SUITE 520  
MARIETTA, GA 30062  
770-565-3016

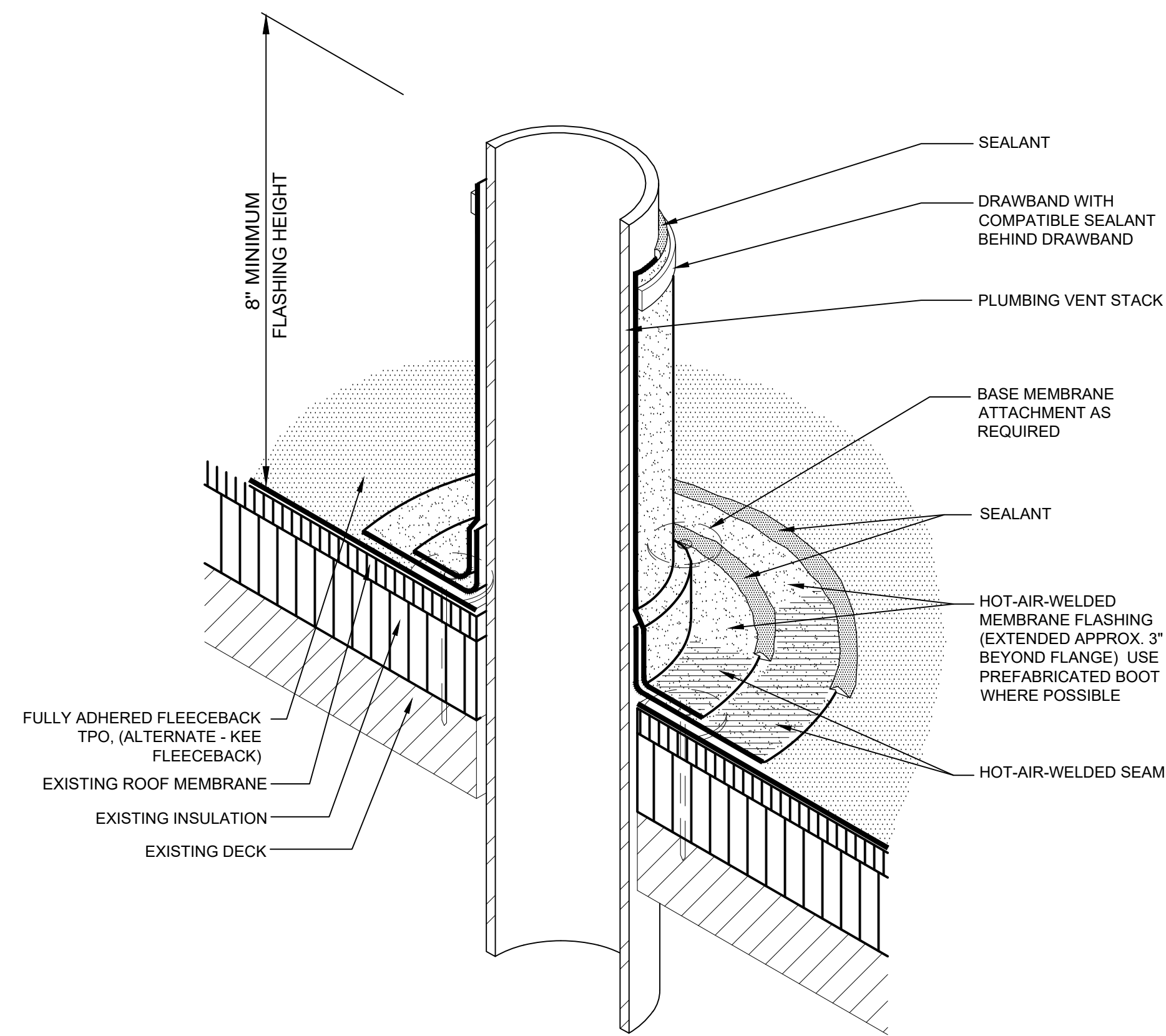
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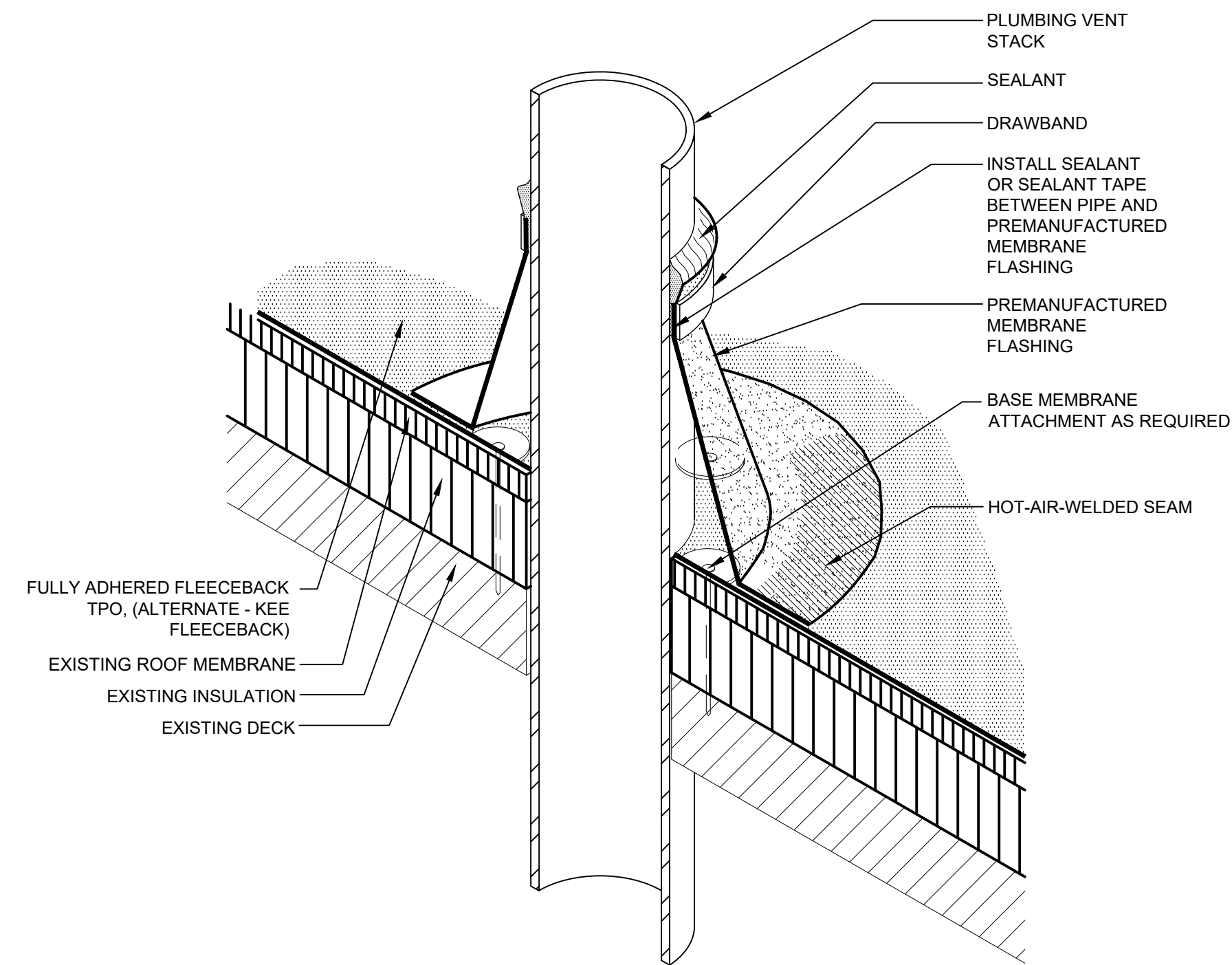
DETAILS -  
PERIMETER &  
DRAINAGE

