



Jackson County Board of Commissioners

67 Athens Street
Jefferson, Georgia 30549
Phone: (706) 367-6309
Fax: (706) 708-2505
Email: kmorris@jacksoncountygov.com

TO: Qualified General & Roofing Contractors

DATE: June 9, 2023

SUBJECT: Request for Proposal for Commerce Service Center Roof Replacement

You are invited to submit a proposal to the Jackson County Board of Commissioners, Jefferson, Georgia for Commerce Service Center Roof Replacement.

Attached hereto are the general conditions, technical specifications, and submittal format.

The written requirements contained in this Request for Proposal (RFP) shall not be changed or superseded except by written addendum from Jackson County Purchasing Department. Failure to comply with the written requirements for this RFP may result in disqualification of the submittal by Jackson County.

Submittals are to be sealed, marked with the vendor's name and address and labeled: **"RFP 230019"**, Commerce Service Center Roof Replacement and delivered to:

Jackson County Board of Commissioners
Attention: Purchasing Manager
67 Athens Street
Jefferson, GA 30549

not later than **Friday, July 21st at 10:00 AM.**

A qualified interpreter for the hearing impaired is available upon request at least 10 (ten) days in advance of the proposal receipt date. Please call (706) 367-6312 for more information for the hearing impaired. This service is in compliance with the Americans with Disabilities Act (ADA).

Jackson County reserves the right to reject any and all submittals, to waive any technicalities or irregularities and to award contracts based on the highest and best interest of Jackson County.

Inquiries regarding this Request for Proposal (RFP) should be made to Kenneth Morris, Purchasing Manager at phone number (706) 367-4174, by fax at (706) 708-2505, or by email kmorris@jacksoncountygov.com

JACKSON COUNTY BOARD OF COMMISSIONERS
REQUEST FOR PROPOSALS
FOR
COMMERCE SERVICE CENTER ROOF REPLACEMENT

SUBMISSIONS ARE DUE AT THE ADDRESS SHOWN BELOW NO LATER THAN

FRIDAY, JUNE 21 AT 10:00 AM EST

JACKSON COUNTY BOARD OF COMMISSIONERS
ATTENTION: PURCHASING MANAGER
67 ATHENS STREET
JEFFERSON, GA 30549

RFP # 230019

THE RESPONSIBILITY FOR SUBMITTING A RESPONSE TO THIS RFP ON OR BEFORE THE STATED DATE AND TIME
WILL BE SOLELY AND STRICTLY THE RESPONSIBILITY OF THE OFFEROR.

ISSUE DATE: Friday, June 9, 2023



**Request for Proposals (RFP) #230019
For General and Roofing Contractor Services
for the
Commerce Service Center Roof Replacement Project**

The Jackson County Board of Commissioners (the County) requests Proposals from General and Roofing Contractor firms for the replacement of roofing at the Commerce Service Center located at 623-653 S. Elm Street Commerce, Georgia 30529. Upon completion of a review of proposals received, the County anticipates awarding a contract for services. Attached hereto are the general conditions, technical specifications, and submittal format.

The written requirements contained in this Request for Proposals (RFP) shall not be changed or superseded except by written addendum from Jackson County Purchasing Department. Failure to comply with the written requirements for this RFP may result in disqualification of the submittal by Jackson County.

Purpose:

The County is requesting a roof replacement at the Commerce Service Center located in Commerce, GA. This facility is leased out to multiple service-oriented organizations. The County will consider service proposals from qualified and insured General and Roofing Contracting firms to manage the construction and provide cost evaluation assistance to the County. The firm will assume responsibility for project construction cost by issuing a guaranteed maximum price (GMP), which will be a contractual obligation. The firm will develop an overall final project schedule, which will be a contractual obligation. In addition, the selected firm will be responsible for methods of construction, safety, and the scheduling and coordination of the work of all construction and miscellaneous contracts required for completion of the project within its established budget and schedule.

Work under this Contract consists of furnishing all labor, materials and equipment necessary to perform the quality roof replacement of the Commerce Service Center. The work will include, but is not necessarily limited to, the following:

1. Remove the existing roof systems down to the existing sloped metal deck.
 - a. Abate the existing asbestos containing material found in the silver paint layers of the roof system. Refer to the Asbestos Report
 - b. Existing plywood slope on front (east) elevation to remain. Repair as required. Refer to Unit Prices and Allowances for repairs.
2. Prepare the existing roof decks as required by the manufacturer. Refer to Unit Prices and Allowances for repairs.
 - a. Remove any abandoned openings in the roof system and patch openings in the deck.
3. Remove all existing flashings, metal flashings, and additional miscellaneous items.
4. Remove existing gutters and downspouts, and discard.

5. Furnish and install new wood blocking as shown on drawings, including but not limited to:
 - a. Gutter eaves
 - b. Top of parapets
 - c. Roof area transition
6. Furnish and install separator board at vertical transitions and curbs.
7. Furnish and install new 2-layer R-25 mechanically attached insulation system.
 - a. Install tapered insulation at gutter eave and upslope of units and penetrations.
8. Furnish and install new fully adhered ½-inch thick coverboard.
9. Furnish and install new fully adhered 80-mil TPO system with 30-year warranty.
 - a. (ALTERNATE 1) Furnish and install new 60-mil TPO system with 20-year warranty.
10. Furnish and install new gutters and downspouts.
 - a. Install concrete splash blocks at discharges.
11. Furnish and install new coping and edge metal.\
12. Furnish and install new pre-manufactured pipe boots and flashings.
13. Furnish and install new walkway protection pads.
14. Furnish and install new condensation lines and supports to nearest drainage.
15. Furnish and install any additional items as required for specified system and warranty.

Contract Period:

Any contract resulting from this RFP shall not exceed a period of ___ days from the time the notice to proceed is provided until completion of the project unless agreed to in writing by both parties. The sample contract provided with this RFP will be used by the Board of Commissioners to engage the vendor selected as a result of this RFP process.

Information to Vendors:

RFP TIMETABLE: The anticipated schedule for the RFP is as follows:

RFP Available	Friday, June 9, 2023
Deadline for questions	Tuesday, July 11 th , 5:00 PM EST
Submittal deadline	Friday, June 21st, 10:00 AM EST

Proposal Process:

All written Proposals shall utilize the attached forms and be submitted *via sealed bid*. The County will not accept any submittal by facsimile or email. Proposal (one(1) original, four(4) copies and one(1) electronic PDF on a storage device) may be mailed or hand delivered.

Receipt of all Addenda to this RFP, if any, must be acknowledged on the proposal form. Addenda shall become part of the requirements of this RFP. Failure to acknowledge receipt of an Addendum may result in rejection of the Proposal. Any cost incurred by respondents in preparing or submitting Proposals for the project shall be the respondents’ sole responsibility. It shall be the respondents’ responsibility to ensure delivery of the Proposal to the designated address by the designated time. The Submittal must be signed by a company officer who is legally authorized to enter into a contractual relationship in the name of the vendor. Hand delivered copies may be delivered to the above address ONLY between the hours of 8:30 a.m. and 4:30 p.m. ET, Monday through Friday, excluding holidays observed by the Jackson County Government.

Vendors are responsible for informing any commercial delivery service, if used, of all delivery requirements and for ensuring that the required address information appears on the outer wrapper or envelope used by such service.

Address Proposals to the attention of:

Mr. Kenneth Morris, Purchasing Manager
Jackson County Board of Commissioners
67 Athens Street
Jefferson, GA 30549
kmorris@jacksoncountygov.com

Proposals are due no later than July 21, 2023 at 10:00am. Late submittals will not be accepted.

Firms are not allowed to communicate with any County staff or elected officials regarding this procurement. Any unauthorized contact shall disqualify the firm from further consideration.

All questions regarding this project should be directed to **Barry Vickery** by e-mail at bvickery@jacksoncountygov.com. All responses, inquiries, or correspondence relating to this RFP will become the property of the County when received and shall be regarded as public record. All information received in response to this RFP, including copyrighted material, is deemed public information and will be made available for public viewing and copying after the time for receipt of proposals has passed, and the award has been made, with the following four exceptions: (1) bona fide trade secrets meeting confidentiality requirements that have been properly marked, separated, and documented; (2) matters involving individual safety as determined by the County; (3) any company financial information requested by the County to determine vendor responsibility, unless prior written consent has been given by the offeror; and (4) other constitutional protections.

The County reserves the right to:

1. Refuse any or all submittals received.
2. Cancel or modify this RFP at any time.
3. Reject any and all submittals or responses at any time.
4. Request further documentation or information, and to discuss an RFP submittal for any purpose in order to answer questions or to provide clarification.

Additional Information/Addenda:

Jackson County will issue responses to inquiries and any other corrections or amendments it deems necessary in written addenda issued prior to the due date. Vendors should not rely on any representations, statements or explanations other than those made in this RFP or in any addendum to this RFP. Where there appears to be a conflict between the RFP and any addenda issued, the last addendum issued will prevail.

Vendors must acknowledge any issued addenda by including the Addenda Acknowledgement Form with the submittal. Proposals which fail to acknowledge the vendor's receipt of any addendum will result in the rejection of the offer if the addendum contains information which substantively changes the Owner's requirements.

Late Submittals:

Submittals received after the due date and time will not be considered. Modifications received after the due date will not be considered. Jackson County Government assumes no responsibility for the premature opening of a proposal not properly addressed and identified, and/or delivered to the proper designation.

Rejection of Proposals:

Jackson County Government may reject any and all submittals and reserves the right to waive any irregularities or informalities in any submittal or in the submittal procedure.

Submittals received after said time or at any place other than the time and place as stated in the notice will not be considered.

Non-Collusion Affidavit:

By submitting a response to this RFP, the vendor represents and warrants that such proposal is genuine and not a sham or collusive or made in the interest or in behalf of any person not therein named and that the vendor has not directly or indirectly induced or solicited any other vendor to put in a sham proposal, or any other person, firm or corporation to refrain from submitting and that the vendor has not in any manner sought by collusion to secure to that vendor any advantage over any other vendor.

By submitting a proposal, the vendor represents and warrants that no official or employee of Jackson County Government has, in any manner, an interest, directly or indirectly in the proposal or in the contract which may be made under it, or in any expected profits to arise there from.

Costs Incurred by Vendors:

All expenses involved with the preparation and submission of the RFP to the Jackson County Board of Commissioners, or any work performed in connection therewith is the responsibility of the vendor(s).

RFP Opening:

The names of vendors submitting a response to this RFP submittal prices will be read aloud publicly. A list of names of firms responding to the RFP may be obtained from Kenneth Morris, Purchasing Manager, after the RFP due date and time stated herein.

Taxes:

Selected vendor will be provided with Jackson County's Sales and Use Tax Certificate of Exemption number upon request.

Vendor Information:

All submissions shall include a current W-9. Vendors whose place of business is other than the State of Georgia may be required to provide the Purchasing Manager with copies of your state's regulations and/or laws concerning the application of certain vendor preference requirements to vendors whose place of business is in the applicable state. Failure to provide this information will result in the disqualification of the vendor from submitting a proposal.

Insurance:

Selected vendor will be required to provide proof of liability and workman’s compensation insurance before work can begin on this County project. Workman’s Compensation Insurance should be as required by the State of Georgia. General Liability should cover \$1,000,000 per incident.

Warranty:

The selected vendor will warrant the product/service for a period of __ years from the date of the final inspection and acceptance by the County.

Termination:

Federal, State, and other Local government agencies may terminate this Agreement in the event funds are not appropriated for it in future periods; provided, however, that funds are also not appropriated for equipment or services that replace those contracted for under this Agreement. Customer shall be obligated for any future annual period if Company is not notified in writing at least thirty (30) days prior to the beginning for the annual period for which non-appropriation is being claimed.

Anti-Discrimination:

By submitting a response to this RFP, all perspective contractors certify to Jackson County that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended.

Illegal Immigration Reform and Enforcement Act of 2011:

Vendors submitting a response to this RFP must complete the Contractor Affidavit under O.C.G.A. §13-10-91(b)(1) which is provided with the RFP package to verify compliance with the Illegal Immigration Reform and Enforcement Act of 2011.

- A. The form must be signed by an authorized officer of the contractor or their authorized agent.
- B. The form must be notarized.
- C. The contractor will be required to have all subcontractors and sub-subcontractors who are engaged to complete physical performance of services under the final contract executed between the County and the contractor complete the appropriate subcontractor and sub-subcontractor affidavits and return them to the County a minimum of five (5) days prior to any work being accomplished by said subcontractor or sub-subcontractor. Format for this affidavit can be provided to the contractor if necessary.

Qualification and Submittal Requirements:

1. Letter of Interest- A letter executed by a principal of the firm committing to the requirements specified in this Request.
2. Experience- Provide the year of the company’s incorporation, and provide documentation of successful completion of construction of at least three (3) government or commercial roofing replacement projects completed in the last ten (10) years similar to the Project under this RFP. Please identify projects

contracted directly with a local government entity. Client references for each project must be included with confirmed email and phone numbers.

3. Project Team- Provide an organizational chart outlining the proposed staff, including superintendent, project manager, project director, cost estimator, project executive, etc., and provide resumes highlighting relevant project experience.
4. Proposed Preconstruction and Project Management Plan- Provide a summary of preconstruction activities, which staff are committed to each phase of the process, quality control programs, approach to bonding subcontractors, approach to encouraging local participation, and anticipated schedule for construction for the proposed project.
5. Financial- Provide financial information including taxes, insurance and benefits, as well as the company's latest financial statement (audited if available). Provide Bonding Agent/Surety Company "good guy letter" and document bonding capacity (performance and payment).
6. Lawsuits- List any pending or settled lawsuits or professional liability claims in which any member of the company was involved during the past ten (10) years.
7. Receipt acknowledgement of all Addenda to this RFQ (if any).
8. Completed Proposal Form, with Exhibit "A."

RFP Schedule:

Task	Date
Issue RFP	6-99-23
Proposals Due	07-21-23 at 10:00am
Interview Firms	TBD
Negotiate Contract	TBD

Jackson County - Commerce Service Center Roof Replacement (The Project) Proposal Form:

Proposing Firm: _____

Signature: _____

Name: _____

Title: _____

Date: _____

E-mail address: _____

9. **Fees:** Amount established by and agreed to by both parties, which is the full amount of compensation due to the firm as gross profit and for any and all expenses of the Project not included and identified as the Cost of the Work, provided that the firm performs all requirements of the Contract Documents within the time limits established.

A. Pre-Construction Fee: \$ _____ (lump sum)

B. General Conditions: \$ _____ (lump sum –see attached Exhibit “A”)

C. Construction Fee: _____% (percent of construction cost)

10. Addendum Acknowledgement

Number	Date	Number	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

NOTARY

Notary#: _____

Name: _____

Expiration: _____

Signature: _____

Seal

Attachment:

Exhibit A – Commerce Service Center Roof Replacement (The Project) Maximum Allowable General Conditions

EXHIBIT A**Jackson County Commerce Service Center Roof Replacement (*The Project*) Maximum Allowable General Conditions**

ITEM	DURATION	UNIT COST	TOTAL COST
Project Director		\$	\$
Superintendent		\$	\$
Assistant Superintendent		\$	\$
Senior Project Manager		\$	\$
Project Manager/Project Engineer		\$	\$
Field Engineering		\$	\$
MEP/BIM Coordination		\$	\$
In-House Accounting		\$	\$
On Site Safety Engineer		\$	\$
Safety Materials Program		\$	\$
Field Office Rental, Setup and Removal		\$	\$
Storage Trailer Rental		\$	\$
Temporary Toilets		\$	\$
Job Signs	LUMP SUM	\$	\$
Copier, Fax Machine		\$	\$
Telephone and Internet Costs and Setup		\$	\$
Ice, Cups, Water		\$	\$
Office Supplies		\$	\$
Office Furniture	LUMP SUM	\$	\$
Jobsite Computers and Technology	LUMP SUM	\$	\$
Postage and Couriers		\$	\$
Progress Photographs		\$	\$
Final Photographs	LUMP SUM	\$	\$
Plan Printing and Copying	LUMP SUM	\$	\$
Cellphones and Radios		\$	\$
Supervision Vehicles		\$	\$
Project Management Vehicles and Travel		\$	\$
Gas, Oil and Maintenance		\$	\$
Builder's Risk Insurance	LUMP SUM (based on \$12M)	\$	\$
General Liability & Umbrella Insurance	LUMP SUM (based on \$12M)	\$	\$
Payment and Performance Bond	LUMP SUM (based on \$12M)	\$	\$

Total General Conditions Cost: \$ _____

Note: No direct labor may be billed as Cost of Work without prior written approval by the County.

SECTION II - GENERAL CONDITIONS

- A. All questions shall be submitted in writing (e-mail is acceptable) and shall be communicated to all firms responding to this RFP.
- B. All materials submitted in connection with this RFP will be public documents and subject to the Open Records Act and all other laws of the State of Georgia, the United States of America and the open records policies of the Jackson County Board of Commissioners. All such materials shall remain the property of the Jackson County Board of Commissioners and will not be returned to the respondent.
- C. All respondents to this RFP shall hold harmless the Jackson County Board of Commissioners, and any of their officers and employees from all suits and claims alleged to be a result of this RFP. The issuance of this RFP constitutes only an invitation to present a proposal. The Jackson County Board of Commissioners reserves the right to determine, at its sole discretion, whether any aspect of a respondent's submittal meets the criteria in this RFP. The Jackson County Board of Commissioners also reserves the right to seek clarifications, to negotiate with any vendor submitting a response, to reject any or all responses with or without cause, and to modify the procurement process and schedule. In the event that this RFP is withdrawn or the project canceled for any reason, the Jackson County Board of Commissioners shall have no liability to any respondent for any costs or expenses incurred in connection with this RFP or otherwise.
- D. The RFP is subject to the provisions of the Jackson County Purchasing Ordinance and any revisions thereto, which are hereby incorporated into this RFP in their entirety except as amended or superseded herein.
- E. Failure to submit all the mandatory forms from this RFP package shall be just cause for the rejection of the qualification package. However, Jackson County reserves the right to decide, on a case by case basis, in its sole discretion, whether or not to reject such a bid as non-responsive.
- F. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment less than 30 days, however. Payment will be made via ACH.
- G. In case of failure to deliver goods in accordance with the contract terms and conditions, Jackson County, after due oral or written notice, may procure substitute goods or services from other sources and hold the contractor responsible for any resulting additional purchasing and administrative costs. This remedy shall be in addition to any other remedies which Jackson County may have.
- H. By submitting a qualification package, the vendor is certifying that they are not currently debarred from bidding on contracts by any agency of the State of Georgia, nor are they an agent of any person or entity that is currently debarred from submitting bids on contracts by any agency of the State of Georgia.
- I. Any contract resulting from this RFP shall be governed in all respects by the laws of the State of Georgia and any litigation with respect thereto shall be brought in the courts of the State of Georgia. Then contractor shall comply with applicable federal, state, and local laws and regulations.
- J. It is understood and agreed between the parties herein that Jackson County shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this agreement.

Final Selection:

Following review of all qualified proposals, selection of a suitable vendor, and preliminary contract negotiations, a recommendation will be made to the Jackson County Board of Commissioners by the project representative. Following Commission approval, the County will complete contract negotiations.

The Jackson County Board of Commissioners reserves the right to accept the response that is determined to be in the best interest of the County. The County reserves the right to reject any and or all proposals.

Every vendor submitting a proposal must complete the form showing compliance with the **Illegal Immigration Reform and Enforcement Act of 2011, OCGA §13-10-90(b)(1)**. The form is provided with this RFP package. See Section I. B., paragraph 18.

RFP 230019 PRICE PROPOSAL

COMPANY NAME: _____

FORMAT TO ENABLE A CLEAR UNDERSTANDING OF WHAT IS BEING BID AND THE PRICE. BY DETAILING EVERYTHING HERE, THIS WILL BE THE SHEET THAT IS LOOKED AT DURING THE BID OPENING.

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL.

EXECUTION OF PROPOSAL

DATE: _____

The potential Contractor certifies the following by placing an "X" in all blank spaces:

- ___ That this proposal was signed by an authorized representative of the firm.
- ___ That the potential Contractor has determined the cost and availability of all materials and supplies associated with performing the services outlined herein.
- ___ **That all labor costs associated with this project have been determined, including all direct and indirect costs.**
- ___ That the potential Contractor agrees to the conditions as set forth in this Request for Proposal with no exceptions.

Therefore, in compliance with the foregoing **Request for Qualifications**, and subject to all terms and conditions thereof, the undersigned offers and agrees, if this proposal is accepted within sixty (60) days from the date of the opening, to furnish the services for the prices quoted within the timeframe required.

Business Contact Representative

Operational Contact Representative

Vendor's Name

Federal ID #

_____ Address

Phone

Fax

Email

Authorized Signature

Date

Typed Name & Title

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL.

ADDENDA ACKNOWLEDGEMENT

The vendor has examined and carefully studied the Request for Proposals and the following Addenda, receipt of all of which is hereby acknowledged:

Addendum No. _____

Addendum No. _____

Addendum No. _____

Addendum No. _____

Authorized Representative/Title
(Print or Type)

Authorized Representative (Date)
(Signature)

Vendors must acknowledge any issued addenda. Proposals which fail to acknowledge the vendor's receipt of any addendum will result in the rejection of the offer if the addendum contained information which substantively changes the Owner's requirements.

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL.

Illegal Immigration Reform and Enforcement Act of 2011
CONTRACTOR AFFIDAVIT UNDER O.C.G.A. §13-10-91(b)(1)

The Jackson County Board of Commissioners and Contractor agree that compliance with the Illegal Immigration Reform and Enforcement Act of 2011 are conditions of this Agreement for the physical performance of services.

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 the Jackson County Board of Commissioners 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 and 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:

E-Verify Employment Eligibility Verification User Identification Number

Date of Authorization to Use Federal Work Authorization Program

NAME OF CONTRACTOR

Name of Project

Jackson County Board of Commissioners
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: _____

The following pages include a sample contract that will only become finalized based on selection by Jackson County Board of Commissioners. Please complete and execute as part of your firm's proposal package submission.

ARTICLE 3

Georgia Illegal Immigration Reform and Enforcement Act of 2011

Contractor agrees and acknowledges that compliance with the requirements of the Georgia Illegal Immigration Reform and Enforcement Act of 2011 are conditions of this Contract. The Contractor Affidavit and Agreement executed by Contractor pursuant to O.C.G.A. §13-10-91(b)(1) is hereby incorporated into this Agreement by reference and made a part of this Contract. By the execution of this Contract, the Contractor affirms that the Illegal Immigration Reform and Enforcement Act of 2011 Contractor Affidavit submitted with the response to RFQ 230019 is still valid, that the Contractor's Federal Work Authorization Number has not changed, that the Contractor will utilize the Federal Work Authorization Program during the duration of this contract, that the Contractor will ensure that all subcontractors and sub-subcontractors working on the Project covered by this Contract are participating in the Federal Work Authorization Program and have completed the Subcontractors and/or Sub-subcontractor Affidavit, and that the Contractor will advise the Owner of hiring a new subcontractor and/or sub-subcontractor and will provide the Owner with a Subcontractor/Sub-subcontractor Affidavit attesting to the subcontractor's/sub-subcontractor's name, address, user identification number, and date of authorization to use the Federal Work Authorization Program within five (5) days of hiring before the subcontractor/sub-subcontractor begins working on the Project. The Contractor understands and will ensure that all subcontractors and sub-subcontractors understand that knowingly and willfully making a false, fictitious, or fraudulent statement in an affidavit submitted in compliance with O.C.G.A. §13-10-91 shall be guilty of a violation of Code Section §16-10-20 and, upon conviction, shall be punished as provided for in such Code Section. Additionally, any contractor and/or sub-contractor convicted for false statements based upon a violation of this Code Section shall be prohibited from bidding on or entering into any public contract for twelve (12) months following the conviction.

ARTICLE 4

Time of Commencement and Completion

The Work to be performed under this Contract shall be completed within _____ days of the Notice to Proceed, unless authorized in writing by the County.

ARTICLE 5

Contract Price

The Owner shall pay the Contractor, for the performance of the Work as provided in the Conditions of the Contract, in current funds, the amount based upon the Contractors response to the Request for Proposal not to exceed \$_____.

ARTICLE 6

Warrantee Period

All parts, labor, and services provided by the Contractor in conjunction with RFP 230019 shall be warranted for a period of ____ year(s). The warrantee period will begin at the time the Contractor and County conduct the final acceptance inspection after all punch list items have been completely corrected and continue for the period hereto stated.

ARTICLE 7

Payment

Payment for the Work as described in Article 5 above, shall be made upon completion and inspection of Work by the Owner to the Contractor within thirty (30) days after the completion of the Work, provided that the Work has been completed and the Contractor fully performed in accordance with the Contract Documents. Contractors may request a draw against completed work once every thirty (30) days if the contract is for a period of more than thirty (30) days. The Contractor shall complete and submit an invoice to the Purchasing Manager, 67 Athens Street, Jefferson, Georgia 30549. The Purchasing Manager will coordinate with the Project Manager for approval and will forward the invoice to Accounts Payable for payment. The invoice provided by the Contractor should include all necessary documentation to prove that all the requirements outlined in the Request for Proposal, all addenda, and all change orders have been completed and that the work has been properly inspected.

IN WITNESS WHEREOF, the parties have executed this Contract on the date first written above.

OWNER:
Jackson County Board of Commissioners

CONTRACTOR:

Company's Legal Name

BY: Tom Crow, Chairman

BY: Representative

ATTEST:

Notary Public

ATTEST:

Notary Public

Commerce Service Center Roof Replacement

623-653 S. Elm Street
Commerce, Georgia 30529



Project Manual

PM&A Project No. 23-019

Prepared For:

Jackson County Government
67 Athens Street
Jefferson, Georgia 30549

Prepared By:

PM&A Engineering Services
1000 Holcomb Woods Parkway | Suite 210
Roswell, Georgia 30076

June 8, 2023

Phillip Pickens, PE, RRC, RRO



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END OF SECTION



SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.01 Description of the Work

- A. Work under this Contract consists of furnishing all labor, materials and equipment necessary to perform the quality roof replacement of the Commerce Service Center. The work will include, but is not necessarily limited to, the following:
1. Remove the existing roof systems down to the existing sloped metal deck.
 - (a) Abate the existing asbestos containing material found in the silver paint layers of the roof system. Refer to the Asbestos Report.
 - (b) Existing plywood slope on front (east) elevation to remain. Repair as required. Refer to Unit Prices and Allowances for repairs.
 2. Prepare the existing roof decks as required by the manufacturer. Refer to Unit Prices and Allowances for repairs.
 - (a) Remove any abandoned openings in the roof system and patch openings in the deck.
 3. Remove all existing flashings, metal flashings, and additional miscellaneous items.
 4. Remove existing gutters and downspouts, and discard.
 5. Furnish and install new wood blocking as shown on drawings, including but not limited to:
 - (a) Gutter eaves
 - (b) Top of parapets
 - (c) Roof area transitions
 6. Furnish and install separator board at vertical transitions and curbs.
 7. Furnish and install new 2-layer R-25 mechanically attached insulation system.
 - (a) Install tapered insulation at gutter eave and upslope of units and penetrations.
 8. Furnish and install new fully adhered ½-inch thick coverboard.
 9. Furnish and install new fully adhered 80-mil TPO system with 30-year warranty.
 - (a) **(ALTERNATE 1)** Furnish and install new 60-mil TPO system with 20-year warranty.
 10. Furnish and install new gutters and downspouts.
 - (a) Install concrete splash blocks at discharges.
 11. Furnish and install new coping and edge metal.
 12. Furnish and install new pre-manufactured pipe boots and flashings.
 13. Furnish and install new walkway protection pads.
 14. Furnish and install new condensation lines and supports to nearest drainage.
 15. Furnish and install any additional items as required for specified system and warranty.

1.02 Roof System Requirements

- A. All roof systems, components, and accessories shall be capable of withstanding the following Wind Design Requirements per ASCE 7-16 Ultimate Wind Loads:
1. Zone 1 -41.5 PSF
 2. Zone 1' -23.8 PSF
 3. Zone 2 -54.7 PSF
 4. Zone 3 -74.5 PSF

- B. Approval and listing in the latest Underwriters Laboratory Inc. Roofing Materials and Systems Directory for UL, Class A, exterior fire exposure.
- C. 2018 International Building Code with 2022 Georgia Amendments.
- D. Unless more stringent conditions and materials specified, all components shall be completed in accordance with the National Roofing Contractors Association (NRCA) and roof system manufacturer requirements for the specified warranties.
- E. Warranties: Refer to Section 01 78 36.

1.03 Existing Conditions

- A. Information in this Section is provided only to establish general description the Contractor is responsible for visiting the site and satisfying himself as to the existing conditions, size of roof areas, etc. before submitting the Bid.
- B. Roofing Contractors are encouraged to obtain roof cores and field verify substrate conditions during the pre-bid meeting and must have on site at the time of the meeting all of the appropriate tools and materials required to repair each roof system. The repairs must be approved by the roof designer or the Owner's representative at the site. All repairs must be done with similar materials as the existing membrane. All repairs are to be in accordance with good roofing practice and completed in accordance with NRCA standards.
- C. Existing Roof System
 - 1. Single-ply membrane
 - 2. 1-1/2 inches Polyiso insulation
 - 3. Aggregate surfaced asphaltic built-up roof
 - 4. 1-inch fiberglass insulation
 - 5. Metal roof deck



- D. Asbestos was detected in the silver coating on the flashings of the subject roof system.

1.04 Permitting/Licensing and Inspections Approval



- A. Successful bidder will be required to secure and pay for required permits, licenses, and inspections from the municipality of Jurisdiction.
 - 1. 2018 International Building Code, as adopted and amended by the State of Georgia and Jackson County.
 - 2. Contractor will need to apply for a permit and provide a copy of the plans, specifications, and all other documents required. The Contractor shall provide full cooperation with the officials and inspections as requested by the building department.
 - 3. Contractor shall be required to follow any and all regulatory and noise ordinance requirements of the city and or county.

1.05 Site Specific Special Conditions

- A. Special requirements including, but not limited to:
 - 1. Temporary protection of the grounds, building, HVAC, services, fuel storage, and equipment on the grounds.
 - 2. Contractor shall coordinate temporary closures and sealing off air intake vents as required by the site. Provide approved deodorizers to hinder odors caused by construction.
 - 3. Site access shall be confined to means of rooftop access, staging areas, and parking areas.
 - 4. Contractor shall provide temporary restroom facilities near staging area.
 - 5. Contractor shall install additional lumber and repair existing lumber, including perimeter and curb nailers, as illustrated on the drawings and as specified.
 - 6. Contractor shall remove and infill all abandoned penetrations marked on the roof plan per the provided documents.
 - 7. Contractor shall raise penetrations as required to facilitate the required flashing heights.
 - 8. Contractor shall cut abandoned pipe supports to within 1/2" of deck.
 - 9. Contractor shall provide pad protection at roof access points and around serviced penetrations

PART 2 - MATERIALS: Not Used

PART 3 - PERFORMANCE REQUIREMENTS

3.01 Execution

- A. Once all materials have been delivered to the site and confirmed to comply with the Work Summary, technical specifications and approved submittals. Proceed with the work in strict compliance with the technical specifications, manufacturer's installation requirements and approved details.
- B. All work not conforming to the requirements of the technical specifications, current manufacturer's specifications, installation methods and technical bulletins and approved submittals may be rejected and replaced with all related costs borne by the Contractor.

3.02 Contract Documents

- A. The contract documents are complementary. What is required by one component is as binding as if required by all. Drawings depict the construction intent; however, the specifications are therefore an integral part of the construction process and must be equally considered.
- B. The Contractor shall verify that the construction components can be constructed in accordance with the contract documents. Any conditions that are in conflict with the contract documents shall be brought



to the attention of the Owner's Representative without delay and before proceeding with work on those conditions.

END OF SECTION



**SECTION 01 23 00
ALTERNATES**

PART 1 - GENERAL

1.01 General

- A. Includes all alternates listed in the Summary of Work.

1.02 Procedures

- A. Alternates will be exercised at the option of the Owner
- B. Modify and coordinate related activities as required to complete the work if, and when, acceptance is designated by the Owner in AIA Document A101.
- C. In the event alternates are exercised, applicable sections of this Specification shall govern. Other sections may be modified as required to address the alternate.
- D. The Owner reserves the right to accept any alternate and to accept any combination of alternates.
- E. Submit schedules for each alternate roof system, if different than Base Bid.

PART 2 - NOT USED

PART 3 - EXECUTION

3.01 Alternate No. 1

- A. Furnish and install new 60-mil TPO Roof System in lieu of 80-mil TPO Roof System.

END OF SECTION



**SECTION 01 33 00
SUBMITTALS**

PART 1 - GENERAL

1.01 Submittal Procedures

- A. Each transmitted document shall identify the project name and Contractor. Material submittals shall also identify the type and trade name of materials, material manufacturer, intended use and specification number.
- B. Submittals shall bear the Contractor's stamp and indicate approval and date.
- C. After Engineer's review of materials, revise and resubmit, as required, identifying changes made since previous submittal.
- D. Upon approval by Engineer, submittals will be forwarded to the Owner for review and approval.

1.02 Bid Submittals

- A. Safety Plan, generic and site-specific.
- B. Letter from manufacturer stating acceptance of the specified roof system for the specified warranty and roof requirements stated in Summary of Work.
- C. Anticipated construction schedule including material delivery.
 - 1. Submit separate schedules for each alternate roof system, as applicable.
- D. Sample copy of Contractor's workmanship warranty in accordance with Section 01 78 36.
- E. Refer to Bid Form for additional submittals

1.03 Preconstruction Submittals (General)

- A. Contact information for Contractor's superintendent, foreman, and project manager.
- B. Construction schedule
- C. Contractor's Schedule of Values
- D. Proposed phasing plan, if different from provided.
- E. Manufacturer's system letter(s)
- F. Sample Manufacturer's warranty in accordance with Section 01 78 36
- G. Submit all materials as outlined in Part 2 of the Specification sections. Group and label material submittals by Specification Section.
- H. Shop drawings, samples, and manufacturer identification, and product identification and data as specified.
- I. Submit metal flashing color charts.

1.04 Preconstruction Submittals (Shop Drawings)

- A. Each shop drawing shall be numbered. The same numbering system shall be retained through all revisions. Each drawing shall have a clear space for the approval stamps of contractor and Designer.
- B. In submitting shop drawings for approval, all associated shop drawings related to a complete assembly shall, where possible, be submitted at the same time so that each may be checked in relation to the entire proposed assembly.
- C. Contractor shall prepare composite shop drawings and installation layouts, when required, to depict proposed solutions for tight field conditions. The composite shop drawings and field installation layouts shall be coordinated in the field by the Contractor for proper relationship to the work of other trades involved in the work.



- D. With respect to standard manufactured items, Contractor shall submit to Designer manufacturer's illustrated cuts of the items to be furnished showing details, sizes and dimensions and all other pertinent information. Sufficient copies of cuts shall be furnished so that Designer may maintain a minimum of two copies and return to Contractor the number required for Contractor's use.
- E. Contractor shall submit one reproducible print and three copies of each drawing.

1.05 Preconstruction Submittals (Product Data)

- A. Submit a complete description of the roofing systems listing all components and their respective manufacturer.
- B. If requested, submit each manufacturer's technical specifications and installation procedures for each major roofing component required.
- C. Minimum required components include full system and attachment methods.

1.06 Preconstruction Submittals (Samples)

- A. Provide samples of components and metal colors as requested by Designer or Owner.

1.07 Closeout Submittals

- A. Contractor's final payment application.
- B. Manufacturer's warranty(s) in accordance with Section 01 78 36.
- C. Contractor's warranty in accordance with Section 01 78 36.

PART 2 - NOT USED

PART 3 - EXECUTION

3.01 General

- A. Contractor shall denote any variations from the contract documents on the submittal.

3.02 Schedule

- A. Make all submittals in accordance with schedules specified herein.
- B. Engineer will be allowed a minimum of 7 calendar days following receipt of submittals for review.

3.03 Review

- A. Review by the Designer shall be directed to the general method of construction and shall not be construed as a complete check nor shall the review relieve the contractor from responsibility for errors and/or omissions which may exist.
- B. The notations "Reviewed" or "Make Corrections as Noted" shall authorize Contractor to proceed with fabrication, purchase, or both, subject to the revisions, if any, required by the Designer's review comments.
- C. The Contractor shall make all revisions, as required. If the Contractor considers any required revisions to constitute a change, he shall notify the Designer under the provisions specified in the General Conditions.



- D. Only those revisions directed or approved by the Designer shall be shown on the re-submittal.
- E. After a submittal has been approved by the Designer, substitution of materials or equipment shall not be considered unless accompanied by an acceptable explanation as to the necessity for the substitution.

END OF SECTION



**SECTION 01 45 00
QUALITY CONTROL**

PART 1 - GENERAL

1.01 General

- A. Maintain quality control over products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Contractor shall provide weekly reports to the Designer and Owner. Reports shall, at a minimum:
 - 1. Summarize work completed for the week. Summary shall include:
 - (a) Square deet of roofing installed.
 - (b) Linear feet of metal installed.
 - 2. Plans for work the following week.
 - 3. Any unit prices utilized with accompanying documentation.
 - 4. A minimum of 12 photos depicting progress completed since previous week.
 - 5. Any schedule updates.
 - 6. Any open RFIs or issues encountered.
- C. Contractor superintendent/project manager shall be available for weekly meetings with the Designer and Owner.

1.02 Project Specific

- A. A minimum of 3 seam samples shall be taken across seams per day per welder or field peel tests shall be performed in accordance with the roofing system manufacturer's requirements by the roofing contractor. At a minimum, a peel test shall be performed each time machines are activated, and this test shall be dated, stored on-site, and readily available for Designer inspection. Samples shall be tack welded to the roof at each test location, but shall be removed before substantial completion, unless otherwise directed by the Owner.
- B. Work found in violation of the Specifications, or not in conformance with acceptable roofing practices/standards, shall be subject to rejection including removal and replacement with new materials at Contractor's expense.
- C. Failure of Owner or Designer to discover or reject defective work, or work not in accordance with the Contract, shall not be deemed an acceptance thereof, nor a waiver of Owner's rights to Contractor's compliance with the Contract or performance of the work, or any part thereof. No partial or final payment, or partial or entire occupancy, by Owner shall be deemed to be an acceptance with the Contract, nor shall it be deemed a waiver by Owner or any of Owner's rights pursuant to this Contract or otherwise.
- D. Owner intends to conduct inspections of the work by in-house personnel and/or the Owner's representative on a full/part-time basis. Such work is in addition to the Designer's inspections which may be conducted to verify that work completed is comparable to contractor's monthly application for payment.
- E. TPO membrane and base flashings shall be smooth to the substrate, and wrinkles in membrane or base flashings shall be grounds for rejection.



- F. The accumulation of debris and foam adhesive beneath new membrane is not acceptable and shall be grounds for rejection.

PART 2 - NOT USED

PART 3 - NOT USED

END OF SECTION



**SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS**

PART 1 - GENERAL

1.01 Description

- A. 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.
- B. All equipment furnished by Contractor shall comply with all pertinent safety requirements.
- C. 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.
- D. All temporary facilities will be subject to the Owner's approval.

1.02 Product Handling

- A. The Contractor shall exercise all means necessary to maintain temporary facilities and controls in proper and safe condition throughout the progress of the project.
- B. 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.
- C. If the required utility is not available from the Owner, the Contractor shall provide for alternate temporary service for the duration of the project.

PART 2 - NOT USED

PART 3 - EXECUTION

3.01 Electricity

- A. Electrical outlets are not available at the roof of the subject building. Contractor shall provide a means for temporary power supply during the duration of the roofing work. Any additional electrical requirements required by the Contractor shall be provided by the Contractor at no additional cost to the Owner.
- B. 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.

3.02 Water



- A. Water supply is not available at the roof of the subject building. Contractor shall provide a means of water supply for during the duration of the roofing work. Any additional water requirements by the Contractor shall be provided by the Contractor at no additional cost to the Owner.

3.03 Sanitary Facilities:

- A. 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.
- B. Contractor's temporary toilet and washroom facilities shall be located as determined by the Owner.

3.04 Enclosures:

- A. 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.
- B. 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.

3.05 Signs:

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

3.06 Construction Aids:

- A. Contractor shall provide for debris removal services and containers. Placement and servicing of containers shall be coordinated with the Owner.
- B. 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.
- C. 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 Engineer.

3.07 Parking:

- A. 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.

3.08 Connects and Disconnects:

- A. 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 in writing by Owner.

3.09 Site Access:

- A. Contractor's operations shall be confined to areas indicated. Contractor shall not block entrances, points of egress, or passageways except as necessary.



END OF SECTION



**SECTION 01 78 36
WARRANTIES**

PART 1 - GENERAL

1.01 Description

- A. Upon completion of the work and prior to the final payment, the Contractor shall submit the required contractor's warranty and/or manufacturer's guarantee, as required by this Section.

1.02 Warranties and Bonds

- A. Comply with the General Conditions of the Contract concerning warranties and bonds. The Contractor shall agree that the work covered under this Contract shall remain free from any water penetration and physical defects caused by defective workmanship or materials for a period of two (2) years from the date of final acceptance by Owner. Warranty under "Exhibit A" shall be executed on Contractor's company letterhead and signed by an authorized officer of the company.
- B. Prior to final payment, Contractor shall submit one original and three copies of the roofing system manufacturer's thirty (30) year, No Dollar Limit Guarantee, with flashing endorsement, to the Owner.
 - 1. Roofing system shall include all layers of the system including accessories, insulation, coverboard, temporary roofs, etc.
 - 2. Warranty shall include 1-inch hail rider.
 - 3. Note: There have been instances where a problem has arisen with the material performance of a product that has been approved by the roofing system manufacturer, but is not manufactured by the roofing system manufacturer. In those instances where a product defect or failure occurs, even if the failure/defect does not result in leaks through the membrane and/or facility, the roofing system manufacturer shall work in concert with the roofing contractor to resolve such issues to the satisfaction of the Owner at no additional cost to the Owner.
- C. **(ALTERNATE 1)** Prior to final payment, Contractor shall submit one original and three copies of the roofing system manufacturer's twenty (20) year, No Dollar Limit Guarantee, with flashing endorsement, to the Owner.
 - 1. Roofing system shall include all layers of the system including accessories, insulation, coverboard, temporary roofs, etc.
 - 2. Warranty shall include 1-inch hail rider.
 - 3. Note: There have been instances where a problem has arisen with the material performance of a product that has been approved by the roofing system manufacturer, but is not manufactured by the roofing system manufacturer. In those instances where a product defect or failure occurs, even if the failure/defect does not result in leaks through the membrane and/or facility, the roofing system manufacturer shall work in concert with the roofing contractor to resolve such issues to the satisfaction of the Owner at no additional cost to the Owner.
- D. Prior to final payment, the contractor shall furnish one original and three copies of the metal flashing manufacturer's 20-year finish warranty for factory applied finishes.