**A301**



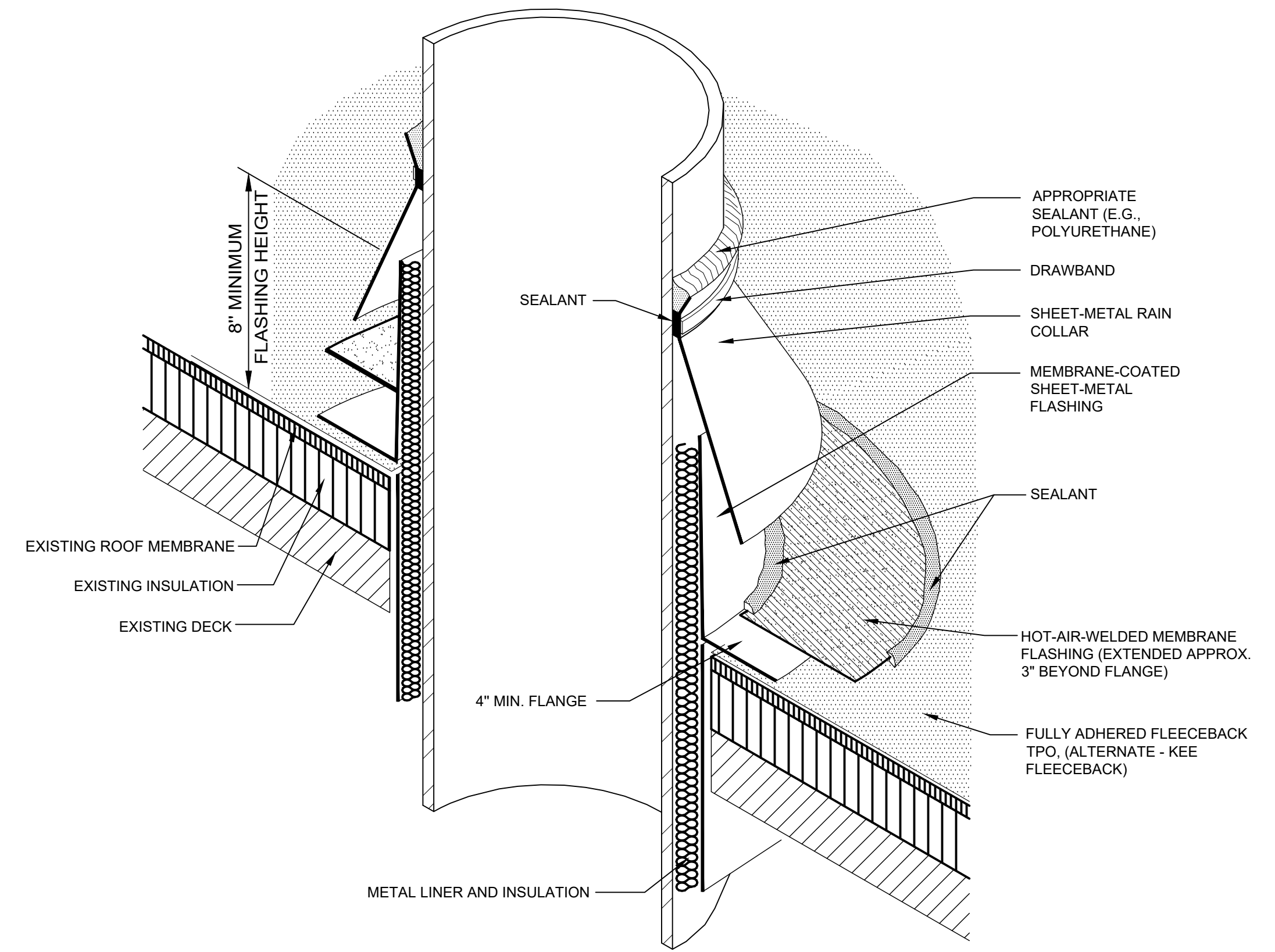
NOTES:  
1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.