PART 2 - NOT USED

PART 3 - NOT USED



END OF SECTION



EXHIBIT "A"

(Print Warranty Body on Contractor's Company Letterhead)

WARRANTY

1. Known all men by these presents, that we, *Contractor shall insert company name here* (Contractor), having installed insulation, roofing, flashings, and sheet metal work, and having accomplished certain other work on the John Harrison Hosch Library on the University of North Georgia, Gainesville Campus under Contract between University of North Georgia and (Contractor) warrant to University of North Georgia, with respect to said work that for a period of two years from date of final acceptance of said work by University of North Georgia, the roofing including insulation, roofing membrane, flashings, and sheet metal work, shall be absolutely watertight and free from all leaks, provided however that the following are excluded from this warranty:
 - a. Defects or failure resulting from abuse by the Owner.
 - b. Defects in design involving failure of the structure, load-bearing walls, and/or foundations.
 - c. Damage caused by fire, tornado, hail, hurricane, acts of God, wars, riots, and/or civil commotion.
2. We agree that should any leaks occur in the roofing, we will promptly remedy said leaks in a manner to restore the roof to a watertight condition by methods compatible to the system and acceptable under industry standards and/or general practice.
3. We further agree that for a period of two from date of final acceptance referred to above, we will make repairs at no expense to the Owner, to any defects which may develop in the work including, but not limited to, blisters, wrinkles, ridges, splits, warped insulation, and loose flashings, in a manner compatible to the system and acceptable under industry standards and general practice.
4. We also agree that the Owner has the right, at any time during the two-year warranty period, to make emergency repairs to protect the contents of the building or the building itself from damage due to leaking. The cost of emergency repairs made during the two years of the warranty period shall be borne by the Contractor and action by the Owner shall not invalidate the warranty.

IN WITNESS WHEREOF, we have caused this instrument to be duly executed, this ___ day of _____, 202x.

_____ by _____
 Contractor President

Notary Public

END OF EXHIBIT "A"



**SECTION 02 41 13
SELECTIVE DEMOLITION AND PREPARATION**

PART 1 - GENERAL

1.01 Section Includes:

- A. Metal deck repair
- B. Unit Prices and Allowances
- C. Miscellaneous work

1.02 Related Work

- A. Section 01 11 00 – Summary of Work
- B. Section 02 82 33 – Removal of Asbestos Containing Roofing Materials
- C. Section 06 10 53 – Miscellaneous Rough Carpentry

PART 2 - MATERIALS

2.01 Unit Prices and Allowances

- A. Metal Deck Primer: Kem Kromik as manufactured by Sherwin Williams or approved equal.
- B. Sheet Metal: 20-gauge G-60 galvanized steel.
- C. Deck-To-Joist Fastener: Astm A240, 410 stainless steel, self-drilling minimum #12 stainless steel screw with a nominal head diameter of 0.430 inches. Screws shall penetrate the substrate a minimum of 1-1/2 inch.
- D. Wood Blocking and Accessories: Refer to Section 06 10 53.

2.02 Miscellaneous Materials

- A. Condensation Lines: Schedule 40 PVC.
- B. Condensation Line Supports:
 - 1. Carlisle Pipe Support: Small
 - 2. Approved equal.

PART 3 - PERFORMANCE REQUIREMENTS

3.01 Demolition

- A. Refer to Section 01 11 00 Summary of Work.



- B. The Contractor shall document the actual quantities removed for materials bid on a unit price basis.
- C. All existing roof mounted equipment shall be lifted or removed so that existing flashings can be totally removed.
- D. Remove only as much material as can be totally replaced in the same day.
- E. Demolition shall be performed by personnel familiar with the replacement of materials being used.
- F. Demolition adjacent to areas to remain shall be performed in a neat manner with straight lines to facilitate tie-ins of replacement materials. Contractor shall review tie-in methods with the Designer for approval. Designer has final approval of such methods.
- G. Excessive demolition, as determined by the Owner's representative, shall be replaced with equal materials at the Contractor's expense in accordance with the General Conditions of the Contract.
- H. No demolition shall be performed if the chance of precipitation is 40% or more as reported by the nearest office of the National Weather Service.

3.02 Preparations

- A. Prior to the installation of any new roofing, flashings, metal flashings, any other miscellaneous items, the Contractor shall clean surfaces of all dust, dirt, and other foreign materials.
- B. Inspect the deck carefully. If, in Contractor's opinion, there are metal deck areas that require repair and/or replacement, notify the Designer. Do not proceed with any repairs or replacement until directed by the Designer.
- C. Prior to the installation of any new roofing materials, extend all existing soil pipe vents through the roof to a minimum height of 8 inches (or as required by local plumbing codes) above the finished roof surface. Furnish a piece of PVC piping that will fit snugly into the existing soil pipe vent and shall extend into the pipe a minimum of 12 inches. Provide a second PVC pipe that fits snugly around the smaller PVC pipe and shall provide a minimum 8" height above the finished roof surface. The smaller pipe height shall match the outer pipe. Cement the two PVC pipes together with an approved pipe solvent/glue. Insert the extension into the existing soil pipe vent.
 - 1. Note: The placement of a PVC pipe extension directly on top of the existing soil pipe vent without the support method described above shall be removed by the Contractor and new extensions approved by the Designer shall be installed at no additional cost to the Owner.
- D. Abandoned Penetrations at Metal Roof Decks:
 - 1. At all abandoned roof penetrations, less than 6 inches in diameter, secure a piece of 20 ga. galvanized steel to the existing deck at spacings not to exceed 6 inches on center and located approximately one inch from the edge of the opening. Sheet metal shall be secured to the deck with specified deck screws. The sheet metal shall extend onto the existing deck a minimum of 6 inches.
 - 2. At abandoned openings, larger than 12 inches on any side but less than 24 inches, furnish and install new steel decking which matches the existing and install so that the ends and sides extend



- past the edges of the existing deck a minimum of 12 inches. The ends of the new steel deck shall extend over a structural member. Secure the new deck to the existing deck with specified deck screws at spacings not to exceed 6 inches on-center located approximately 6 inches from the opening on all sides. The ends of the new deck shall be secured to the existing structural supports using specified deck screws at Steel Deck Institute 36/7 patterns. Install specified side lap screws along the side laps at spacings not to exceed 30 inches on-center.
3. At abandoned openings, larger than 24 inches on any side, furnish and install new steel decking which matches the existing and install so that the new deck unit is supported by a minimum of three structural supports. Insure that the new deck section is “nested” tightly in the existing, which may require the removal of existing deck fasteners or grinding down existing welds. Secure the new deck to each structural member with specified deck screws at at Steel Deck Institute 36/7 patterns. At side laps, furnish and install a minimum of 3 specified side lap screws between each structural member.

3.03 Unit Prices & Allowances

- A. Contractor is responsible for documenting unit prices utilized to the satisfaction of the Owner/Designer. Photos and reports of quantities shall be required.
- B. Unit prices will be exercised at the option of the Owner.
- C. Modify and coordinate related activities as required to complete the work if, and when, acceptance is designated by the Owner in the standard form of agreement.
- D. In the event unit prices are exercised, applicable sections of this Specification shall govern. Other sections may be modified as required to address the unit price.
- E. Cost associated with the repair of decking at removed abandoned penetrations identified on plans and/or marked on the roof shall be included in the Base Bid.
- F. Bidders shall provide a unit price for the items listed on the Bid Form. Bidder shall include a cash allowance in the Base Bid for each unit price in the quantity list below and on the bid form. Payment will be made for unit price work in excess of the cash allowance, which includes all overhead and profit. In the event it is necessary to replace fewer than quantity associated with the cash allowance, the Owner will take a credit at the unit price rate. The Designer shall be responsible for verifying the actual quantity and extent of the unit price work.
 1. Contractor must receive approval in writing prior to exceeding allowances.
- G. (Unit Price No. 1) Where steel decking is rusted but remains structurally sound, wire brush deck units so that all rust is removed. Paint with specified metal primer, or approved equal, and allow to dry before proceeding with the installation of new materials.
 1. Contract shall include 500 square feet of metal deck priming in the Base Bid.
- H. (Unit Price No. 2) Where steel decking is damaged or rusted through in small areas, clean deck of rust with a wire brush. Paint with specified metal primer or approved equal. Install over the damaged area the specified sheet metal that shall be secured to the existing steel deck with specified deck screws



located 1 inch from the perimeter of the plate, and at 6 inches on center. Extend the new steel plate a minimum of 6 inches onto the surface of the existing steel deck beyond the damaged area.

1. Contract shall include 100 square feet of sheet metal installation in the Base Bid.

I. (Unit Price No. 3) At those locations where existing welds have broken from the top of the supporting members or have not been installed, furnish and install new screws at missing locations. Fasteners shall penetrate the structural membrane a minimum of 1-1/2 inches.

1. Contract shall include installation of 500 screws in the Base Bid.

J. (Unit Price No. 4) Where wood blocking or curbs to remain are damaged or deteriorated, remove existing wood blocking to a point 6 inches beyond the damage and/or deterioration, and repair and/or replace with new wood blocking to match existing. Secure new blocking to the substrate using specified screws at spacings not to exceed 12 inches on-center, staggered. Pattern.

1. Contract shall include 400 board feet of nominal 2x6 wood blocking replacement in the Base Bid.

K. (Unit Price No. 5) Where the existing plywood sheathing is damaged or deteriorated, completely remove the damaged decking area. Furnish and install a new CD-X exterior-grade plywood decking to span a minimum of 3 supports, thickness to match existing. The plywood decking shall be attached to all structural supports using appropriate #10 fasteners at spacings not to exceed 6 inches on-center. Fasteners shall penetrate the support a minimum of 1-1/2 inch.

1. Contract shall include 320 square feet of plywood replacement in the Base Bid.

L. Contractor shall include allowances as indicated on the Bid Form in the Base Bid. Contract will be increased at unit price rates for unit price work that exceeds allowances. Contract will be reduced for unused unit price work at the bid unit price rate. Owner reserves the right to negotiate lump sum modifications to the contract for bulk unit price work.

3.04 Condensation Lines and Supports

A. Furnish and install new condensation lines at all existing HVAC unit locations. Direct water into gutter system.

B. Condensation lines shall have P-traps.

C. Furnish and install new supports at 5-feet on center and within 12-inches of all turns.

D. Install supports on 6"x6" welded membrane pads. Adhere supports.

END OF SECTION



**SECTION 02 82 33
REMOVAL OF ASBESTOS CONTAINING ROOFING MATERIALS**

PART 1 - GENERAL

1.01 Summary:

- A. Work includes the development of an asbestos abatement removal plan and the removal of the roof assembly known to contain asbestos materials in accordance with all applicable Georgia and Federal laws.
- B. Asbestos was found in the silver coatings on the roof system flashings.
- C. Refer to **Exhibit A: Asbestos Report** for additional information.

1.02 Bid Submittals:

- A. Contractor shall submit documentation that he is qualified and licensed to perform this type of work as part of the Bid submittal.
- B. Contractor shall submit library closure requirements with the Bid submittal.

1.03 Quality Assurance:

- A. Contractor and employees involved in the removal of ACM on this project shall have current training certificates for the proper removal of such materials. Each employee's medical monitoring program shall be current in order to work on this project. Contractor shall provide copies of employee certificates to the Designer prior to the start of this phase of the work.
- B. Contractor shall comply with current testing and monitoring protocols. Three copies of these protocols shall be provided to the Owner prior to the start of ACM removals for review.
- C. Contractor shall comply with the current requirements for handling and disposal of ACM. Disposal certificates from the receiving landfill shall be provided to the Owner at the time of project closeout.

1.04 Environmental Conditions

- A. Material installation shall proceed only when weather conditions are in compliance with the applicable manufacturer's recommendations for installation and no precipitation is imminent. Materials installed during adverse weather conditions shall be subject to removal and replacement with new materials at no additional cost to Owner.
- B. Contractor shall provide additional temporary roof systems, if required, during the abatement process.

1.05 Asbestos Abatement Plan Preparation:

- A. Contractor shall submit an asbestos abatement plan which describes the procedures that the Contractor shall use during this project. This plan shall include, at a minimum, the following:
 - 1. Table of Contents
 - 2. Equipment to be used on this project



3. Written description of procedures for cutting, dust control, packaging, transporting, and disposal of ACM.
4. Written description of procedures for air monitoring, sample testing, project safety, and site access controls that will be in place during abatement activities.
5. Documentation that workers are medically qualified for this type of work and that medical documentation is current in accordance with the regulations.
6. Training certificates for all workers on this project that show they meet the current requirements to perform the specified work.
7. A copy of the applicable regulations used in the development of the work plan.
8. Temporary waterproofing methods.

PART 2 - MATERIALS: Not Used.

PART 3 - EXECUTION

3.01 Preparation

- A. All roof-mounted mechanical equipment shall be shut down during abatement.
- B. Seal off all air intake ports, discharge ports, independent fans, etc. with tape and polyethylene film.
- C. Install fully enclosed chutes or make other arrangements for the removal of ACM from the roof areas that comply with current regulations.

3.02 Removals

- A. Contractor shall remove ACM in accordance with the approved work plan. Any deviations from this plan shall be submitted to the Designer for review prior to proceeding.
- B. Air monitoring during the work shall be performed in accordance with current regulations and the approved work plan. All field records and test results associated with the monitoring program shall be submitted at the end of the project to the Owner.

NOTE: Any costs associated with required air monitoring on this project shall be included in the Base Bid.

- C. Abatement activities shall be coordinated with the roofing work so that the roof assembly will be watertight at the end of each workday.
- D. At a minimum, the contractor shall wet and double-bag all ACM prior to placing materials in a dumpster double-lined with minimum 6 mil sheathing.

END OF SECTION



Commerce Service Center
Roof Replacement

PM&A Project No. 23-019

EXHIBIT A – ASBESTOS REPORT

**CHAIN OF CUSTODY
 BULK ASBESTOS ANALYSIS**

Client Name:	<u>P. Marchall & Associates</u>	Project Name:	<u>23-019 Jackson County</u>
Address:	<u>1000 Holcomb Woods Pkwy</u>	Project Number:	<u>23-019 Jackson County</u>
City, State, Zip:	<u>Roswell Ga 30076</u>	Sampling Date:	<u>2-6-2023</u>
Contact:	<u>678-55-4501</u>	Phone #:	<u></u>
Sampler's Name:	<u>Robert Bounnakhom</u>	Invoice To Name(s):	<u>Robert Bounnakhom</u>
Report To:	<u>Robert Bounnakhom</u>	Invoice To Email(s):	<u>Rbounnakhom@pmass.com</u>
Report to Email:	<u>Rbounnakhom@pmass.com</u>	PO #:	<u></u>

Sample ID	Sample Location/Description	Analysis Requested	Turnaround Time (TAT)	Comments
1	C1 1/3	PLM	Standard	
2	C1 2/3	PLM	Standard	
3	C1 3/3	PLM	Standard	
4	C2 Main	PLM	Standard	
5	C2 Top	PLM	Standard	
6	C2 Bottom	PLM	Standard	
7	C3 Main	PLM	Standard	
8	C3 Bottom	PLM	Standard	
9	C4 1/3	PLM	Standard	
10	C4 2/3	PLM	Standard	
11	C4 3/3	PLM	Standard	
12	C8 Top Wall	PLM	Standard	
13	C8 Bottom Wall	PLM	Standard	
14	C8 Main 1 Top	PLM	Standard	
15	C8 Main 2 Bottom	PLM	Standard	
16	C9 Top	PLM	Standard	
17	C9 Mid	PLM	Standard	
18	C9 Bottom	PLM	Standard	
19	C10 Main	PLM	Standard	
20	C10 Bottom	PLM	Standard	

Relinquished by:	<u>[Signature]</u>	Date/Time:	<u>3-21-23 2:47</u>
Received by:	<u></u>	Date/Time:	<u></u>
Relinquished by:	<u></u>	Date/Time:	<u></u>
Received by:	<u></u>	Date/Time:	<u></u>

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Client assumes sole responsibility for damage or loss of samples before we accept them. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT.

Asbestos COC7.15.19

Lab Recipient:	<u>LEILA DYE</u>	FOR LAB USE ONLY	Date/Time:	<u>3-21-23 14:47</u>	Method of Shipment:	<u>CLIENT</u>
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Atlanta, GA 30340
Tel : (770) 457-8177
Fax: (770) 457-8188

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Bulk Sample Summary Report



Report Date: 29-Mar-23

Client Name:	P Marshall & Associates	AES Job Number:	2303003
Project Name:	23-019 JACKSON COUNTY	Project Number:	23-019 JACKSON CO

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
C1 1/3 Layer: 1	2303O03 -001A	SEE COC	ND	ND	ND	ND	ND	ND	
C1 1/3 Layer: 2	2303O03 -001A	SEE COC	ND	ND	ND	ND	ND	ND	
C1 2/3 Layer: 1	2303O03 -002A	SEE COC	ND	ND	ND	ND	ND	ND	
C1 2/3 Layer: 2	2303O03 -002A	SEE COC	ND	ND	ND	ND	ND	ND	
C1 3/3 Layer: 1	2303O03 -003A	SEE COC	ND	ND	ND	ND	ND	ND	
C1 3/3 Layer: 2	2303O03 -003A	SEE COC	ND	ND	ND	ND	ND	ND	

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophyllite
For comments on the samples, see the individual analysis sheets.
ND = None Detected

AES, Inc. is accredited by NIST's National Voluntary Laboratory Accreditation Program (NVLAP) for Polarized Light Microscopy (PLM) analysis, Lab Code 102082-0. All analyses performed in accordance with EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA 600/M4-82-020), 1982 as found in 40 CFR, Part 763, Appendix E to Subpart E and "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), 1993.
These test results apply only to those samples actually tested, as submitted by the client. All percentages are reported by visually estimated volume. PLM is not consistently reliable in detecting small concentrations of asbestos in floor tiles and similar nonfriable materials, quantitative TEM is currently the only method that can be used to determine conclusive asbestos content.
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Microanalyst:

Svetlana Arkhipov

QC Analyst:

Yelena Khanina



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ANALYTICAL ENVIRONMENTAL SERVICES, INC.

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Report Date: 29-Mar-23

Client Name:	P Marshall & Associates	AES Job Number:	2303003
Project Name:	23-019 JACKSON COUNTY	Project Number:	23-019 JACKSON CO

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
C2 MAIN Layer: 1	2303003 -004A	SEE COC	ND	ND	ND	ND	ND	ND	
C2 MAIN Layer: 2	2303003 -004A	SEE COC	ND	ND	ND	ND	ND	ND	
C2 MAIN Layer: 3	2303003 -004A	SEE COC	ND	ND	ND	ND	ND	ND	
C2 TOP Layer: 1	2303003 -005A	SEE COC	ND	ND	ND	ND	ND	ND	Paint included as binder
C2 BOTTOM Layer: 1	2303003 -006A	SEE COC	ND	ND	ND	ND	ND	ND	
C2 BOTTOM Layer: 2	2303003 -006A	SEE COC	ND	ND	ND	ND	ND	ND	

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ND = None Detected

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Report Date: 29-Mar-23

Client Name:	P Marshall & Associates	AES Job Number:	2303003
Project Name:	23-019 JACKSON COUNTY	Project Number:	23-019 JACKSON CO

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
C3 MAIN Layer: 1	2303003 -007A	SEE COC	ND	ND	ND	ND	ND	ND	
C3 MAIN Layer: 2	2303003 -007A	SEE COC	ND	ND	ND	ND	ND	ND	
C3 BOTTOM Layer: 1	2303003 -008A	SEE COC	ND	ND	ND	ND	ND	ND	
C3 BOTTOM Layer: 2	2303003 -008A	SEE COC	ND	ND	ND	ND	ND	ND	
C4 1/3 Layer: 1	2303003 -009A	SEE COC	ND	ND	ND	ND	ND	ND	
C4 1/3 Layer: 2	2303003 -009A	SEE COC	ND	ND	ND	ND	ND	ND	

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ND = None Detected

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Report Date: 29-Mar-23

Client Name:	P Marshall & Associates	AES Job Number:	2303003
Project Name:	23-019 JACKSON COUNTY	Project Number:	23-019 JACKSON CO

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
C4 2/3 Layer: 1	2303003 -010A	SEE COC	ND	ND	ND	ND	ND	ND	
C4 2/3 Layer: 2	2303003 -010A	SEE COC	ND	ND	ND	ND	ND	ND	
C4 3/3 Layer: 1	2303003 -011A	SEE COC	ND	ND	ND	ND	ND	ND	
C4 3/3 Layer: 2	2303003 -011A	SEE COC	5	ND	ND	ND	ND	ND	Silver Paint
C4 3/3 Layer: 3	2303003 -011A	SEE COC	ND	ND	ND	ND	ND	ND	
C8 TOP WALL Layer: 1	2303003 -012A	SEE COC	ND	ND	ND	ND	ND	ND	

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Project Name:	23-019 JACKSON COUNTY	Project Number:	23-019 JACKSON CO

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
C8 TOP WALL Layer: 2	2303003 -012A	SEE COC	5	ND	ND	ND	ND	ND	Silver Paint
C8 TOP WALL Layer: 3	2303003 -012A	SEE COC	ND	ND	ND	ND	ND	ND	
C8 BOTTOM WALL Layer: 1	2303003 -013A	SEE COC	ND	ND	ND	ND	ND	ND	
C8 BOTTOM WALL Layer: 2	2303003 -013A	SEE COC	ND	ND	ND	ND	ND	ND	
C8 MAIN 1 TOP Layer: 1	2303003 -014A	SEE COC	ND	ND	ND	ND	ND	ND	
C8 MAIN 1 TOP Layer: 2	2303003 -014A	SEE COC	ND	ND	ND	ND	ND	ND	

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ND = None Detected

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Report Date: 29-Mar-23

Client Name:	P Marshall & Associates	AES Job Number:	2303003
Project Name:	23-019 JACKSON COUNTY	Project Number:	23-019 JACKSON CO

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
C8 MAIN 1 TOP Layer: 3	2303003 -014A	SEE COC	ND	ND	ND	ND	ND	ND	
C8 MAIN 2 BOTTOM Layer: 1	2303003 -015A	SEE COC	ND	ND	ND	ND	ND	ND	
C8 MAIN 2 BOTTOM Layer: 2	2303003 -015A	SEE COC	ND	ND	ND	ND	ND	ND	
C9 TOP Layer: 1	2303003 -016A	SEE COC	ND	ND	ND	ND	ND	ND	
C9 TOP Layer: 2	2303003 -016A	SEE COC	ND	ND	ND	ND	ND	ND	
C9 MID Layer: 1	2303003 -017A	SEE COC	ND	ND	ND	ND	ND	ND	

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ND = None Detected

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Report Date: 29-Mar-23

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Project Name:	23-019 JACKSON COUNTY	Project Number:	23-019 JACKSON CO

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
C9 MID Layer: 2	2303003 -017A	SEE COC	ND	ND	ND	ND	ND	ND	
C9 BOTTOM Layer: 1	2303003 -018A	SEE COC	ND	ND	ND	ND	ND	ND	
C10 MAIN Layer: 1	2303003 -019A	SEE COC	ND	ND	ND	ND	ND	ND	
C10 MAIN Layer: 2	2303003 -019A	SEE COC	ND	ND	ND	ND	ND	ND	
C10 MAIN Layer: 3	2303003 -019A	SEE COC	ND	ND	ND	ND	ND	ND	
C10 BOTTOM Layer: 1	2303003 -020A	SEE COC	ND	ND	ND	ND	ND	ND	

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ND = None Detected

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These test results apply only to those samples actually tested, as submitted by the client. All percentages are reported by visually estimated volume. PLM is not consistently reliable in detecting small concentrations of asbestos in floor tiles and similar nonfriable materials, quantitative TEM is currently the only method that can be used to determine conclusive asbestos content.
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QC Analyst:

Yelena Khanina

End of Report



SECTION 06 10 53
MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.01 Description

- A. Installation of wood blocking and/or curbs as required for the roof replacement.

1.02 Related Work

- A. Section 07 54 23 – TPO Roofing

PART 2 - NOT USED

2.01 Wood Products

- A. Non-Structural Wood Blocking: Nominal 2-inch-thick maximum, nominal widths as specified, shop pressure-treated for above ground contact. Do not use oil-based preservatives.
- B. Cd-X Exterior Grade Plywood: Nominal 1-inch-thick maximum, three-ply minimum.
- C. Wood Fiber Tapered Edge Strips: ASTM C208, Type II, Grade 1 (Built-Up Roofs), C209. Approved for use by approved roofing system manufacturer.

2.02 Fastening Products

- A. Screws: #12 double-coated galvanized steel screws or stainless-steel self-tapping wood screws that shall be able to resist any galvanic action that may be able to develop between the nail and the pressure treatment. The use of a lesser quality screw will not be approved. Screws shall be of sufficient length to penetrate a minimum of 1-1/2-inches into the substrate. Space screws no more than 12-inches on-center, unless specified otherwise.
- B. Nails: For securing new lumber to new lumber or new plywood/OSB to new lumber, double-coated galvanized steel or stainless-steel ring shank nails are to be used to penetrate a minimum of 1-1/2-inches into the substrate but not smaller than 10d nails. Use 16d nails where material being secured is 1-1/2-inch to 2-inches-thick. Space nails no more than 12-inches on-center unless specified otherwise.
- C. Masonry Fastener: Space fastener no more than 12-inches on-center unless specified otherwise.
 - 1. Tapcon 1/4-inch x minimum 1-1/4-inch in the substrate, as manufactured by Buildex.

PART 3 - EXECUTION

3.01 General

- A. Furnish and install new wood blocking at all roof mounted equipment as required to provide a minimum flashing height of 8-inches above roof level.
- B. Blocking shall be installed under integral equipment curbs as required to maintain full cant face above roof level and secured to the deck with appropriate fasteners through the deck as specified.



3.02 Wood Blocking Installation:

- A. Install the minimum number of layers to satisfy the total thickness requirements shown on drawings or specified herein. Locate two fasteners approximately 2 inches from the end of each board
- B. Parapets: Furnish and install new continuous tapered wood blocking on top of the existing parapet as shown on drawings. Secure the wood blocking to the existing structure using specified masonry anchors at 12-inches on center, staggered pattern. Taper shall provide a minimum slope of ¼-inch-per-foot across the parapet. Refer to Drawings.
- C. At the gutter eave and roof deck transitions, furnish and install new nominal 6-inch-wide wood blocking to match the thickness of the adjacent insulation and coverboard. Secure the wood blocking to the existing structure using specified sheet metal screws at 12-inches on center, staggered pattern. Secure additional layers of wood blocking to the previous layers using specified screws at 12-inches on center, staggered pattern. Utilize plywood, if required, for smooth transitions. Plywood width shall match the adjacent blocking. Refer to Drawings.
- D. At the top of the slant, furnish and install new ½-inch thick plywood trimmed to match the slope and provide a smooth transition. Plywood shall extend over the existing wall panels. Secure the wood blocking to the existing structure using specified screws at 12-inches on center, staggered pattern. Refer to Drawings.

END OF SECTION



**SECTION 07 22 16
ROOF BOARD INSULATION**

PART 1 - GENERAL

1.01 Description

- A. Installation of roof insulation system, coverboard, and separator board.

1.02 Related Work

- A. Section 01 11 00 – Summary of Work
- B. Section 06 10 53 – Miscellaneous Rough Carpentry
- C. Section 07 54 23 – TPO Roofing

1.03 Environmental Conditions:

- A. Material installation shall proceed only when weather conditions are in compliance with the applicable manufacturer's recommendations for installation and no precipitation is imminent. Materials installed during adverse weather conditions shall be subject to removal and replacement with new materials at no additional cost to Owner.

PART 2 - PRODUCTS

- 2.01 General:** All accessories and materials as approved by the system manufacturer. Roof system shall attain minimum R-25.

2.02 Insulation Materials

- A. Polyisocyanurate Roof Insulation: Flat and tapered, as specified, ASTM C1289, Type II, Class I. Board size shall not exceed 4' x 8' for mechanically attached insulation. Board size of tapered insulation shall not exceed 4' x 4'. The Long-Term Thermal Resistance shall be a minimum of 5.7 per inch. Insulation compressive strength shall be minimum 20 psi. Insulation density shall be 2 pcf minimum. Thermal insulating factor as specified; however, thicknesses of each layer of insulation shall not exceed 2 inches.
- B. Wood Fiber Tapered Edge Strips: For tapered insulation transitions and coping as approved for use by approved roofing system manufacturer.
- C. Cover Board: Gypsum Fiber Board, Nominal 1/2" thick, ASTM C 1177, 0 Flame Spread and 0 Smoke Developed when tested in accordance with ASTM E 84, nominal 900 psi minimum compressive strength, Class A, non-combustible, 4' x 4' board size.
- D. Separator Board: Gypsum Fiber Board, Nominal 1/4" thick, ASTM C 1177, 0 Flame Spread and 0 Smoke Developed when tested in accordance with ASTM E 84, nominal 900 psi minimum compressive strength, Class A, non-combustible.

2.03 Fasteners



- A. Low-Rise Adhesive Fastener: double or single-component low-rise polyurethane adhesive as approved by the roofing system manufacturer.
- B. Fasteners & Plates:
 - 1. Insulation Fastener: Minimum #12 steel screw roof insulation fastener for steel decking as approved by the roofing materials manufacturer. Fasteners must pass a minimum of 15 cycles in the Kesternich SFW 2.0s DIN 50018 test with less than 15% red rust.
 - 2. Insulation Fastener Plate: 3" ribbed, galvalume coated steel plate as approved by the roofing materials manufacturer.

PART 3 - EXECUTION

3.01 General:

- A. The substrate shall be clean, smooth, dry, and free of debris and all foreign matter prior to receiving insulation and cover board. Application of new materials shall constitute approval of the substrate by the Contractor.
- B. The contractor bears the responsibility to locate any conduits that are in the decking flutes prior to the start of the work. The contractor shall to be full extent possible, not engage these conduits with screws, fasteners, etc. Should power be lost due to penetrate a conduit, the Contractor bears the responsibility to locate and repair the conduit and/or enclosed wiring to the original condition so as to restore power to the Owner. Cost associated with these repairs shall be borne by the Contractor at no additional cost to the Owner.
- C. Repairs to conduit, wiring, electrical equipment, and accessories under this paragraph shall be performed by an electrical contractor licensed to perform such work in the state of Georgia with a minimum of 5 years' experience in this type of work.

3.02 General Installation: Roof Insulation and Cover Board

- A. Apply insulation with end joints staggered approximately one-half the length of the units.
- B. Offset insulation joints from the preceding layer a minimum of six (6) inches.
- C. Fit insulation units snugly to each other and to all vertical surfaces.
- D. Low-Rise Foam Adhesive: Secure each board to the substrate using low-rise adhesive beads at spacings in accordance with the manufacturer's requirements to resist the uplift pressures and/or ratings shown on drawings for each zone. However, spacings shall not exceed 12 inches on-center in the field (Zone 1), 6 inches on center for the perimeter (Zone 2), and 4 inches on center for the corner (Zone 3). Zone definition is indicated on drawings. Ensure insulation contact with adhesive by weighting units. Prior to applying adhesive bead, apply one continuous bead of adhesive around the perimeter of the of the insulation board not further than 4 inches from the edge.
- E. Mechanical Attachment: Secure each board to the metal deck using plates and fasteners in accordance with the manufacturer's requirements to resist the uplift pressures and/or ratings shown on drawings for each zone. However, there shall be a minimum of 1 fastener/plates per 4 square feet for



the field (Zone 1), 1 fastener/plates per 2 square feet at the perimeter (Zone 2), and 1 fastener/plates per 1 square feet at the corners (Zone 3). Zone definition is indicated on drawings. Partial units less than 4 square feet shall be secured with a minimum of 4 fasteners/plates. Provide insulation fastener of length to penetrate the roof deck a minimum of $\frac{3}{4}$ inch and a maximum of 1-1/2 inch.

F. Replace damaged units as required to provide a smooth surface and uniform insulation thickness.

3.03 Installation –All Roofs

A. Apply two layers of isocyanurate insulation, thickness as required to meet minimum assembly R-25 requirements. Gang fasten the insulation layers in accordance with above.

B. At the gutter eave, furnish and install one row (4') of 1/4-inch per foot tapered insulation into the gutter in lieu of the top layer of flat insulation. Provide additional flat insulation, if required for a smooth transition.

C. Furnish and install one layer of nominal 1/2-inch-thick cover board over all isocyanurate insulation and secure using low-rise adhesive.

3.04 General Requirements: Crickets/Saddles

A. Cricket/Saddles shall also meet the requirements of Paragraph 3.02 above.

B. Start cricket construction by striking chalk lines for outer edges of tapered units. Install the first row along the chalk lines, mitering and fitting at the points where lines break.

C. Complete the cricket assembly using tapered isocyanurate and isocyanurate fill units. Fill unit shall not exceed one (1) inches in thickness.

D. The thin edge of the tapered insulation shall be $\frac{1}{2}$ " and shall be located at the valley created by the tapered insulation and the roof insulation.

E. Remove and replace damaged units with new insulation or repair to provide a smooth surface and uniform insulation thickness.

F. Utilize tapered wood fiber edge strips that transition from 0" to 1/2" as the first layer of tapered insulation to provide a smooth transition. Set wood fiber on top of the insulation in one continuous band of low-rise foam adhesive.

G. All crickets/saddles shall have a minimum **finished** slope of $\frac{1}{4}$ -inch per foot.

3.05 Separator Board: At curbs and walls above roof level where bituminous flashings have been removed and new plywood or metal is not installed, furnish and install a new separator board over the substrate where new membrane flashings will be applied. Secure the board to the substrate using specified fasteners and insulation plates at spacings not to exceed 18 inches on-center, in every direction and a minimum of 2 rows of fasteners. Fasteners shall penetrate the substrate a minimum of 1 inch.

END OF SECTION



**SECTION 07 54 23
TPO ROOFING**

PART 1 - GENERAL

1.01 Description

- A. Installation of new TPO roof system and accessories.

1.02 Related Work

- A. Section 01 11 00 – Summary of Work
- B. Section 07 22 16 – Roof Board Insulation
- C. Section 07 60 00 – Flashing and Sheet Metal

- 1.03 Environmental Conditions:** Material installation shall proceed only when weather conditions are in compliance with the applicable manufacturer's recommendations for installation and no precipitation is imminent. Materials installed during adverse weather conditions shall be subject to removal and replacement with new materials at no additional cost to Owner.

PART 2 - PRODUCTS

2.01 Acceptable Manufacturers

- A. Carlisle Syntec: Sure-Weld, 80 mil. (Basis of Design)
- B. Johns Manville: JM TPO, 80 mil.
- C. Firestone: UltraPly TPO, 80 mil.

2.02 Thermoplastic Polyolefin (TPO) Roofing Materials

- A. Thermoplastic Polyolefin Membrane. ASTM D6878, Nominal 80 mil overall thickness with minimum 31 mil polymer thickness above the scrim. A minimum tearing strength of 130 pounds as tested in accordance with ASTM D751. A minimum puncture resistance of 400 pounds as tested in accordance with FTM 101C, Method 2031.
 - 1. Maximum sheet width of 12-feet for fully adhered membrane.
 - 2. Membrane color: White. Minimum initial solar reflectance of .79. Minimum 3-year solar reflectance of .70.
- B. **(Alternate 1)** Thermoplastic Polyolefin Membrane. ASTM D6878, Nominal 60 mil overall thickness with minimum 21 mil polymer thickness above the scrim. A minimum tearing strength of 130 pounds as tested in accordance with ASTM D751. A minimum puncture resistance of 300 pounds as tested in accordance with FTM 101C, Method 2031.
 - 1. Maximum sheet width of 12-feet for fully adhered membrane.
 - 2. Membrane color: White. Minimum initial solar reflectance of .79. Minimum 3-year solar reflectance of .70.
- C. Membrane Adhesive (Solvent-Based), as manufactured by the approved roofing system manufacturer.



- D. General Purpose Sealant (white). As manufactured by the approved roofing system manufacturer.
- E. T-Joint Covers. As manufactured by the approved roofing system manufacturer.
- F. Inside/Outside Molded Corners. As manufactured by the roofing system manufacturer. The use of field-fabricated inside/outside corners is not acceptable.
- G. Large and Small Pipe Flashing. As manufactured by the roofing system manufacturer.
- H. Universal Pipe Boot. As manufactured by the roofing system manufacturer. Pre-fabricated flashing boot shall include a draw band for securing the top of the flashing boot to the pipe.
- I. Unsupported Membrane. As manufactured by the approved roofing system manufacturer. Minimum 55 mil thickness.
- J. Cut Edge Sealant. As manufactured by the approved roofing system manufacturer.
- K. Membrane Cleaner: As manufactured by the approved roofing system manufacturer. For use in removing foreign debris from the membrane prior to welding.
- L. Membrane-Clad Metal: As manufactured by the approved roofing system manufacturer, ASTM A653, minimum 24 ga. galvanized steel clad with membrane.
- M. Termination Bar. As manufactured or approved by the approved roofing system manufacturer.
- N. Polyurethane Caulk: As manufactured and/or approved by the roofing system manufacturer. To be applied at those locations identified by the manufacturer.
- O. Water Cut-Off Mastic: As manufactured and/or approved by the roofing system manufacturer. To be applied at those locations identified by the manufacturer.
- P. Walkway Pads: As manufactured by the approved roofing system manufacturer. Nominal 30" wide.
 - 1. Carlisle Sure-Weld TPO Walkway Rolls or approved equal.

2.03 Membrane Welding Machines: As approved by the roofing system manufacturer. Contractor shall provide written documentation that operators have received the roofing system manufacturer's required training to operate equipment. Welders shall be maintained in good working order and shall be operated and maintained in accordance with the welding machine manufacturer's written instructions.

2.04 Roofing Nails: With minimum 1" head, such as Simplex nails or approved equal.

PART 3 - EXECUTION

3.01 General: Install in strict accordance with manufacturer's recommendations.

3.02 Inspection



- A. The substrate shall be clean, smooth, dry, free of debris and all foreign matter prior to installation of the roof membrane. Application of new materials shall constitute approval of the substrate by the Roofing Contractor.
- B. Insulation joints with gaps greater than ¼" shall be filled with roof insulation in order to provide a smooth surface.

3.03 Fully Adhered Roof Membrane Installation

- A. Unroll the membrane sheets and allow them to relax in accordance with the roofing system manufacturer's recommendations and ambient temperature at the time of this phase of the work.
- B. Remove any damaged or creased membrane sections, and discard.
- C. All membrane surfaces to be welded shall be clean and dry. No adhesive shall be present within the lap areas
- D. Solvent-Based Adhesive
 - 1. Fold the sheet back evenly without wrinkles onto itself to expose the underside. Position the sheet at any field splices by overlapping the membrane approximately 5 inches, unless the manufacturer has a more stringent requirement. Once the membrane is in place, mark the bottom sheet ½" - ¾" from the edge of the top sheet every 4' - 6' with a lumber crayon or similar type marking device.
 - 2. Sweep the substrate with a stiff broom to remove materials that will interfere with the proper installation of the membrane.
 - 3. Apply the manufacturer's bonding adhesive to both the exposed underside of the sheet and the substrate to which it will be adhered to allow approximately the same drying time. Apply adhesive to provide an even and uniform film thickness. Care shall be taken not to apply adhesive over an area that is to be later cleaned and spliced to another sheet of flashing.
 - 4. Allow adhesive to flash off until tacky. Touch the adhesive surface with a clean dry finger to be certain that the adhesive does not stick or string. Also push forward on the adhesive at an angle to ensure that the adhesive is ready throughout its thickness.
 - 5. Starting at the fold, roll the previously coated portion of the sheet into the coated substrate slowly and evenly to minimize wrinkles. Compress the bonded half of the sheet to the substrate with a stiff push broom.
 - 6. Fold the unadhered half of the membrane sheet back onto itself, and repeat the bonding procedure to complete the bonding of the sheet.
- E. Vertical Surfaces:
 - 1. At vertical surfaces, turn the membrane up the vertical surface a minimum of 2 inches and fully adhere using the manufacturer's approved adhesive. Secure the membrane to the substrate using the roofing system manufacturer's approved termination bar or fasteners/plates, and secure in accordance with their written instructions. Fasteners shall penetrate the substrate at spacings and depths approved by the roofing system manufacturer.
 - 2. At the base of curbs, parapets, and other vertical surfaces, the membrane shall be mechanically fastened to the metal decking using membrane fasteners and plates spaced no more than 12 inches on-center.

- F. Furnish and install the roofing system manufacturer's patches at all required locations such as intersecting field seams. Apply the manufacturer's approved seam caulk, as required, at locations specified by the roofing system manufacturer.
- G. Prior to final inspection, the surface of the membrane shall be cleaned of all debris, dust, and foreign material. This may require the use of water, detergents, and other cleaning agents approved by the roofing system manufacturer. Contractor will be responsible for providing the necessary items to perform this task. Do not use any abrasive pads that can score the polymer.

3.04 Base Flashing Installation:

- A. Roll out the membrane to be used for base flashings and allow to relax in accordance with the roofing system manufacturer's written instructions.
- B. Flashing pieces shall extend onto the roof a minimum 3 inches past the roof membrane fasteners at the edge of the sheet and up the vertical surface a minimum of 8 inches.
- C. Fully adhere the flashing to the substrate using the roofing system manufacturer's approved flashing adhesive.
- D. Base flashing shall be smooth to the substrate, and wrinkles in base flashing shall be grounds for rejection.
- E. If base flashings terminate at a corner and edges would be exposed, furnish and install new 4-inch x 4-inch L-type membrane-clad metal closures with an exterior edge caulking cove. If base flashings terminate at walls and edges would be exposed, furnish and install new 4-inch-wide L-type membrane-clad metal closures with an exterior edge caulking cove. The closure shall be set in water cut-off mastic or butyl tape, and fastened to the substrate using appropriate fasteners at spacings not to exceed 12 inches on center. Completely hot air weld the base flashings to the membrane-clad metal. Apply a non-shrinking sealant, such as NP-1 or approved equal, to the caulking cove at the exterior edge of the closure. Completely remove all residual asphalt from the substrate prior to installing any sealant or caulking.
- F. At inside and outside corners of curbs and parapets, Contractor shall use the roofing system manufacturer's pre-fabricated corner pieces. The use of field-fabricated pieces is not acceptable. Pre-fabricated pieces shall be installed in accordance with the roofing system manufacturer's written instructions.
- G. At locations where base flashing seam transition from vertical to horizontal, the contractor shall furnish and install new unsupported patches at these locations shall extend a minimum of 3 inches past the transition, centered over the seams in all directions.
- H. Use the roofing system manufacturer's termination bar at base flashing that exceed 36 inches in height. Install rows of termination equally spaced up the wall. Fastener spacings not to exceed 8 inches on center. Set flashing in water cut-off mastic, set the bar over the edge of the base flashing, and apply caulk at the top of the flashing.
- I. At a minimum, extend base flashings up and over the top horizontal surface of curbs and inside the curb a minimum of 1 inch, unless otherwise stated in specification or shown on drawings.



- J. Extend the base flashing over the top of the parapet and down the outside face of the wood blocking. Base flashing shall extend down past the outside face of the parapet wood blocking a minimum of 1 inch. Fully adhere the membrane to the wood blocking and fasten to the vertical face of the wood blocking using roofing nails at spacings not to exceed 12 inches on-center. Set the edge of the membrane in continuous multi-purpose tape.
- K. At gutters, membrane shall extend behind the gutter to the bottom of the gutter system.