5 PIPE PENETRATION  
NOT TO SCALE



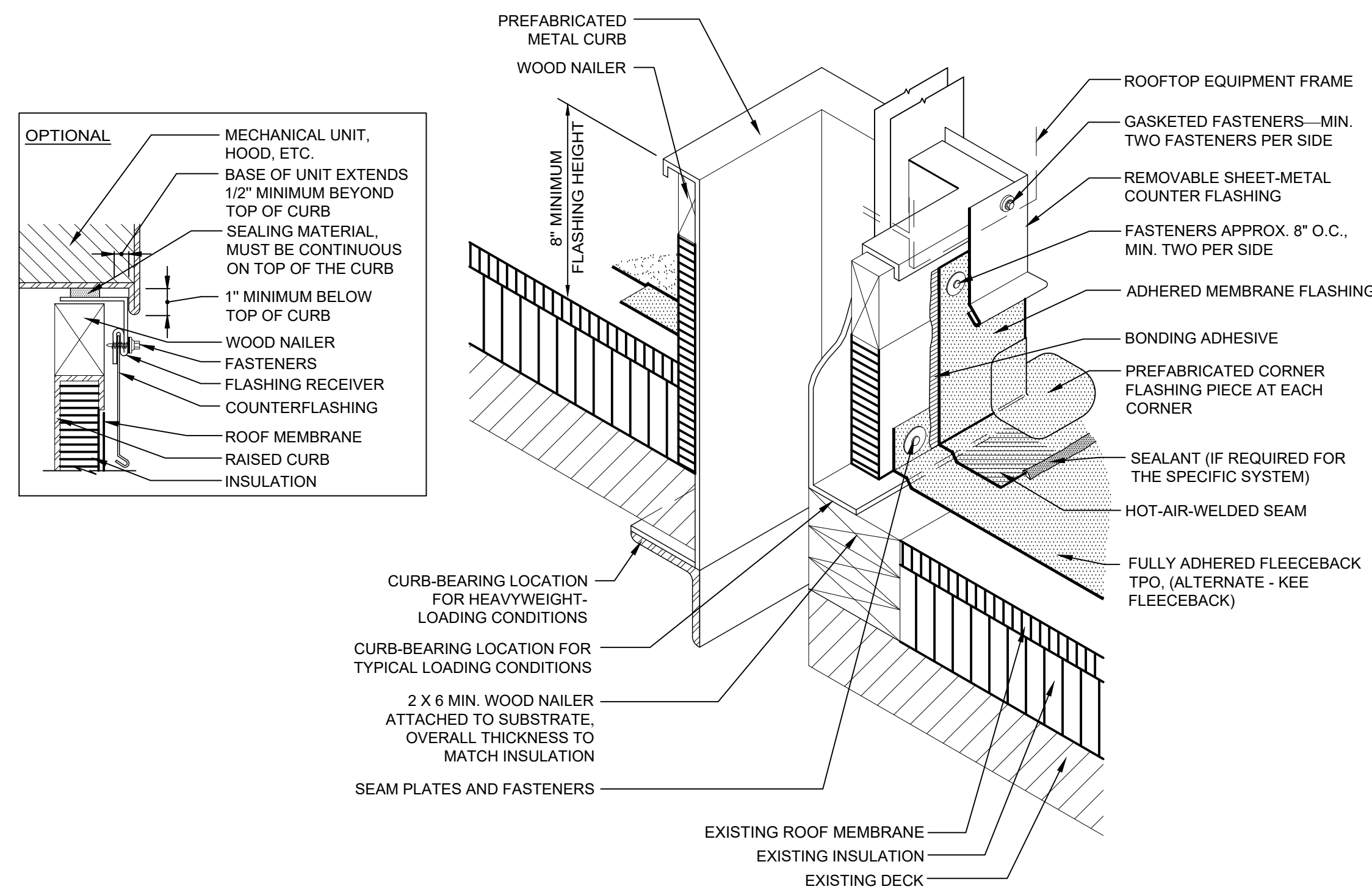
NOTES:  
1. REFER TO MANUFACTURERS' SPECIFICATIONS FOR SPECIFIC REQUIREMENTS FOR BASE MEMBRANE ATTACHMENT AND PLACEMENT.