3.05 Heat Welding

- A. Hot air weld all sheet seams using either a machine or hand-held hot air welder approved by the roofing system manufacturer. A copy of the operating instructions shall be provided to the Designer prior to the start of the project.
- B. Monitor the temperature of the hot air welder so as to minimize the amount of smoke that should develop and to ensure that the material from the bottom of the sheet begins to soften and flow from the seam. Hand held welders shall insure that membrane welding is immediately followed by a hand roller to press the heated membrane surfaces together with slow, even movements.
- C. All seams shall be manually probed using a blunt rounded instrument daily. Any fishmouths or other seam defects where the seam is not fully adhered shall be repaired in accordance with the roofing system manufacturer's instructions.
- D. After seams have set for approximately 8 hours, the Contractor shall make a minimum of 3, 2" x 12" test cuts across the seam, with at least one of the test cuts taken from the first seam of the day. If multiple welders are used, the minimum test cuts are applicable to each welder used. Test cuts shall be repaired by the Contractor daily and shall be done at no additional cost to the Owner. In lieu of test cuts, the contractor may perform peel tests. Peel test shall be performed with two 4" x 12" pieces of membrane that shall be welded together 1-1/2 inch for the machine welder and 2 inches for hand welders. The membrane shall be pulled apart across the seam. Test shall be dated, and one test shall be performed every time a welding device is turned on. An archive of test shall be available for Designer inspection. Peel-test shall only be considered successful if:
 - 1. there is a complete cohesion failure in a polymer layer, and/or
 - 2. there is an adhesion failure between a polymer layer and the scrim.
 - 3. Other instances as stated in writing by the membrane manufacturer.
- E. Seams shall be tested in accordance with the roofing system manufacturer's instructions and evaluated for seam integrity. Seams that fail this test shall be subject to additional test cuts, as directed by the Designer and/or roofing system manufacturer, in order to further quantify the extent of the deficient condition. Repairs to deficient seams and/or test cut locations shall be performed by the Contractor at no additional cost to the Owner.
- F. Seal the edges of the membrane where the reinforcing fabric is cut with the roofing system manufacturer's approved seam sealant. Such work shall be done on a daily basis.

3.06 Pipe Flashing Installation

- A. Pipe penetrations shall be flashed using pre-manufactured pipe flashings. Cut the pipe flashing so that it will fit tight to the pipe penetration. Ensure that the field membrane is secured at the base of the pipe as required herein. Fully weld the pipe flashing flange to the field membrane in accordance



with membrane manufacturer written instruction. Set the pipe flashing in water block against the pipe penetration, and secure the top of the pipe flashing to the pipe using a draw-band clamp. Seal the top of the pipe flashing to the pipe penetration using NP-1 sealant, or approved equal.

- B. At locations where pre-manufactured pipe flashing cannot be installed, the contractor may field flash the pipe penetration. Field flashing shall extend onto the roofing membrane a minimum of 2 inches past the membrane fasteners. Field flashing shall extend up of the pipe penetration a minimum of 6 inches. The top of the field flashing shall receive water block, draw-band clamp, and sealant in accordance with Paragraph 3.5.1 above. At square penetrations, secure the top edge of the field flashing using a self-adhering membrane stripping membrane. Prime the penetration and membrane prior to applying the self-adhering membrane.

3.07 Walkway Pad

- A. Apply one row of walkway pads around all roof access hatches, at the base of roof access doors, at the top and bottom of ship ladders, and as shown on drawings. Install walkway pads in accordance with the roofing system manufacturer's written instructions. Refer to Drawings.
- B. Walkway pads shall be spaced approximately 1 inch apart. Leave small opening on the downslope side of walkway pads to allow for any water beneath the pads to exit.
- C. Clean the surface of the membrane to receive the walkway pads in accordance with the roofing system manufacturer's written instructions. Fully adhere the walkway pad to the membrane and hot-air weld all sides of the pads to the surface of the membrane in accordance with the roofing system manufacturer's written instructions.

3.08 Field Quality Requirements:

- A. Manufacturer's Field Services: Upon Owner's request, provide material manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.
- B. Minimum Manufacturer Inspections: Provide inspections by a Technical Representative employed by the roofing system manufacturer. Contractor shall complete any necessary repairs required for issuance of warranty. Minimum schedule of material manufacturer inspections:
 - 1. 25% Completion
 - 2. 50% Completion
 - 3. Final Completion
- C. Contractor shall provide Owner and Designer a copy of the manufacturer's inspection report within 48-hours of each inspection.

3.09 Final Inspection:

- A. Prior to final inspection, the surface of the membranes shall be cleaned of all debris, dust, and foreign material. This may require the use of water, detergents, and other cleaning agents approved by the roofing system manufacturer. Contractor will be responsible for providing the necessary items to perform this task. Do not use any abrasive pads that can score the polymer.

END OF SECTION



**SECTION 07 60 00
FLASHING AND SHEET METAL**

PART 1 - GENERAL

1.01 Description

- A. Includes the fabrication and installation of sheet metal and related accessories associated with roofing membranes, providing physical protection to membrane, base flashings, and membrane terminations.

1.02 Related Work

- A. Section 01 11 00 – Summary of Work
- B. Section 07 22 16 – Roof Board Insulation
- C. Section 07 53 23 – TPO Roofing

1.03 Environmental Conditions

- A. Material installation shall proceed only when weather conditions are in compliance with the applicable manufacturer's recommendations for installation and no precipitation is imminent. Materials installed during adverse weather conditions shall be subject to removal and replacement with new materials at no additional cost to Owner.

PART 2 - PRODUCTS

2.01 General – Metals

- A. Galvanized Steel: Copper structural quality galvanized steel Coating Class G-90, ASTM A653.
- B. Kynar 500-Based Finish: Shall be factory applied, oven-finish. Finish and primer shall be applied in strict accordance with the formulator's specifications and shall meet the performance criteria of AAMA 605.2-90 specification. Finish coat thickness shall be a minimum of 1.0 mil. Primer coat thickness shall be a minimum of 0.3 mil. Color to match the existing color to be selected by owner.
- C. All metal shall be included in the system warranty.
- D. All edge metal, copings, and facias shall be ANSI/SPRI/ES-1/FM 4435 compliant systems capable of withstanding the specified wind loads.
- E. Stainless Steel: Type 316 (16% chromium, 10% nickel, and 2% molybdenum) ASTM A240, mill finished.
- F. Apply one coat of metal primer and two coats of field-grade Kynar 500 paint to all exposed metal unless otherwise defined.
- G. Color to be selected by management.

2.02 Metal – Systems and Shapes



A. Drip Edge:

- 1. As provided by the roofing system manufacturer as part of full system warranty.
- 2. TPO coated minimum 24-gauge galvanized steel.

B. Termination Bar: As provided by the manufacturer.

C. Flat Bar: 1/4" x 1" (stiffener for gutter and counter flashing),

D. 1/8" x 1" (gutter spacers) and 1/4" x 2" (gutter brackets) flat stock galvanized steel.

E. Minimum Acceptable Metal Weights & Finishes (All metal to be finished with Kynar 500 coating, or approved equal prior to bid unless otherwise specified):

- | | |
|--------------------|---|
| 1. Counterflashing | 24 ga. galvanized steel |
| 2. Drip Edge | 24 ga. galvanized steel (membrane clad) |
| 3. Flashing Metal | 24 ga. galvanized steel (membrane clad) |
| 4. Gutters | 24 ga. galvanized steel |
| 5. Downspouts | 24 ga. galvanized steel |

2.03 Accessories

A. Non-Shrinking Sealant: ASTM C920, Type S or M, Grade NS, Class 25, for Use NT, M, A, and O.

B. 20 Mil PVC Sheeting: 20-mil thick, non-reinforced polyvinyl chloride, elastomeric sheet waterproofing.

C. Self-Adhering Modified Bitumen Membrane: High-temperature, ASTM D1970, minimum 40 mils, W.R. Grace Ice and Water Shield HT, or approved equal prior to bid.

D. R-panel foam closure: Profile to match existing panels; contractor to verify. For Bidding and Standard of Quality purposes:

- 1. Ramco Closure-Foam
- 2. Butyl tape

2.04 Fasteners

A. All fasteners coming into contact with dissimilar metals shall be A-316 stainless steel.

B. All exposed fasteners:#12 stainless steel with bonded neoprene washers.

C. Refer to Section 06 10 53 for additional fasteners.

PART 3 - EXECUTION

3.01 General Installation Requirements



- A. Inspect all surfaces to which metal is to be applied. Do not install metal unless surfaces are even, sound, clean, dry and free from defects which might affect the application.
- B. Follow recommendations of the National Roofing Contractors' Association (NRCA) and Sheet Metal and Air Conditioning Contractors National Association Architectural Sheet Metal Manual (7th Edition) for fabricating in-shop and on-site, and for installation, unless otherwise specified herein.
- C. Metal flashings installed at edges and/or parapets of low-sloped roofing shall adhere to ANSI/SPRI ES-1 wind uplift requirements, as necessary. Specified fastening along with metal flashing thicknesses, gauges, and/or weights listed herein are the minimum required. In the event additional fastening or thicker, lower gauge, or heavier metal flashings are required, the contractor shall satisfy the requirements of ANSI/SPRI ES-1. In some instances, shop-formed metal flashings cannot satisfy ANSI/SPRI ES-1 requirements without additional testing or proprietary systems are necessary. Such cost for testing and/or propriety systems shall be included in the Bid as required.
- D. Follow published instructions of the product manufacturer for installation of extruded or proprietary metal products, unless otherwise specified herein.
- E. Use nails, screws, bolts, cleats or other fasteners of the same material or of material chemically compatible with the contacted metal.
- F. Do not place dissimilar metals in direct contact or in positions where water sheds across both metals.
- G. Install metal to be water and weather tight with lines, arises and angles sharp and true and with paint surfaces free of waves and buckles.
- H. Install shop-formed metal flashings in 12-foot lengths maximum with a minimum number of pieces in each straight run.
- I. Shop form all metal shapes, which are to be formed of prefinished metal, with protective plastic film in place. Do not remove plastic film until just prior to (or, if possible, after) installation.
- J. At all corners, shop form corner pieces of fascia and drip edge flashing from a single section of metal with minimum 36-inch legs on either side of the corner.
- K. All edge metal exposure shall match throughout the perimeter of the project.

3.02 Counterflashing Installation

- A. Form and install new continuous skirt counterflashing as shown on drawings and around all RTU curbs. Slide the top edge of the counterflashing behind existing metal flashing a minimum of 1-inch. Set flange against vertical surface in a solid bed of sealant. Secure the counterflashing using appropriate fasteners at spaced no more than 12 inches on center.
- B. Notch and lap counterflashing sections a minimum of 3 inches, and offset laps in counterflashing a minimum of 12-inches.
- C. Notch and lap joints and inside corners. Notch and seam outside corners. Do not rivet or otherwise secure joints and corner.



3.03 Drip Edge A-Style Flashing

- A. Drip edges shall be membrane-clad.
- B. Single-Ply Roofing:
 - 1. Prior to installing the flashing or gutter, ensure the roofing ends down the exterior face of the wall a distance to the match the flashing or gutter, whichever is greater.
 - 2. Set horizontal flange in a continuous bead of sealant on top of the roofing.
 - 3. At low and high eaves, join sections using cover plates.
 - 4. At rake eaves, join sections by lapping.
- C. Install gutters before flashing. Flashing shall extend into gutter a minimum of 2 inches.
- D. Vertical leg securement is not required at gutter locations. At other locations, vertical leg of the flashings shall be secured with the specified screw at 12-inches on center.
- E. Secure the horizontal leg in accordance with the submitted ES-1 system.
- F. Form new A-style closures using similar metal as shown on Drawings.
- G. Strip in the flange as specified elsewhere.
- H. Install in similar fashion as shown on drawings at ridge.
- I. At perimeters as shown on drawings, furnish and install new face-fastened a-style flashing. Secure in accordance with approved ES-1 compliant details; however, at a minimum, secure the horizontal leg using the specified nails at 3-inches on center and secure the face using stainless steel gasketed neoprene washers at 12-inches on center.
 - 1. Exterior face securements shall be in a single-level row.
- J. At metal wall panel locations, furnish and install new r-panel foam closure.

3.04 Gutter Installation

- A. Form new gutter from 24 ga. Galvanized steel with Kynar 500 coating or approved equal.
- B. Gutter size shall box-style and shall be a minimum of 7" x 7". The back of the gutter shall be a minimum of 1 inch higher than the front. Refer to SMACNA Architectural Sheet Metal Manual Figure No. 1-2, Style A.
- C. Provide butt type expansion joints in gutters at spacings required for the type material used to fabricate gutters. Refer to SMACNA Architectural Sheet Metal Manual Figure No. 1-7.
- D. Provide gutter spacers at 3'-0" on center. Refer to SMACNA Architectural Sheet Metal Manual Figure No. 1-12. Spacers shall be formed from minimum 1/16" x 1" flat stock aluminum. Continuous nominal

¼" x 1" galvanized steel or aluminum flat bar shall be installed at the front of the gutter and secured with stainless steel bolts and nuts at spacer locations.

- E. Provide gutter brackets at 3'-0" on center, and alternating in location from gutter spacers. Refer to SMACNA Architectural Sheet Metal Manual Figure No. 1-12. Brackets shall be formed from minimum ¼" x 1 – ½" flat stock galvanized steel and secured with stainless steel screws through pre-drilled holes. Brackets should be primed and double coated with an approved field-applied Kynar 500 paint prior to installation.
- F. Furnish and install a gutter baffle that extends 12 inches from either side of the gutter corners made from the same material as the gutter and using material not less than 1 gauges heavier in accordance with SMACNA Architectural Sheet Metal Manual Figure No. 1-24A.
- G. Furnish and install gutter outlet tubes in accordance with SMACNA Architectural Sheet Metal Manual Figure No. 1-24C.
- H. Furnish and install stainless steel downspout strainers in accordance with SMACNA Architectural Sheet Metal Manual Figure No. 1-24D.

3.05 Downspout Installation

- A. Form new 4"x3" downspouts from 24 ga. galvanized steel with Kynar 500 finish or approved equal. Refer to SMACNA Architectural Sheet Metal Manual Figure No. 1-32B and 1-32F.
- B. Downspouts be box-style and shall match existing downspouts in size, unless otherwise specified.
- C. Lap sections a minimum of 3 inches and secure sections with a minimum of 2 stainless steel sheet metal screws.
- D. Form 45° elbow where water discharges onto the roof or ground.
- E. Form or provide new round to rectangular downspout metal transition pieces to tie into existing underground drainage system formed from the same material as the downspouts.
- F. Form downspout hangers from the same material as downspouts using material not less than 2 gauges heavier than downspouts. Secure downspouts to wall with hangers spaced not more than 5 feet on center. Refer to SMACNA Architectural Sheet Metal Manual Figure 1-35G. Apply one coat of metal primer and two coats of field-grade Kynar 500 paint to all hangers. Color shall match the downspouts.
- G. Form new downspout protection covers from 10 ga. galvanized steel. Refer to SMACNA Architectural Sheet Metal Manual Figure No.1- 32I. Cover shall be a minimum of 4 feet in length and shall be installed so that the bottom is no higher than 3 inches above grade. Apply one coat of metal primer and two coats of field-grade Kynar 500 paint to all exposed metal. Color shall match the downspouts.
- H. Furnish and install new concrete splash blocks where water discharges onto new roofing or grounds. Refer to SMACNA Architectural Sheet Metal Manual Figure No.1- 36.

END OF SECTION

COMMERCE SERVICE CENTER ROOF REPLACEMENT

623-653 SOUTH ELM STREET
COMMERCE, GEORGIA

COMMERCE SERVICE CENTER
ROOF REPLACEMENT
623-653 SOUTH ELM STREET
COMMERCE, GEORGIA

1. GENERAL

- A. PROVIDE CONSTRUCTION CONFORMING TO THE 2018 INTERNATIONAL BUILDING CODE WITH THE 2022 GEORGIA AMENDMENTS. REFERENCE TO OTHER STANDARDS, SPECIFICATIONS, OR CODES MEANS THE LATEST STANDARD OR CODE PUBLISHED AND ADOPTED.
- B. THE GENERAL NOTES APPLY EXCEPT WHERE INDICATED OTHERWISE ON THE DRAWINGS OR IN THE SPECIFICATIONS. A DETAIL SHOWN FOR ONE CONDITION APPLIES FOR ALL LIKE OR SIMILAR CONDITIONS EVEN THOUGH NOT SPECIFICALLY INDICATED ON THE DRAWINGS.
- C. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS BEFORE STARTING WORK. NOTIFY THE ENGINEER OF RECORD IN WRITING OF ANY DISCREPANCY.
- D. VERIFY ALL PROVIDED QUANTITIES BEFORE STARTING WORK. NOTIFY THE ENGINEER OF RECORD IN WRITING OF ANY DISCREPANCY.
- E. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, AND ALL OTHER MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.
- F. COMPLY WITH CURRENT SPECIFICATIONS AND RECOMMENDATIONS OF EACH PRODUCT MANUFACTURER REGARDING THE USE, PREPARATION, INSTALLATION, AND MAINTENANCE OF REPAIR PRODUCTS.
- G. CONTRACTOR SHALL OBTAIN NECESSARY CONSTRUCTION PERMIT(S) FROM CITY OF COMMERCE AND OTHER JURISDICTIONS AS REQUIRED. FEES REQUIRED FOR OBTAINING CONSTRUCTION PERMIT(S) SHALL BE INCLUDED IN BID.

2. EXISTING CONDITIONS

- A. RENOVATION OF EXISTING STRUCTURES REQUIRES THOROUGH COORDINATION OF THE CONTRACT DOCUMENTS WITH EXISTING CONDITIONS. THE CONTRACTOR MUST VERIFY ALL RELEVANT EXISTING CONDITIONS, DIMENSIONS, AND DETAILS PRIOR TO BEGINNING CONSTRUCTION. REPORT ANY DEVIATIONS FROM CONDITIONS OR DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS TO THE ENGINEER OF RECORD FOR REVIEW OF THE DESIGN AND POSSIBLE REVISION OF THE CONTRACT DOCUMENTS.
- B. THE NATURE OF DEMOLITION AND STABILIZATION IS INHERENTLY UNCERTAIN. THE EXACT CONDITION AND CAPACITY OF EACH ELEMENT CANNOT BE VERIFIED PRIOR TO THE COMMENCEMENT OF WORK. AS A RESULT, IT IS IMPERATIVE TO REPORT ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS, AS WELL AS ANY ELEMENT OF QUESTIONABLE STRUCTURAL INTEGRITY IMMEDIATELY TO THE ENGINEER OF RECORD FOR REVIEW.
- C. NO ATTEMPT HAS BEEN MADE TO DEFINE EACH SPECIFIC ELEMENT OR LOCATION THAT MUST BE REMOVED, ENHANCED, REPLACED, OR REPAIRED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE CONDITION OF INDIVIDUAL ELEMENTS AND AREAS, TO DETERMINE WHICH ELEMENTS CAN BE SALVAGED, WHICH ELEMENTS MUST BE REPLACED OR REPAIRED, AND WHICH ELEMENTS ARE QUESTIONABLE. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER OF RECORD TO DETERMINE THE APPROPRIATE PROCEDURE FOR HANDLING ELEMENTS IN QUESTIONABLE CONDITION, AND SHALL NOTIFY OWNER AND ENGINEER OF RECORD OF ANY DEVIATIONS FROM THE BID QUANTITIES THAT WILL RESULT FROM WORK ON SUCH ELEMENTS.