4 PLUMBING VENT  
NOT TO SCALE



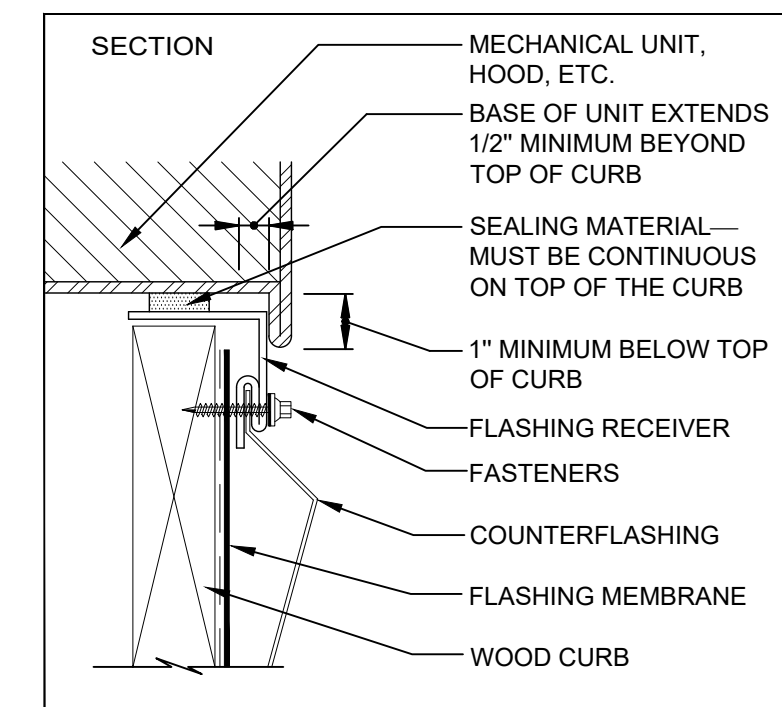
NOTES:  
1. REFER TO MANUFACTURERS' SPECIFICATIONS FOR SPECIFIC REQUIREMENTS FOR BASE MEMBRANE ATTACHMENT AND PLACEMENT.

3 HOT STACK  
NOT TO SCALE



NOTES:  
1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.  
2. WHERE THE ROOFTOP EQUIPMENT FRAME OVERLAPS THE BASE FLASHING AT LEAST 3 INCHES, THE REMOVABLE SHEET-METAL COUNTER FLASHING IS NOT REQUIRED.

2 METAL CURB  
NOT TO SCALE



NOTES:  
1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.  
2. WHERE THE SKYLIGHT, SCUTTLE OR SMOKE VENT FRAME OVERLAPS THE BASE FLASHING AT LEAST 3 INCHES, THE REMOVABLE SHEET-METAL COUNTER FLASHING IS NOT REQUIRED.