3. REFER TO SPECIFICATION 01 11 00 SUMMARY OF WORK

PROJECT LOCATION



KEY MAP:



PROJECT LOCATION



LIST OF SHEETS:

- A0.1 COVER SHEET
- A0.2 SITE PLAN
- A1.1 NEW ROOF PLAN
- A1.2 WIND ZONE ROOF PLAN
- A3.1 TYPICAL ROOF DETAILS
- A3.2 TYPICAL ROOF DETAILS
- A3.3 TYPICAL ROOF DETAILS
- A3.4 TYPICAL ROOF DETAILS
- A3.5 TYPICAL ROOF DETAILS
- A3.6 TYPICAL ROOF DETAILS
- A3.7 TYPICAL ROOF DETAILS
- A3.8 TYPICAL ROOF DETAILS
- A3.9 TYPICAL ROOF DETAILS
- A3.10 TYPICAL ROOF DETAILS



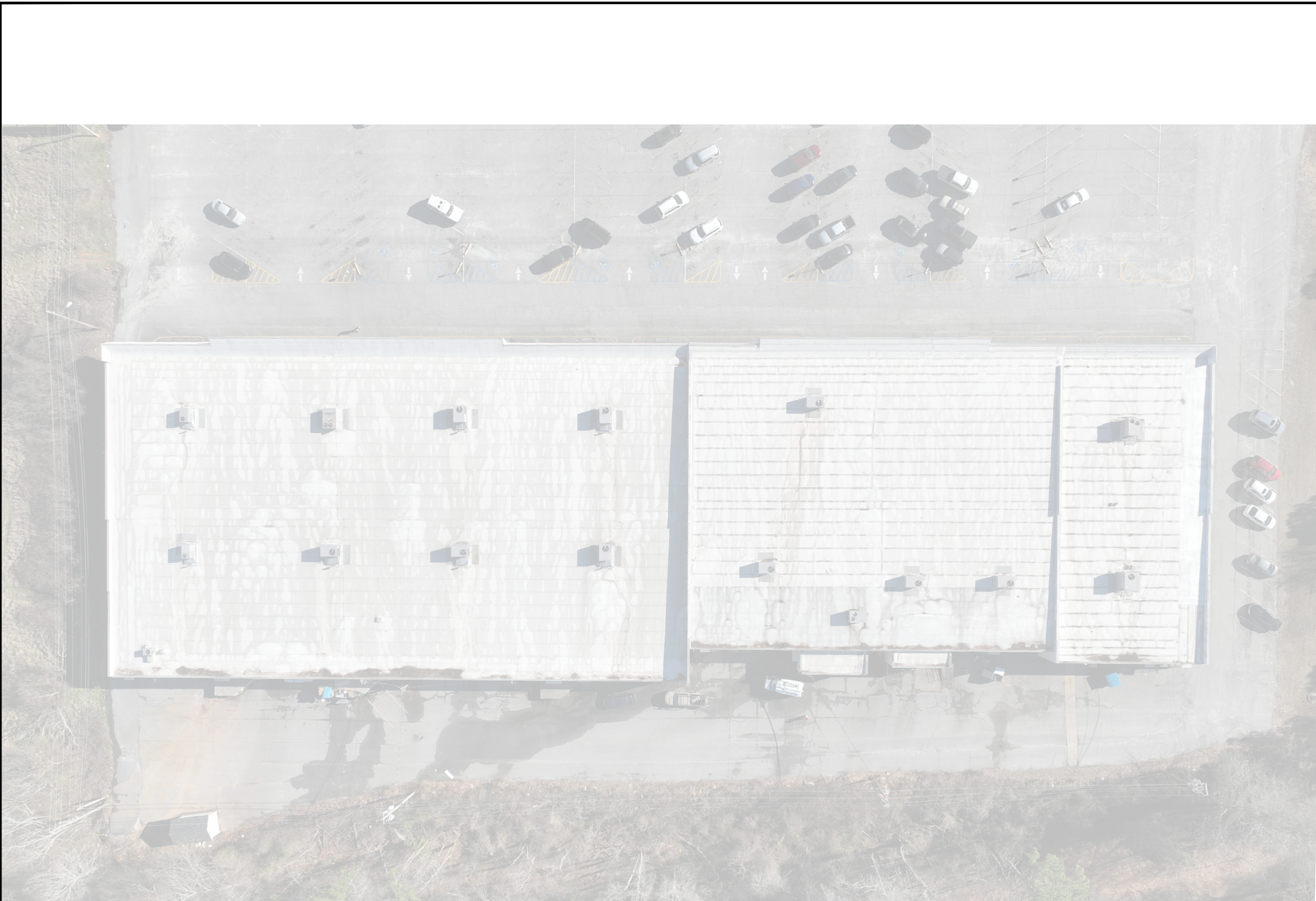
NUM	DATE	DESCRIPTION:
0	06/07/23	FOR BID

COVER SHEET

DESIGNED: RLB
DRAWN: RLB
CHECKED: PGP

JOB #: 23-019

A0.1



GENERAL NOTES

A. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.


PMA
 1000 HOLCOMB WOODS PKWY
 SUITE 210
 ROSWELL, GA 30076
 678-280-2325

SHEET NOTES

1. N/A

COMMERCE SERVICE CENTER
 ROOF REPLACEMENT
 623-653 SOUTH ELM STREET
 COMMERCE, GEORGIA

LEGEND

 CONTRACTOR STAGING AREA

NUM	DATE	DESCRIPTION:
0	06/07/23	FOR BID

SITE PLAN

DESIGNED: RLB
 DRAWN: RLB
 CHECKED: PGP

JOB #: 23-019

A0.2

PLAN

PROJECT SITE
 SCALE: NTS

1
 A0.2



GENERAL NOTES

- A. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.
- B. LOCATIONS AND DIMENSIONS SHOWN ARE APPROXIMATE
- C. SOME PENETRATIONS NOT SHOWN

SHEET NOTES

- 1. UNIT DETAIL FLASHING TO BE DETERMINED
- 2. ABANDONED CURB TO BE WRAPPED WITH COVERBOARD AND MEMBRANE
- 3. CURB TO BE RAISED TO 8" FLASHING HEIGHT
- 4. VERTICAL 5X5 TPO COATED METAL TO MATCH ADJACENT EDGE METAL
- 5. GUTTERS REQUIRING EXPANSION JOINTS

LEGEND

○	TYPICAL PENETRATION
⊗	TYPICAL ABANDONED PENETRATION
○SVP	SOIL VENT PIPE
□	PENETRATION POCKET (PP)
□	MECHANICAL VENT CURB
○	EXHAUST FAN
▨	TAPERED INSULATION
⌈	EXISTING LADDER ACCESS
→	ROOF SLOPE
▨	GUTTERS
⊗	DOWNSPOUTS
▨	WALK PAD
▨	PARAPET TO RECEIVE FASCIA
▨	PARAPET TO BE MEMBRANE WRAPPED
▨	RIDGE FLASHING

COMMERCE SERVICE CENTER
 ROOF REPLACEMENT
 623-653 SOUTH ELM STREET
 COMMERCE, GEORGIA

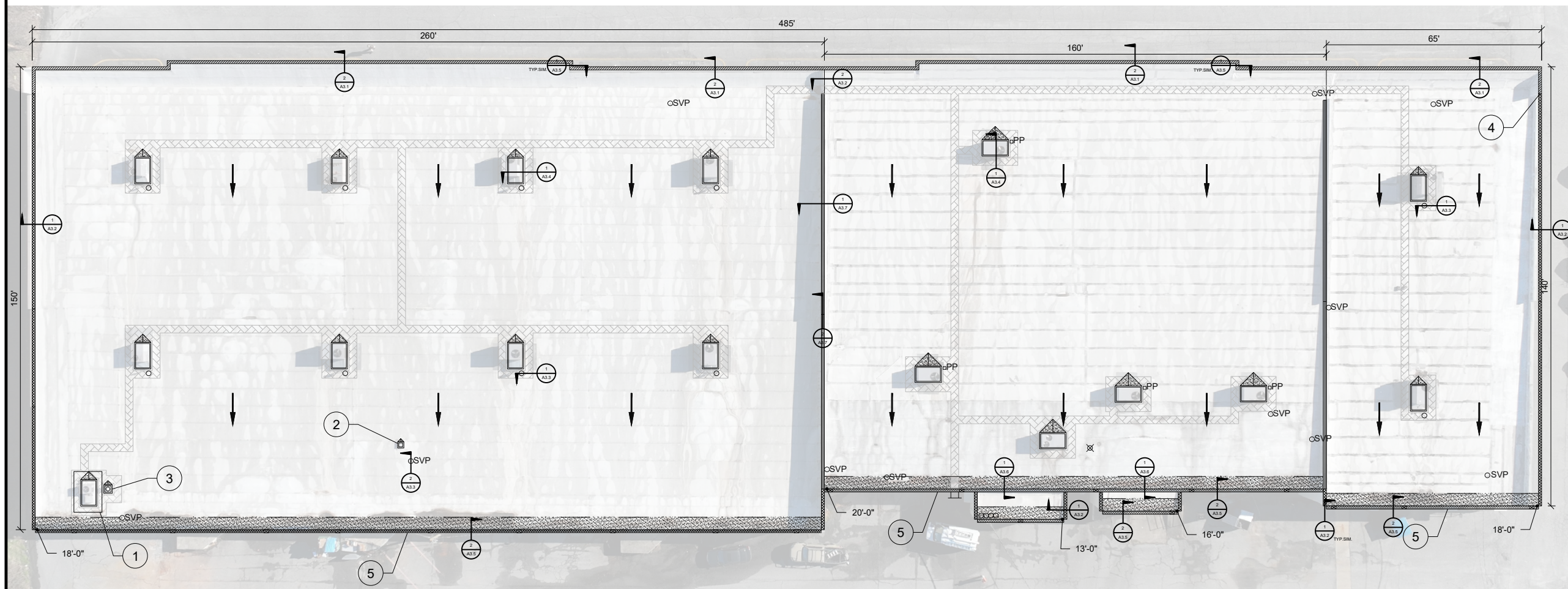
NUM	DATE	DESCRIPTION:
0	06/07/23	FOR BID

NEW ROOF PLAN

DESIGNED: RLB
 DRAWN: RLB
 CHECKED: PGP

JOB #: 23-019

A1.1



PLAN

NEW ROOF PLAN
 SCALE: NTS

1
 A1.1







GENERAL NOTES

- A. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.
- B. ALL LOWER ROOFS SHALL BE CONSIDERED ZONE 2.

SHEET NOTES

- 1. N/A

LEGEND

	WIND ZONE 1' = -23.8 PSF
	WIND ZONE 1 = -41.5 PSF
	WIND ZONE 2 = -54.7 PSF
	WIND ZONE 3 = -74.5 PSF

COMMERCE SERVICE CENTER
 ROOF REPLACEMENT
 623-653 SOUTH ELM STREET
 COMMERCE, GEORGIA

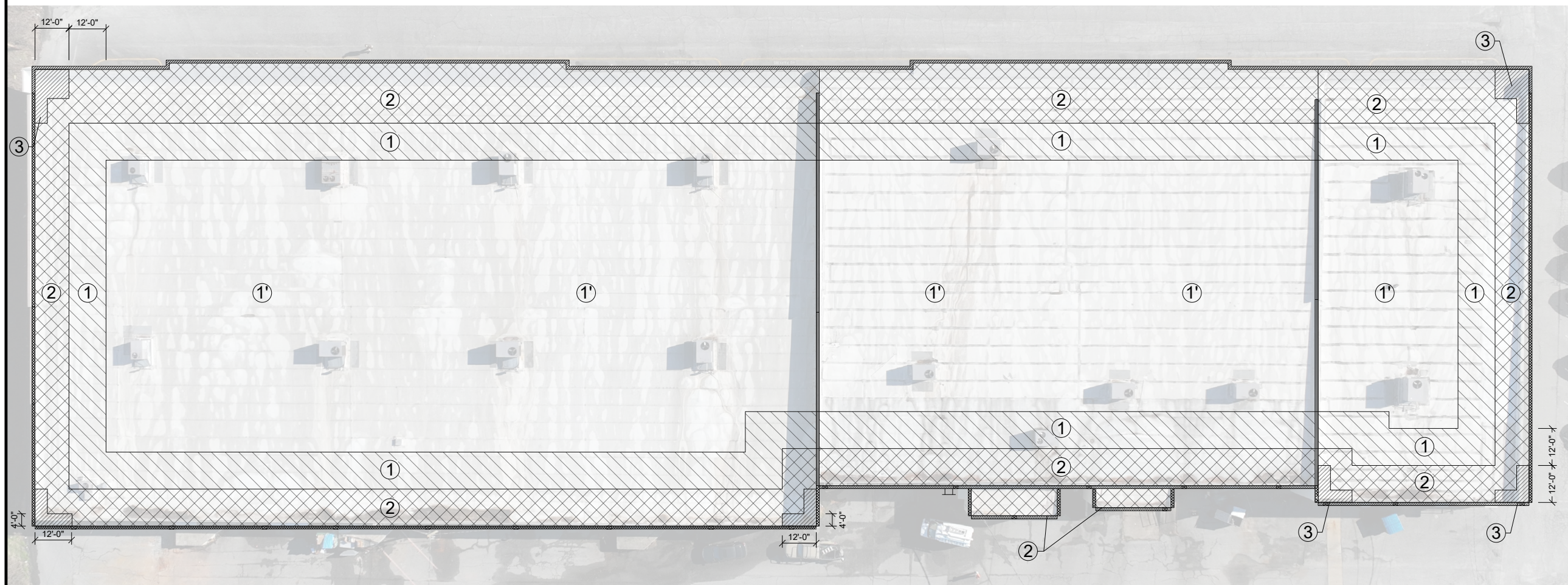
NUM	DATE	DESCRIPTION:
0	06/07/23	FOR BID

WIND ZONE ROOF PLAN

DESIGNED: RLB
 DRAWN: RLB
 CHECKED: PGP

JOB #: 23-019

A1.2

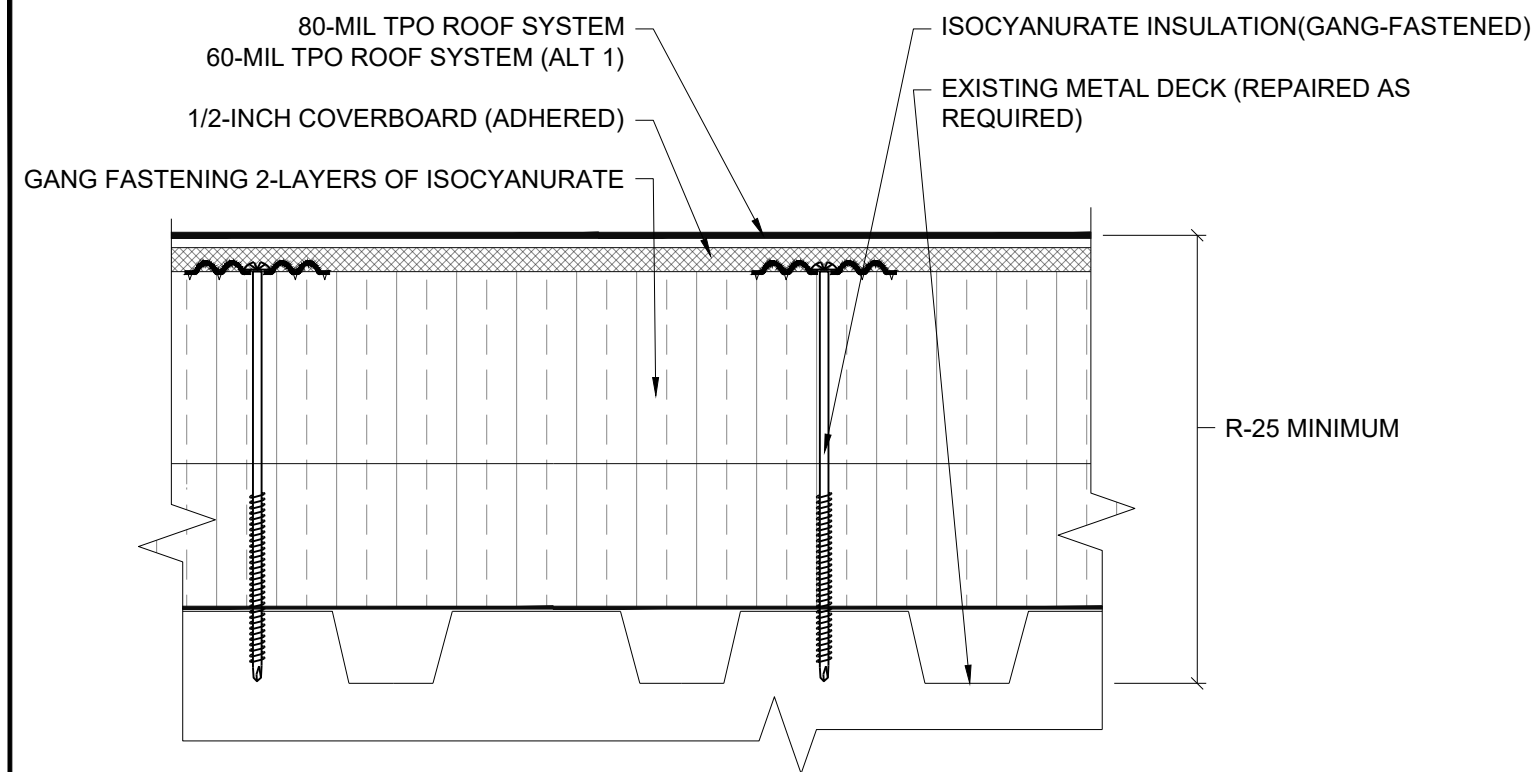


PLAN

WIND ZONE ROOF PLAN
 SCALE: NTS

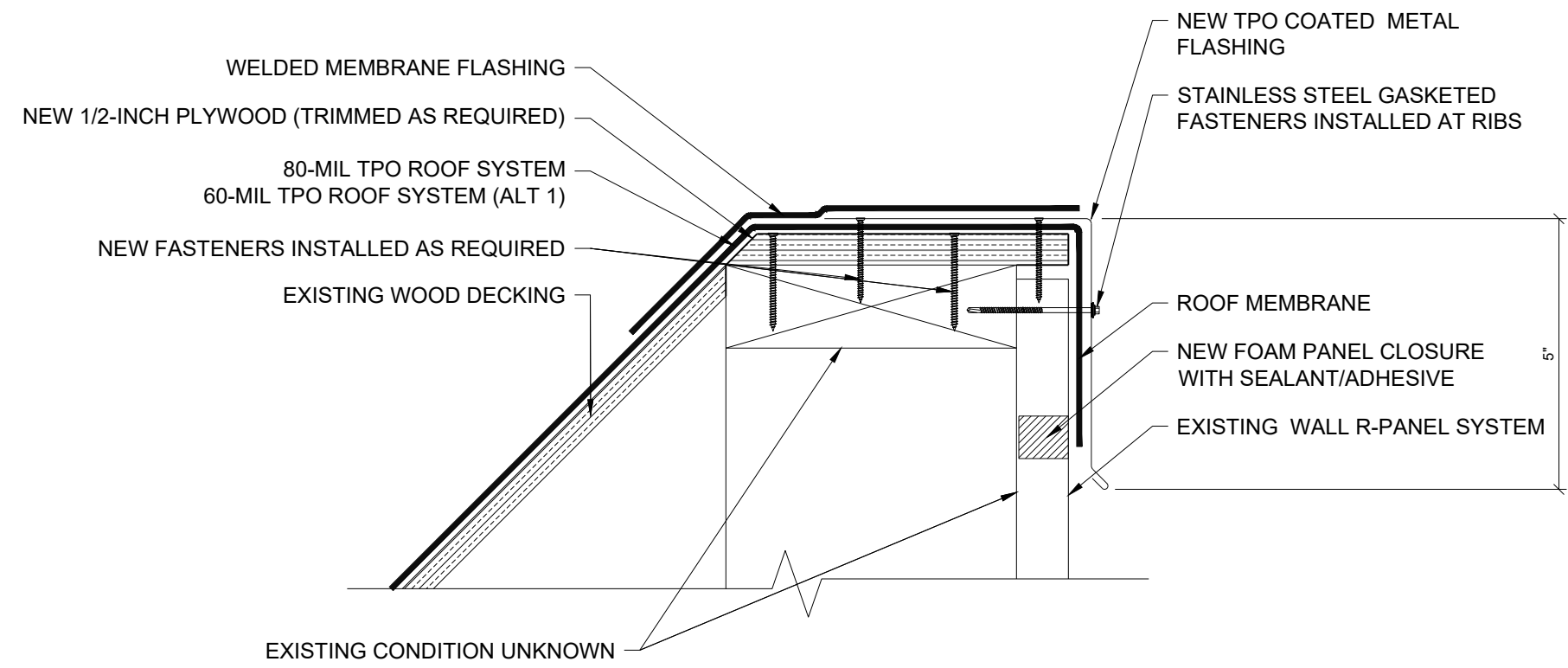
1
 A1.2





NOTE: R-25 NOT REQUIRED AT GUTTER EAVE

SYSTEM TYPICAL SYSTEM DETAIL - ALL ROOFS
 SCALE: NTS **1**
A3.1



DETAIL EDGE DETAIL - MAIN ROOF AT SLANT
 SCALE: NTS **2**
A3.1

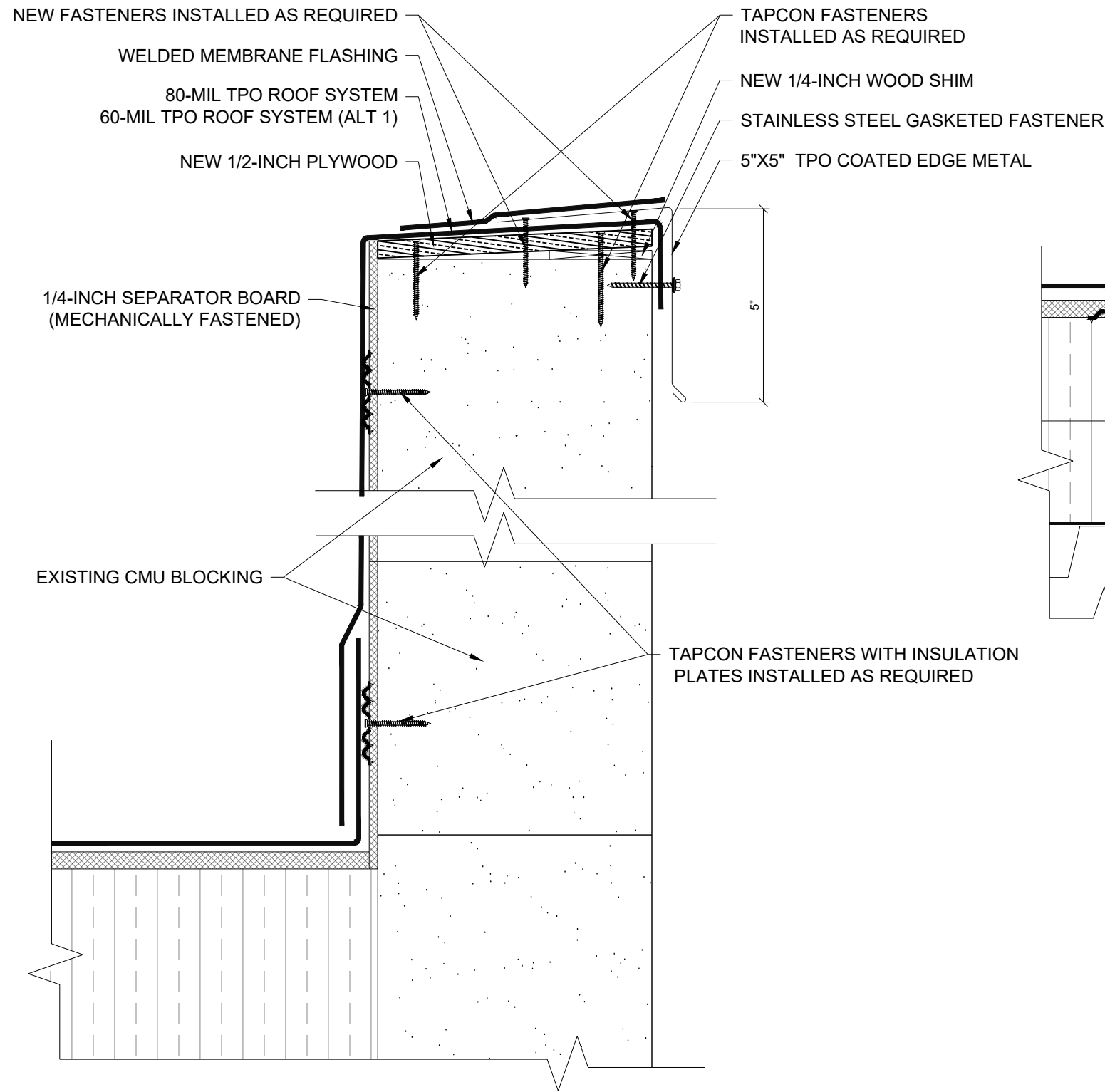
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TYPICAL ROOF DETAILS