1 WOOD CURB  
NOT TO SCALE

3225 SHALLOWFORD ROAD  
SUITE 520  
ATLANTA, GA 30062  
770-565-3016

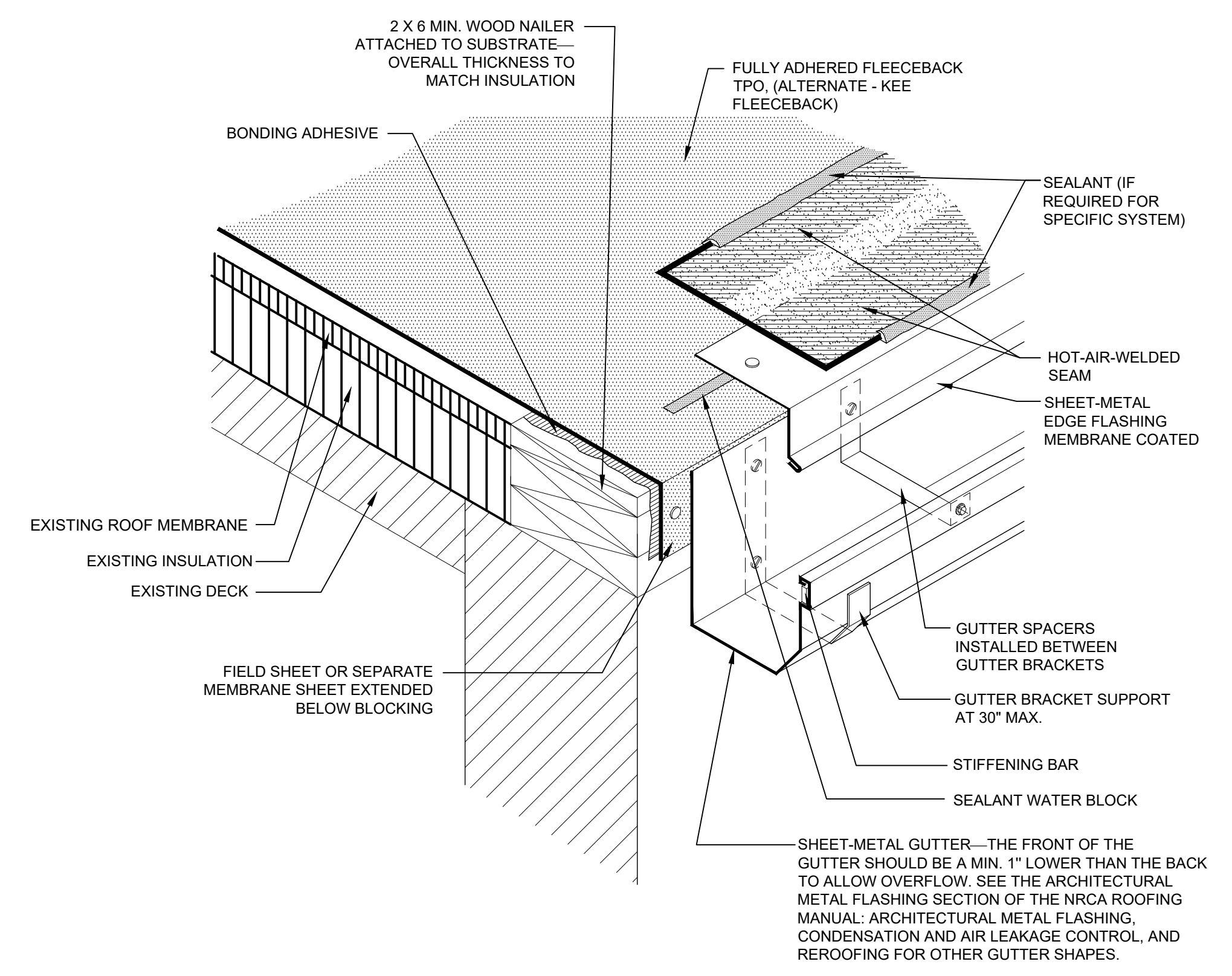
**MERIK**  
BUILDING CONSTRUCTION CONSULTANTS

**POP AUSTIN RECREATION CENTER  
ROOF PROJECT**  
1331 ALEXANDER STREET, COLUMBUS, GA 31904

Project: 24CCGU23RR367  
Drawn: TRM/ Approved: SRG  
Issues:  
01/30/2026 Issue for Bid

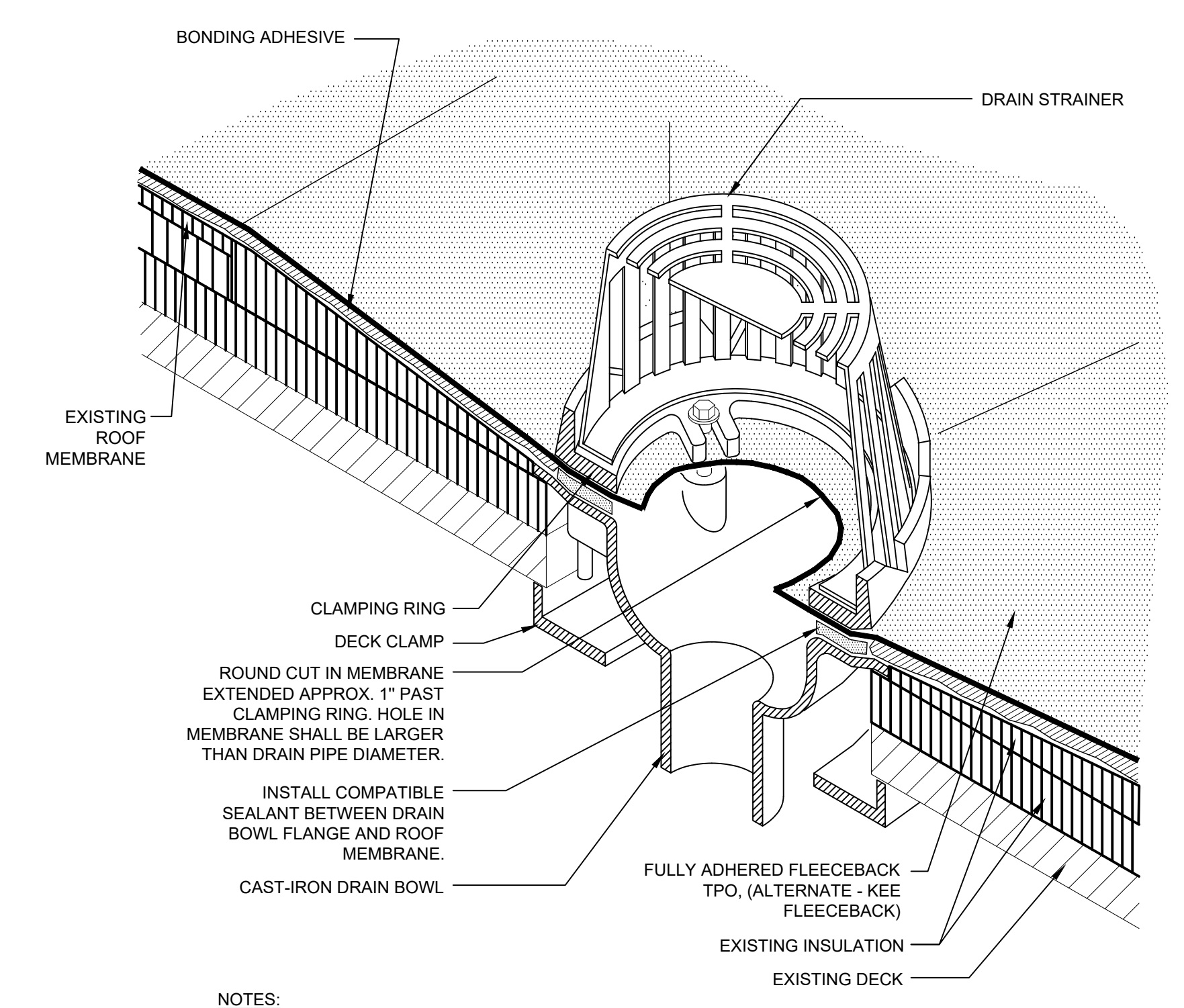
DETAILS -  
PENETRATIONS

**A302**



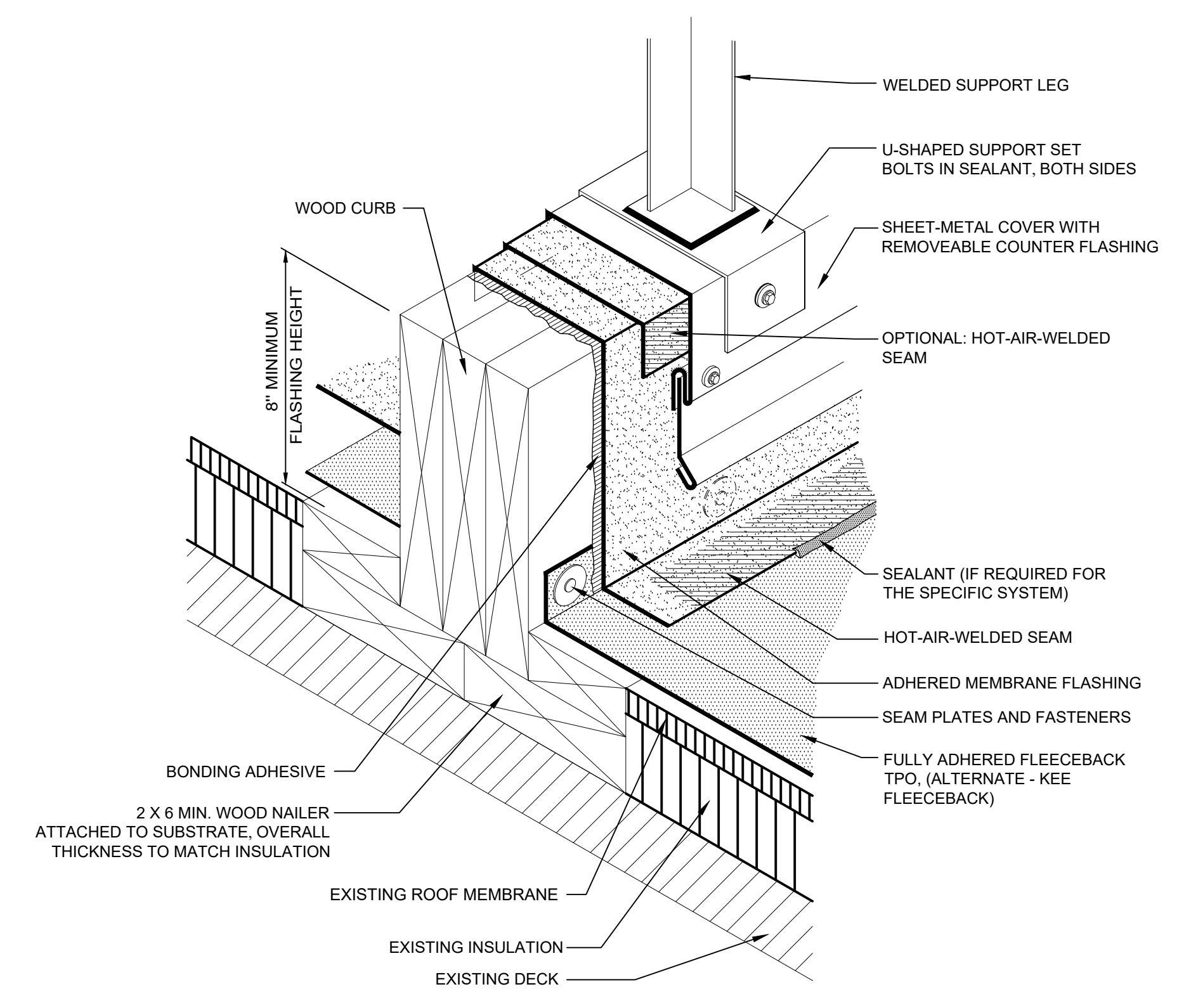
NOTES:  
 1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.  
 2. GUTTER BRACKETS ARE REQUIRED TO BE AT LEAST ONE GAUGE HEAVIER THAN GUTTER STOCK.