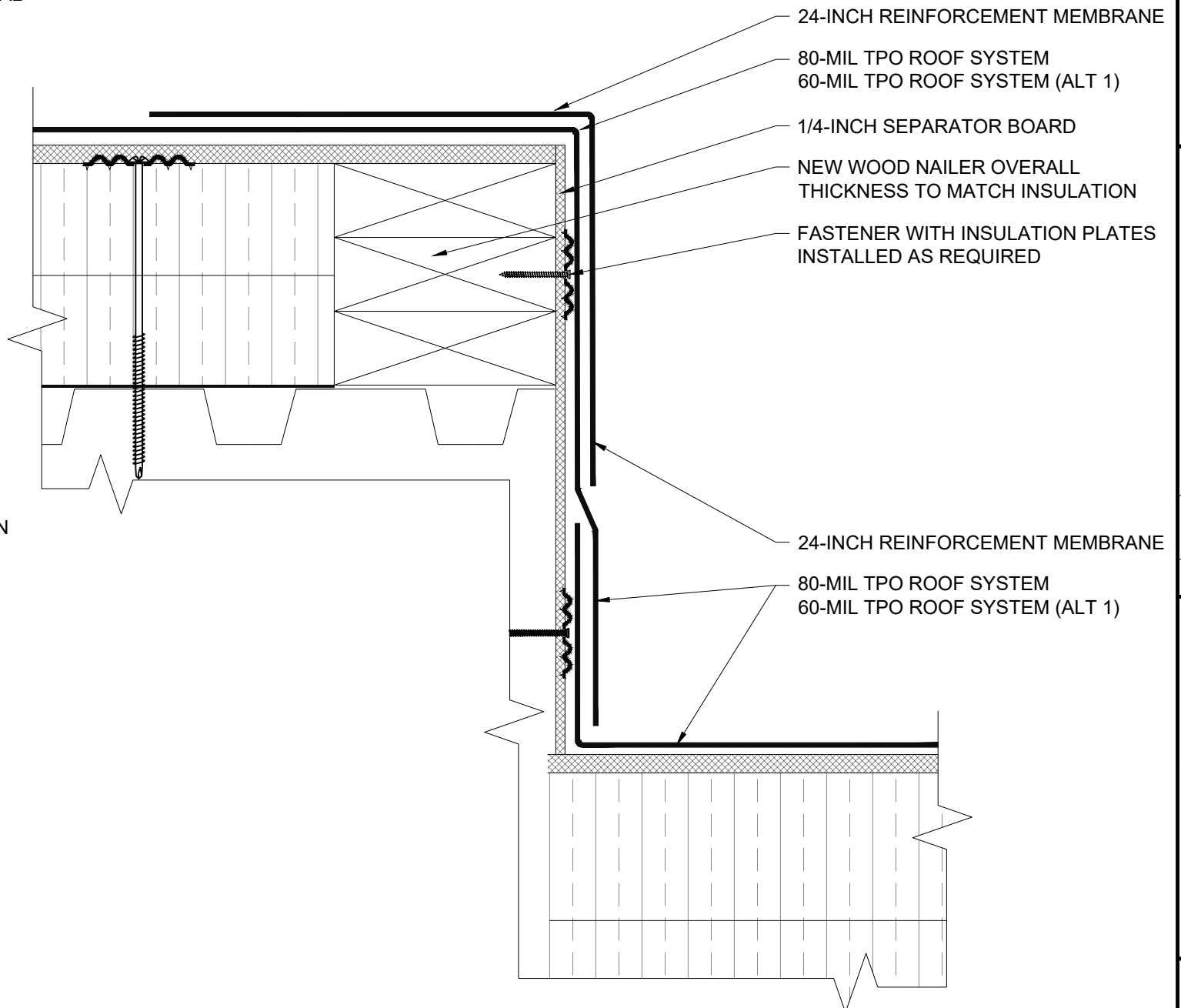
DESIGNED: RLB
 DRAWN: RLB
 CHECKED: PGP

JOB #: 23-019

A3.1



DETAIL TYPICAL PARAPET FASCIA 1 SCALE: NTS A3.2



DETAIL ROOF DECK TRANSITION 2 SCALE: NTS A3.2

NUM	DATE	DESCRIPTION
0	06/07/23	FOR BID

TYPICAL ROOF DETAILS

DESIGNED: RLB
DRAWN: RLB
CHECKED: PGP

JOB #: 23-019

A3.2

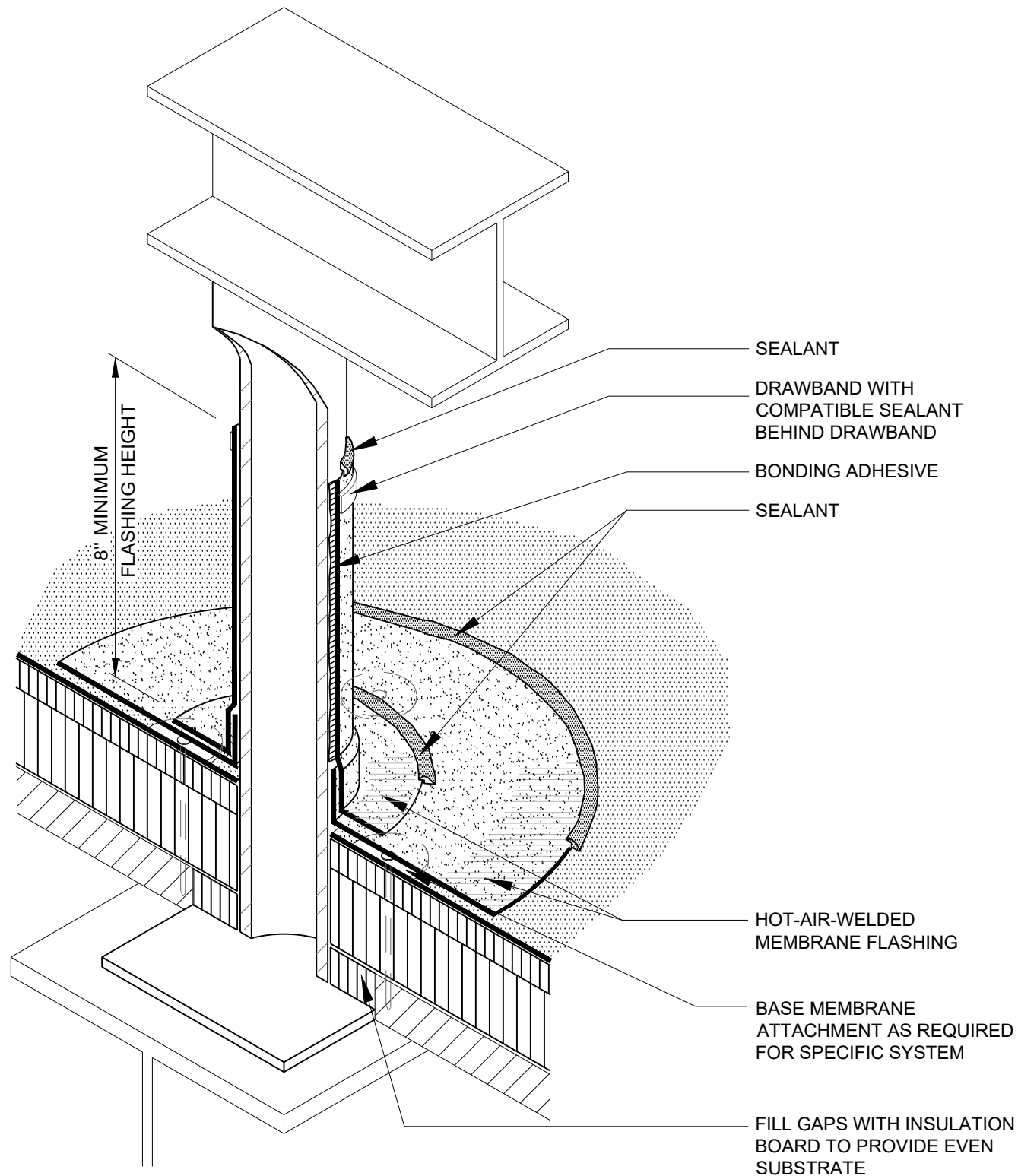
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0	06/07/23	FOR BID

TYPICAL ROOF
 DETAILS

DESIGNED: RLB
 DRAWN: RLB
 CHECKED: PGP

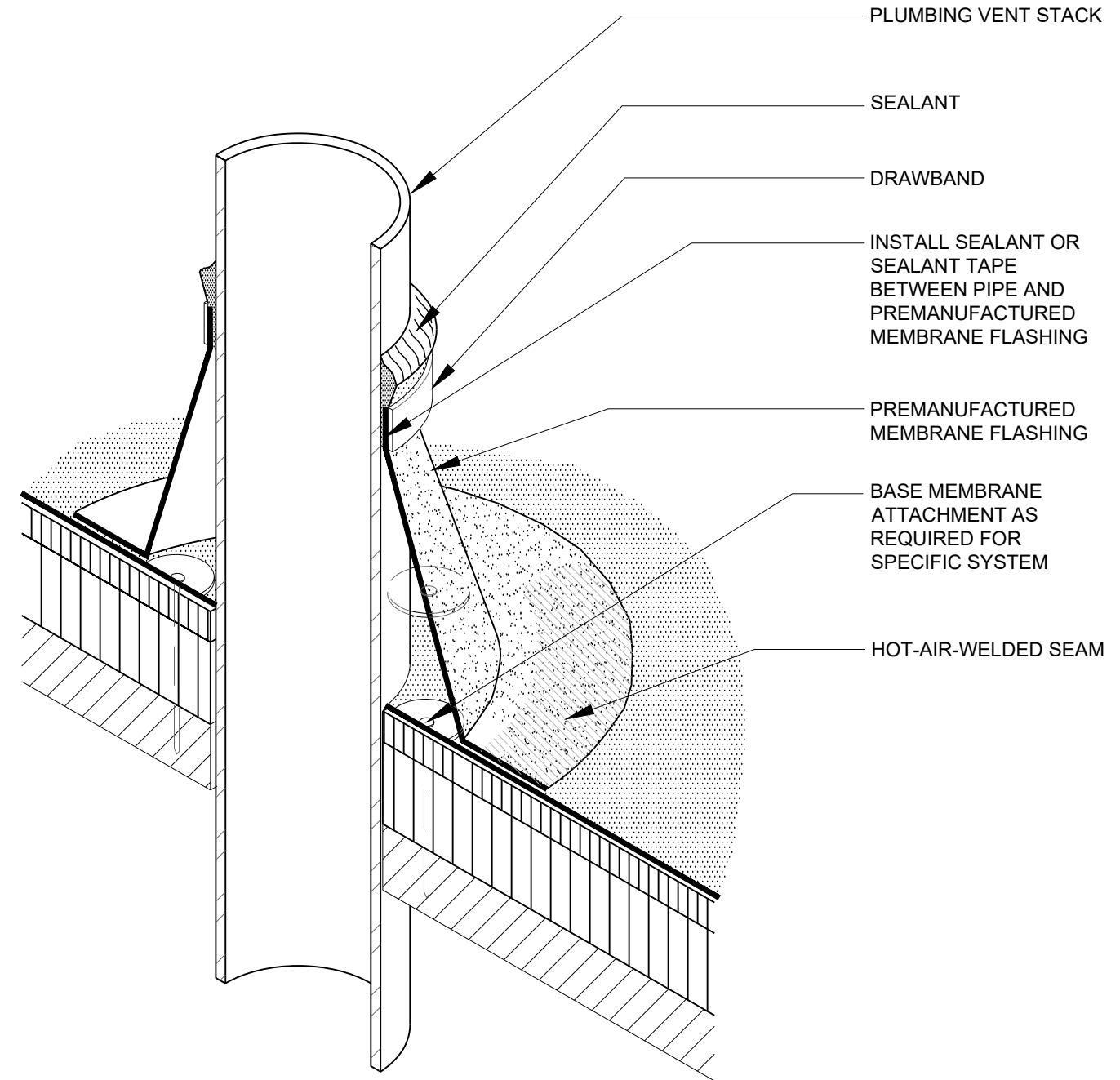
JOB #: 23-019

A3.3



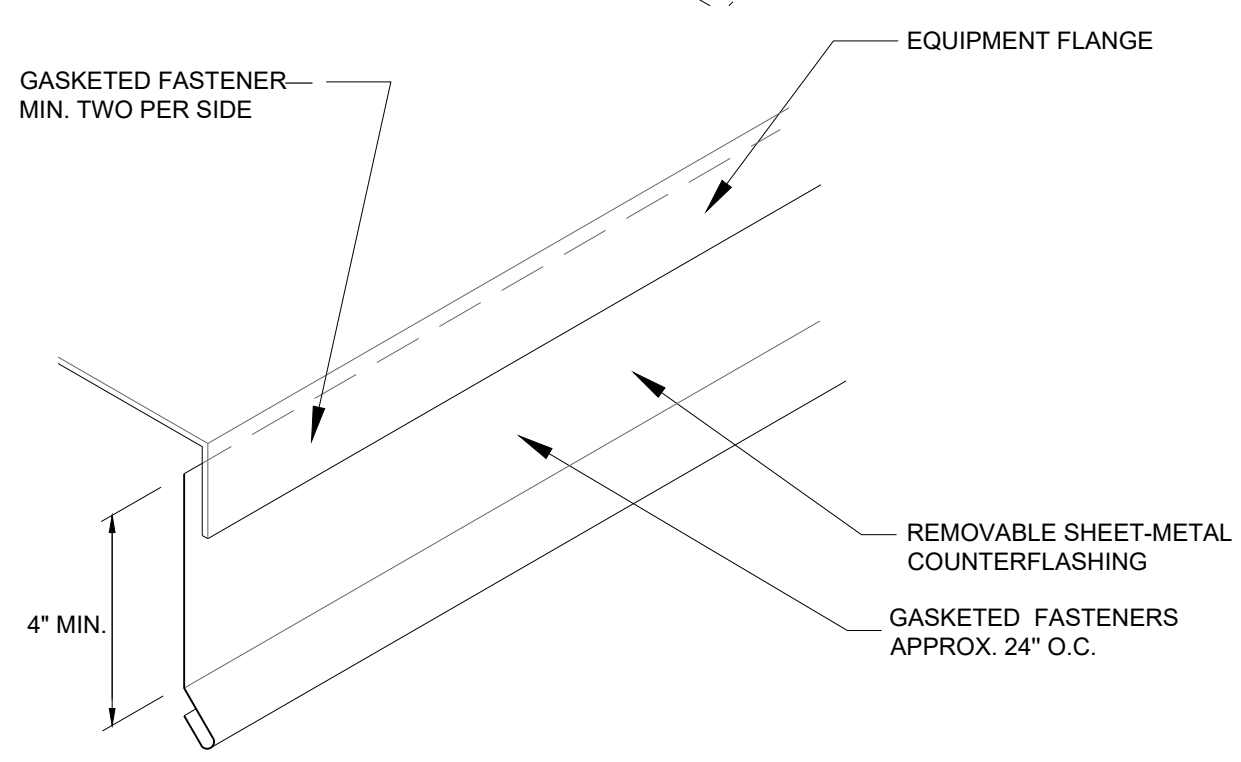
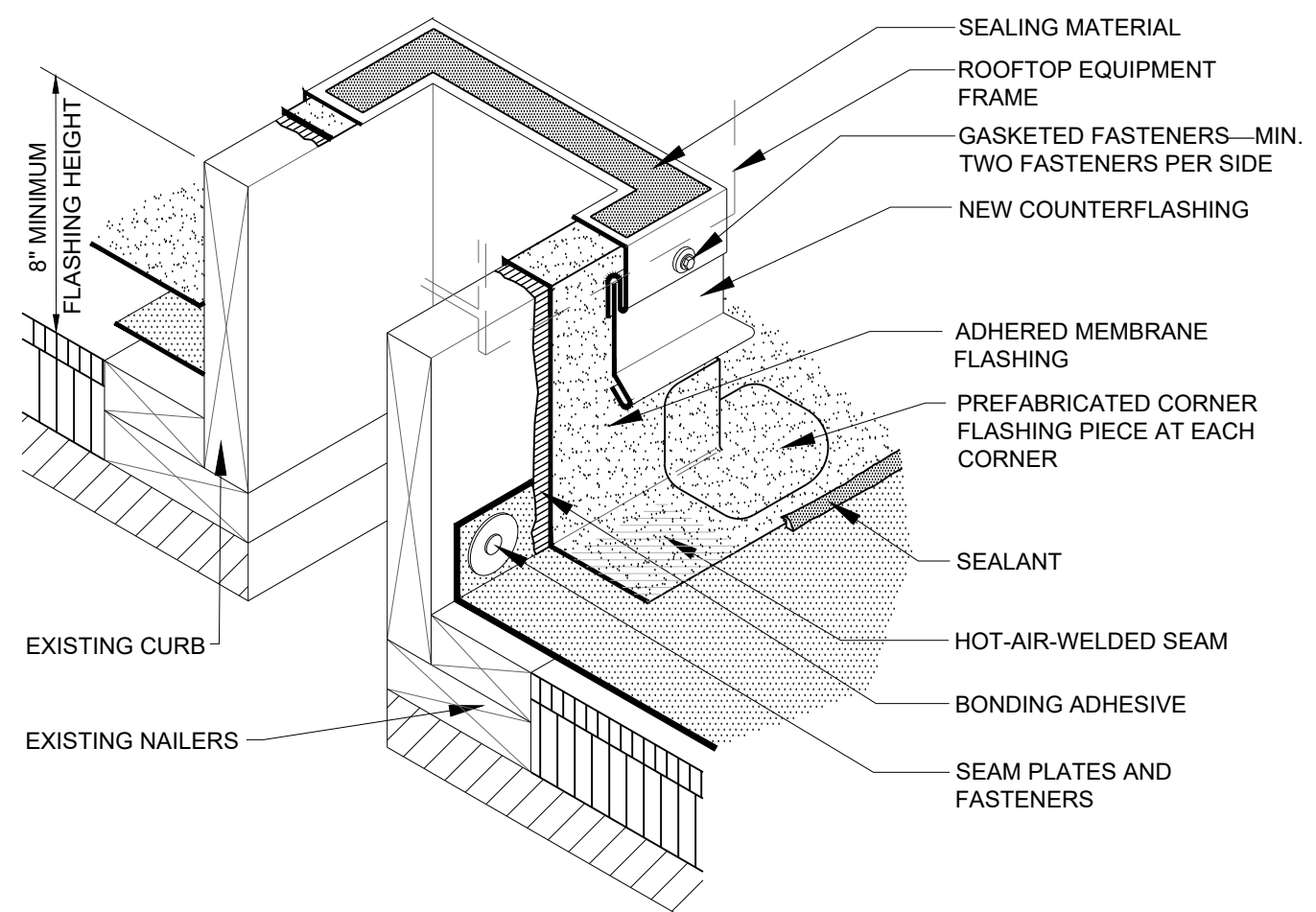
NOTES:
 1. REFER TO MANUFACTURERS' SPECIFICATIONS FOR SPECIFIC REQUIREMENTS FOR BASE MEMBRANE ATTACHMENT AND PLACEMENT.

DETAIL EQUIPMENT SUPPORT STAND LEG [FIELD WRAP] **1**
 SCALE: NTS **A3.3**



NOTES:
 1. VENT STACKS AND OTHER PIPES SHOULD HAVE A MINIMUM OF 12 INCHES OF CLEARANCE ON ALL SIDES FROM WALLS, CURBS AND OTHER PROJECTIONS TO FACILITATE PROPER FLASHING. SEE THE INTRODUCTION TO THE CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
 2. NRCA RECOMMENDS FLASHINGS BE 8 INCHES HIGH; HOWEVER, NRCA IS AWARE PREMANUFACTURED BOOT FLASHINGS GENERALLY WILL NOT MEET THE HEIGHT REQUIREMENT.
 3. REFER TO MANUFACTURERS' SPECIFICATIONS FOR SPECIFIC REQUIREMENTS FOR BASE MEMBRANE ATTACHMENT AND PLACEMENT.