5 GUTTER DETAIL  
 NOT TO SCALE



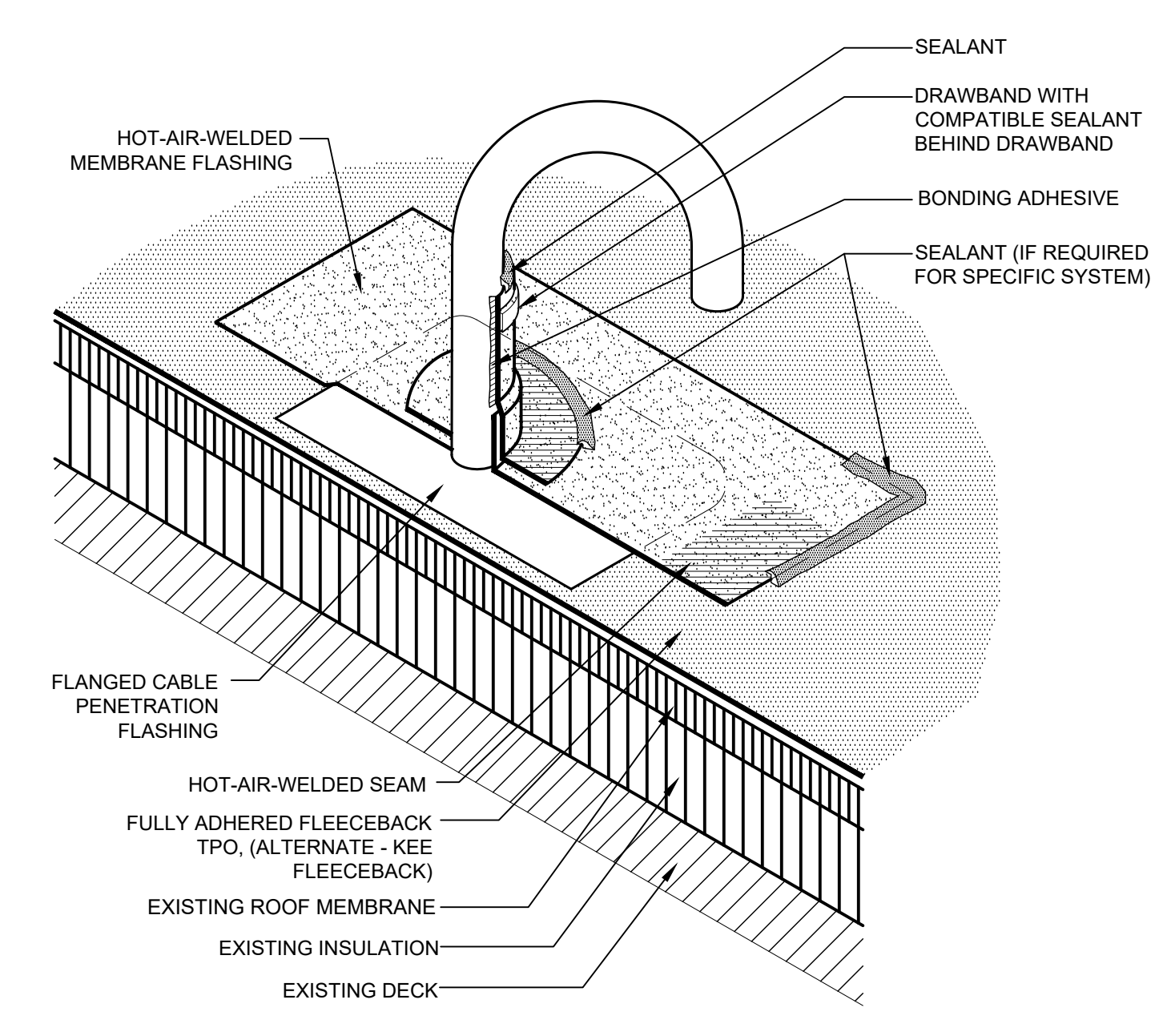
NOTES:  
 1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.  
 2. MEMBRANE SEAMS SHOULD NOT INTERSECT DRAIN CLAMPING RING. SEAMS THAT FALL WITHIN DRAIN SUMP SHOULD BE STRIPPED IN.  
 3. REPLACE MISSING OR DAMAGED DRAIN HARDWARE AS NEEDED.

4 ROOF DRAIN  
 NOT TO SCALE



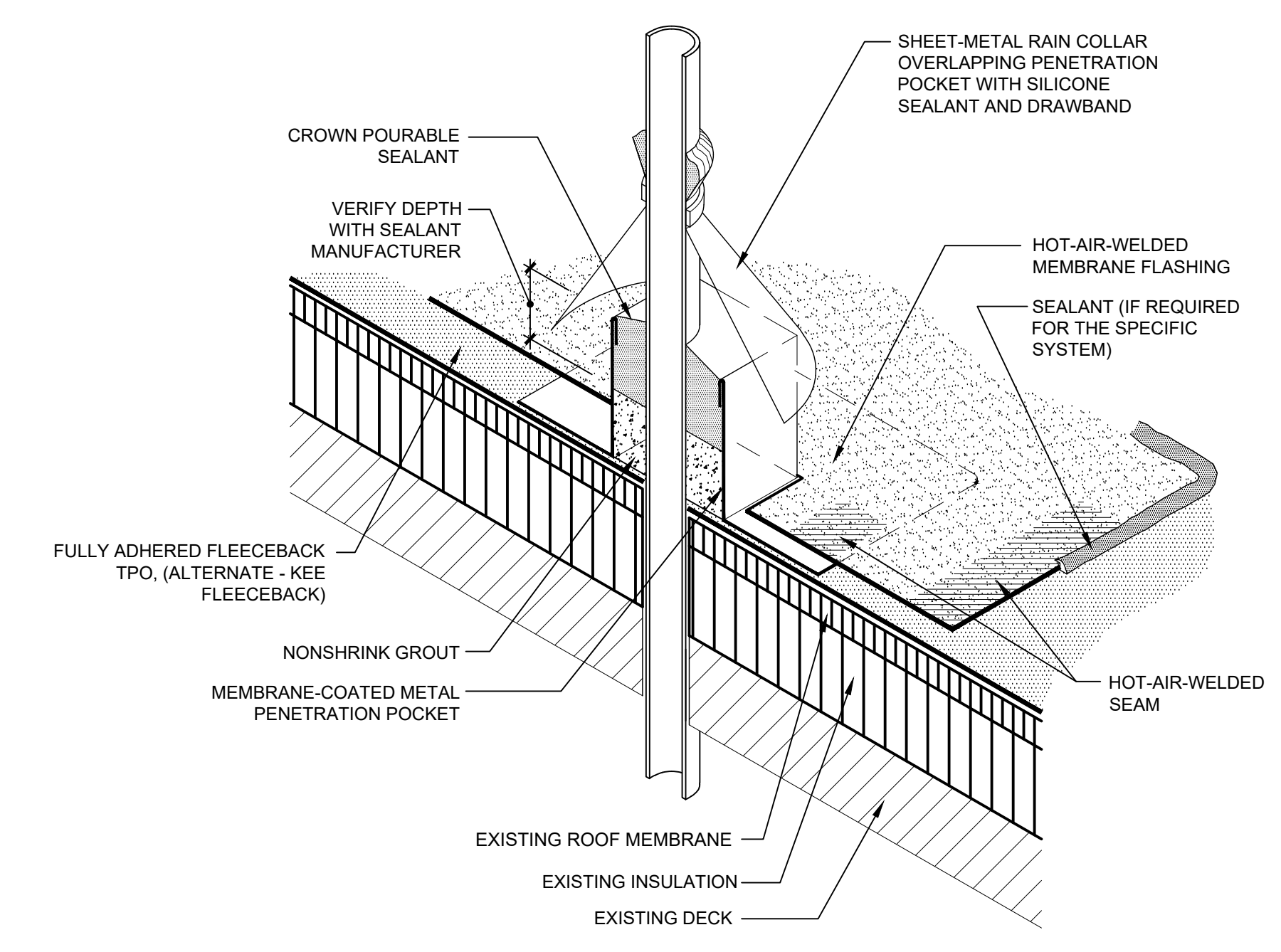
NOTES:  
 1. REFER TO THE SPECIFICATION FOR MATERIALS AND INSTALLATION REQUIREMENTS.  
 2. THIS DETAIL ALLOWS FOR MEMBRANE MAINTENANCE AROUND THE SUPPORTED EQUIPMENT. THE CONTINUOUS SUPPORT IS PREFERRED IN LIGHTWEIGHT STRUCTURAL SYSTEMS BECAUSE THE EQUIPMENT WEIGHT CAN BE SPREAD ACROSS TWO OR MORE SUPPORTING MEMBERS. WHERE HEAVY STRUCTURAL SYSTEMS ARE USED OR WHERE THE LOAD CAN BE CONCENTRATED OVER A COLUMN, DETAIL TP-12 MAY BE PREFERRED. A MINIMUM OF 2 FEET OF HORIZONTAL CLEARANCE MUST BE PROVIDED FOR REMOVAL AND REPLACEMENT OF ROOFING AND FLASHING BETWEEN PARALLEL SUPPORTS. REFER TO THE TABLE FOR RECOMMENDATIONS ON VERTICAL CLEARANCE FROM ROOF SURFACE TO BOTTOM OF SUPPORTED EQUIPMENT.

3 EQUIPMENT SUPPORT  
 NOT TO SCALE



NOTES:  
 1. REFER TO SPECIFICATION FOR DETAILS ON MATERIALS AND CONSTRUCTION.

2 CABLE PENETRATION  
 NOT TO SCALE



NOTES:  
 1. REFER TO SPECIFICATION FOR DETAILS ON MATERIALS AND CONSTRUCTION.

1 PITCH PAN DETAIL  
 NOT TO SCALE