DETAIL PLUMBING VENT [PREMANUFACTURED BOOT] **2**
 SCALE: NTS **A3.3**



DETAIL BASE FLASHING & COUNTERFLASHING AT CURB **1**
 SCALE: NTS **A3.4**

NUM	DATE	DESCRIPTION:
0	06/07/23	FOR BID

**TYPICAL ROOF
 DETAILS**

DESIGNED: RLB
 DRAWN: RLB
 CHECKED: PGP
 JOB #: 23-019

A3.4

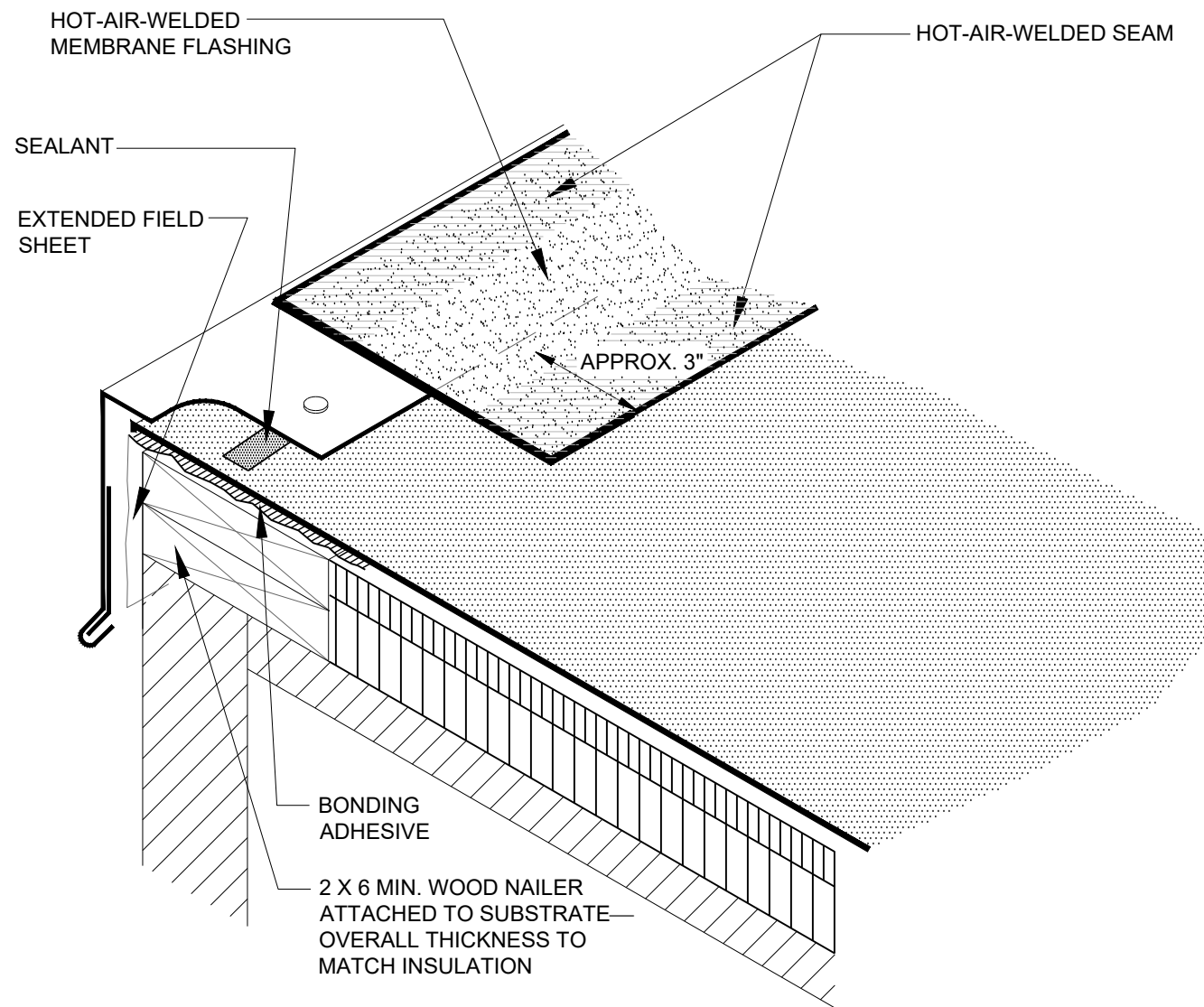
NUM	DATE	DESCRIPTION
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TYPICAL ROOF
 DETAILS

DESIGNED: RLB
 DRAWN: RLB
 CHECKED: PGP

JOB #: 23-019

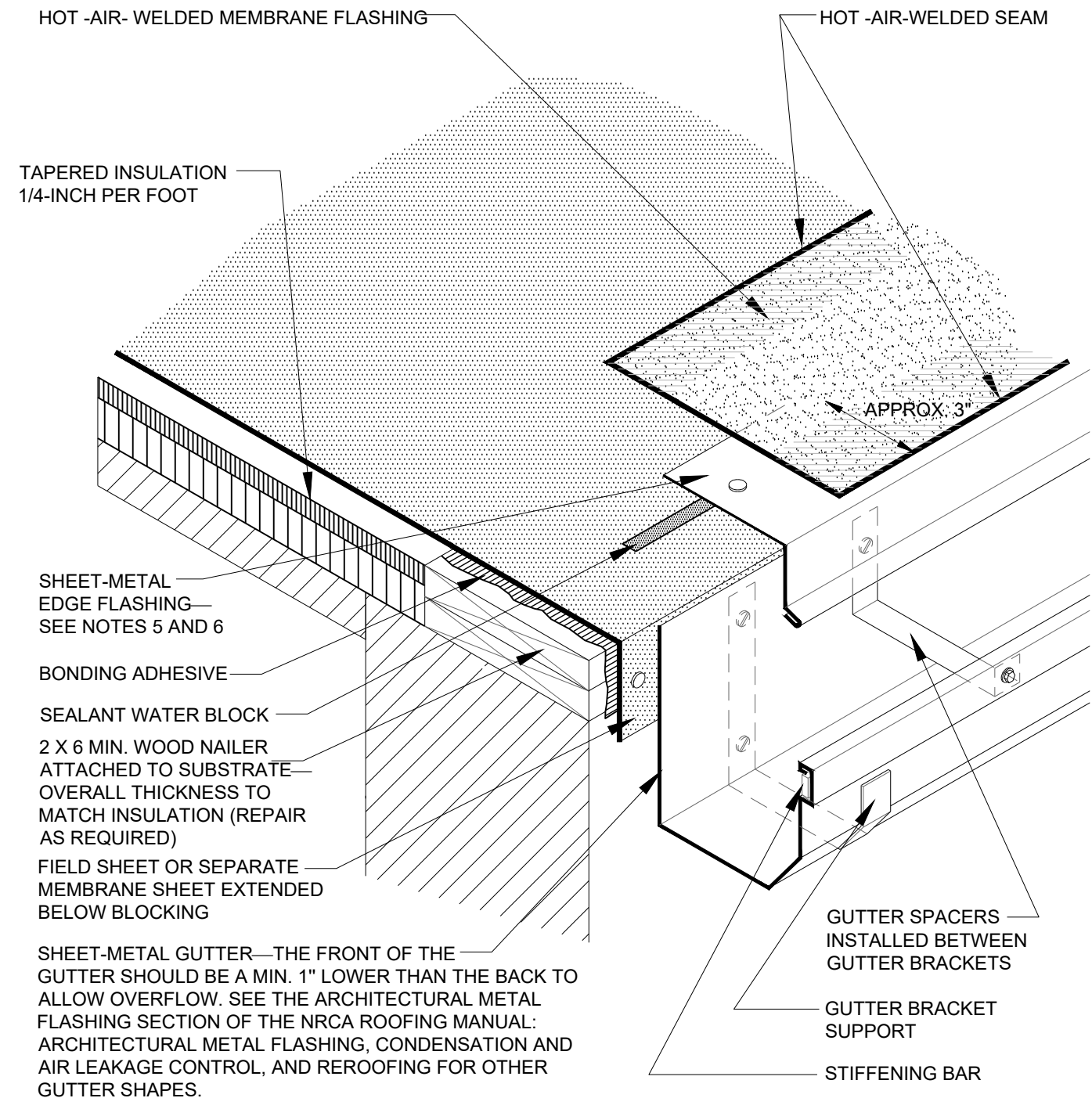
A3.5



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.

DETAIL TYPICAL PERIMETER EDGE METAL **1**
 SCALE: NTS **A3.5**



NOTES:

1. GUTTER BRACKETS ARE RECOMMENDED TO BE AT LEAST ONE GAUGE HEAVIER THAN GUTTER STOCK.
2. REFER TO MANUFACTURERS' SPECIFICATIONS FOR SPECIFIC REQUIREMENTS FOR BASE MEMBRANE ATTACHMENT AND PLACEMENT. MECHANICALLY ATTACHED SYSTEMS GENERALLY REQUIRE SPECIFIC ATTACHMENT REQUIREMENTS FOR PERIMETER LOCATIONS.
3. 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.
4. REFER TO THE INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.

DETAIL TYPICAL GUTTER WITH PERIMETER EDGE METAL **2**
 SCALE: NTS **A3.5**

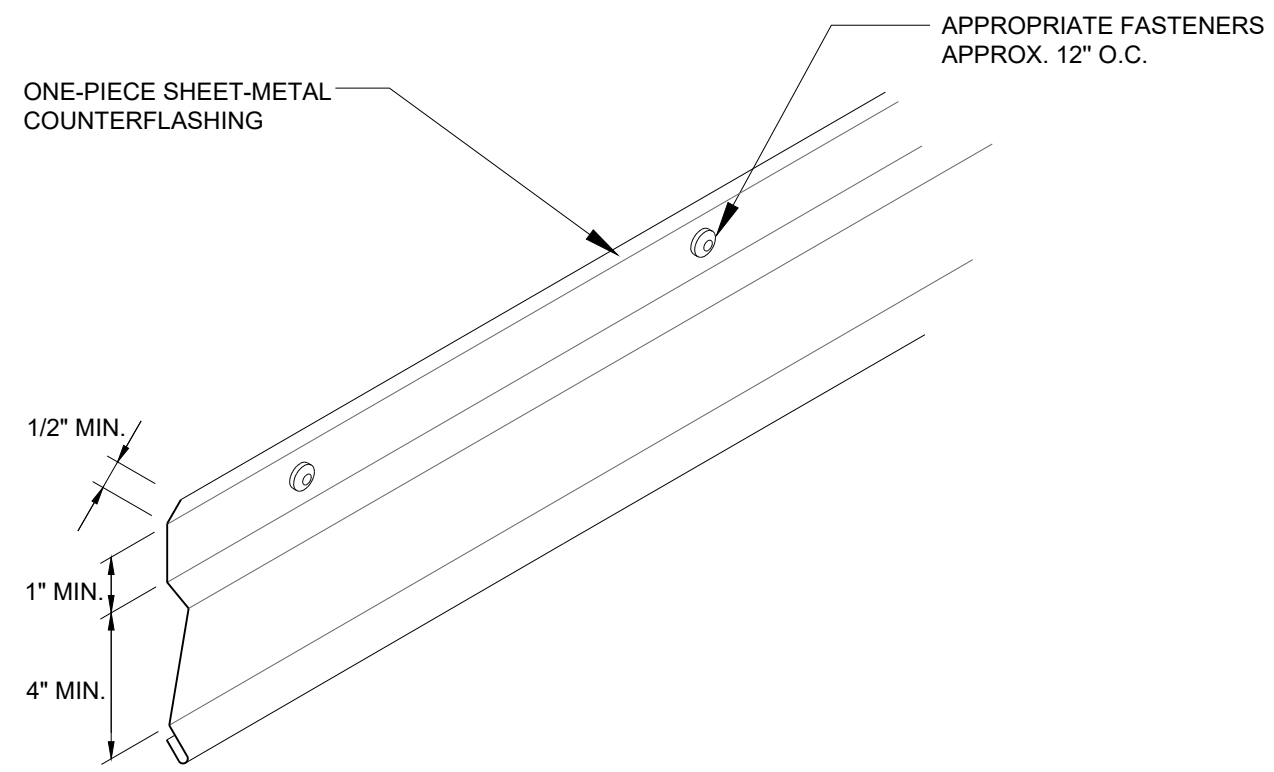
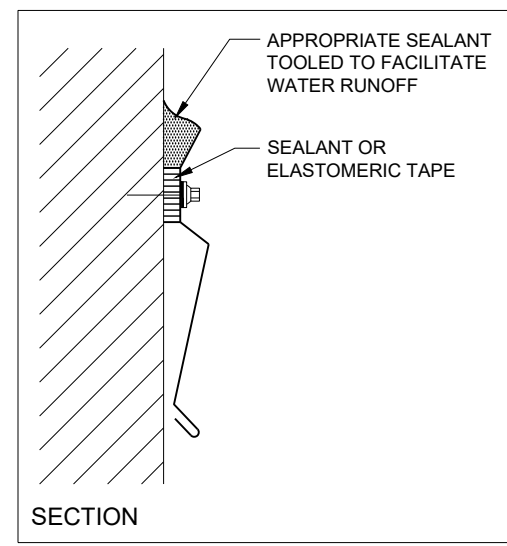
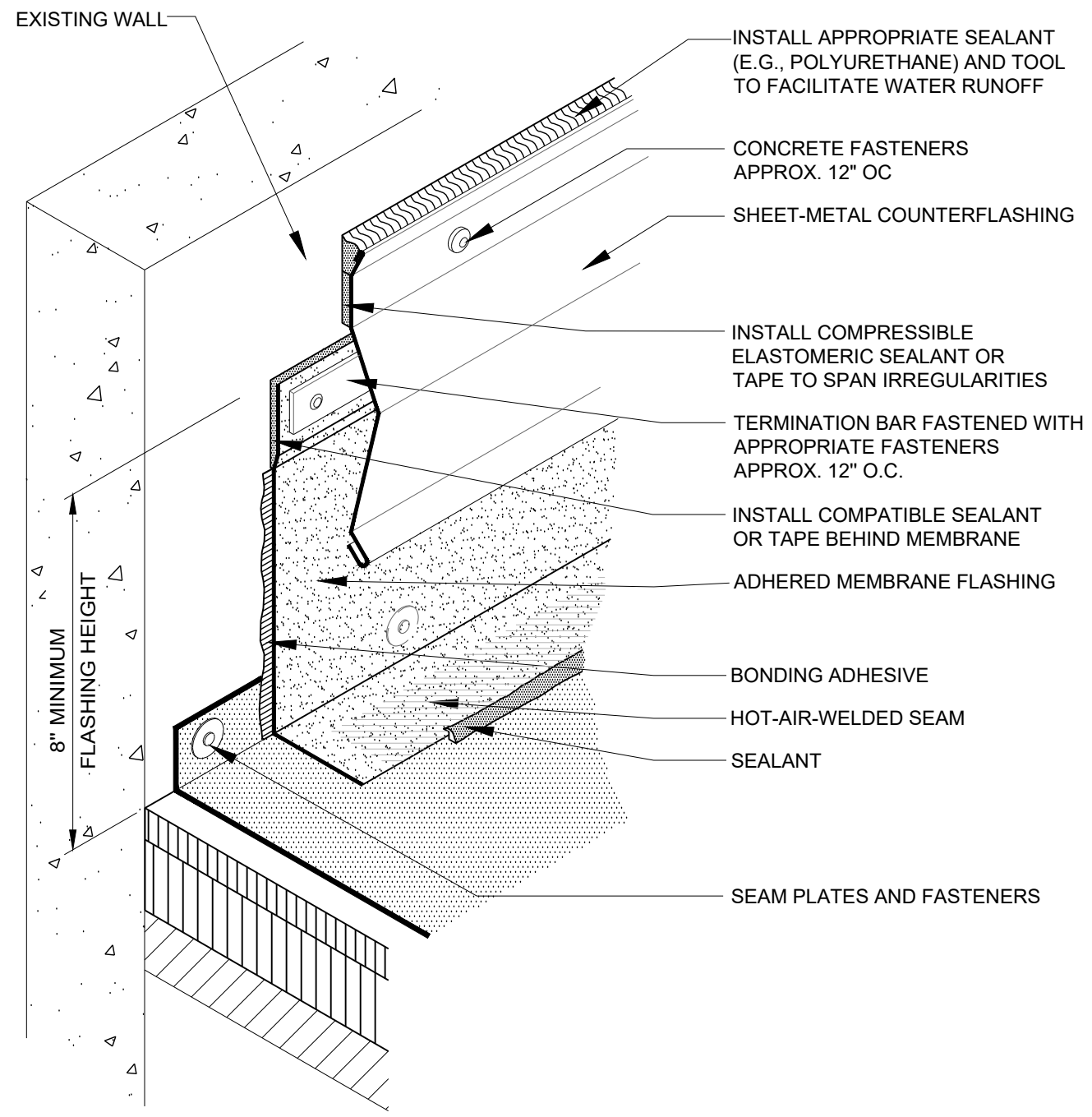
NUM	DATE	DESCRIPTION
0	06/07/23	FOR BID

TYPICAL ROOF
 DETAILS

DESIGNED: RLB
 DRAWN: RLB
 CHECKED: PGP

JOB #: 23-019

A3.6



NOTES:

1. THIS DETAIL DOES NOT ALLOW FOR DIFFERENTIAL MOVEMENT BETWEEN THE DECK AND WALL.
2. REFER TO THE INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ALTERNATIVE BASE SECUREMENT OPTIONS.
3. 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 COUNTERFLASHINGS.
4. REFER TO THE INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.

NOTES:

1. ROOF MEMBRANE AND/OR BASE FLASHINGS NOT SHOWN FOR CLARITY
2. REFER TO THE INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION.

DETAIL BASE FLASHING DETAIL 1
 SCALE: NTS A3.6

DETAIL ONE-PIECE SURFACE-MOUNTED COUNTERFLASHING 2
 SCALE: NTS A3.6

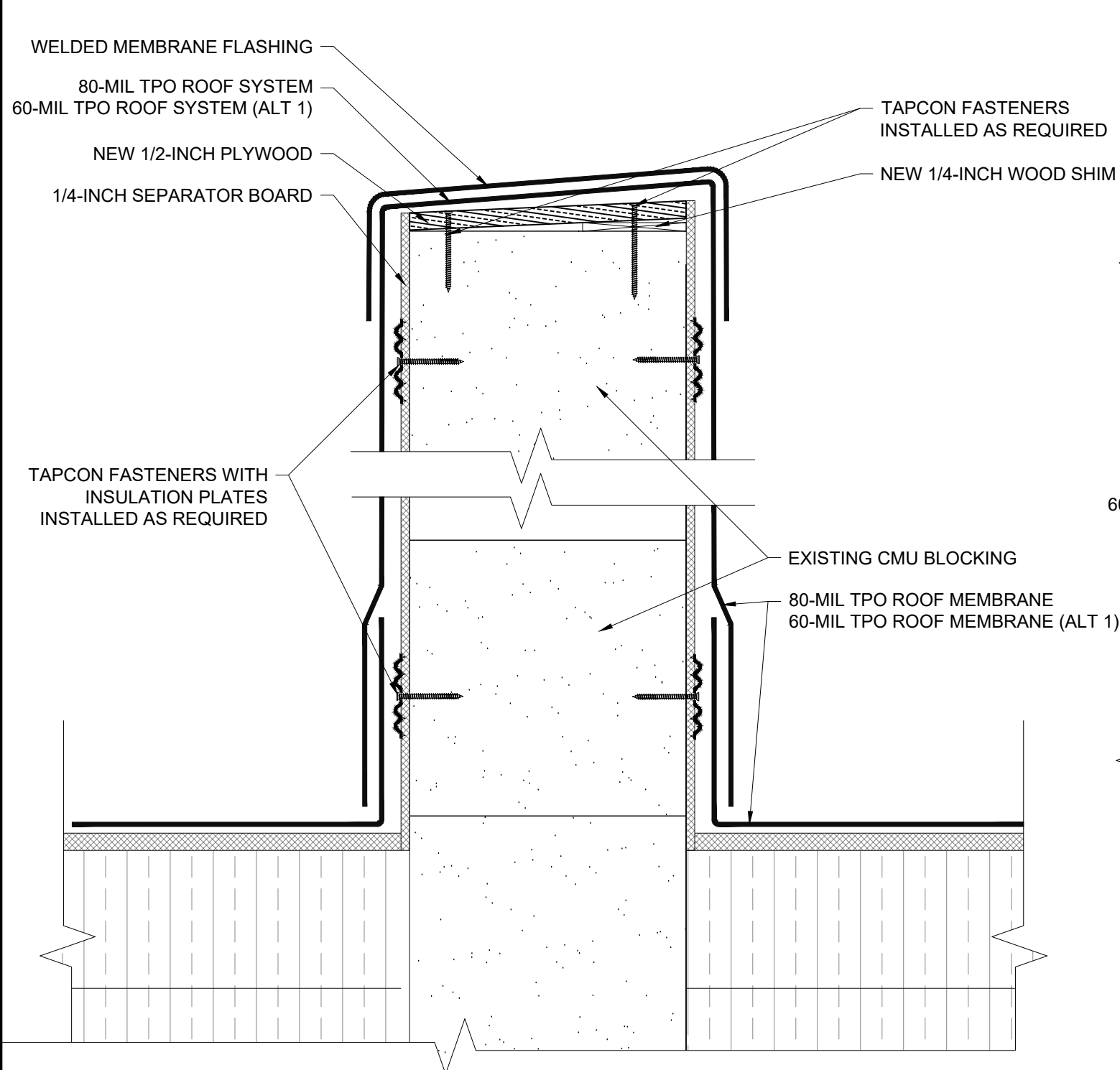
NUM	DATE	DESCRIPTION
0	06/07/23	FOR BID

TYPICAL ROOF
DETAILS

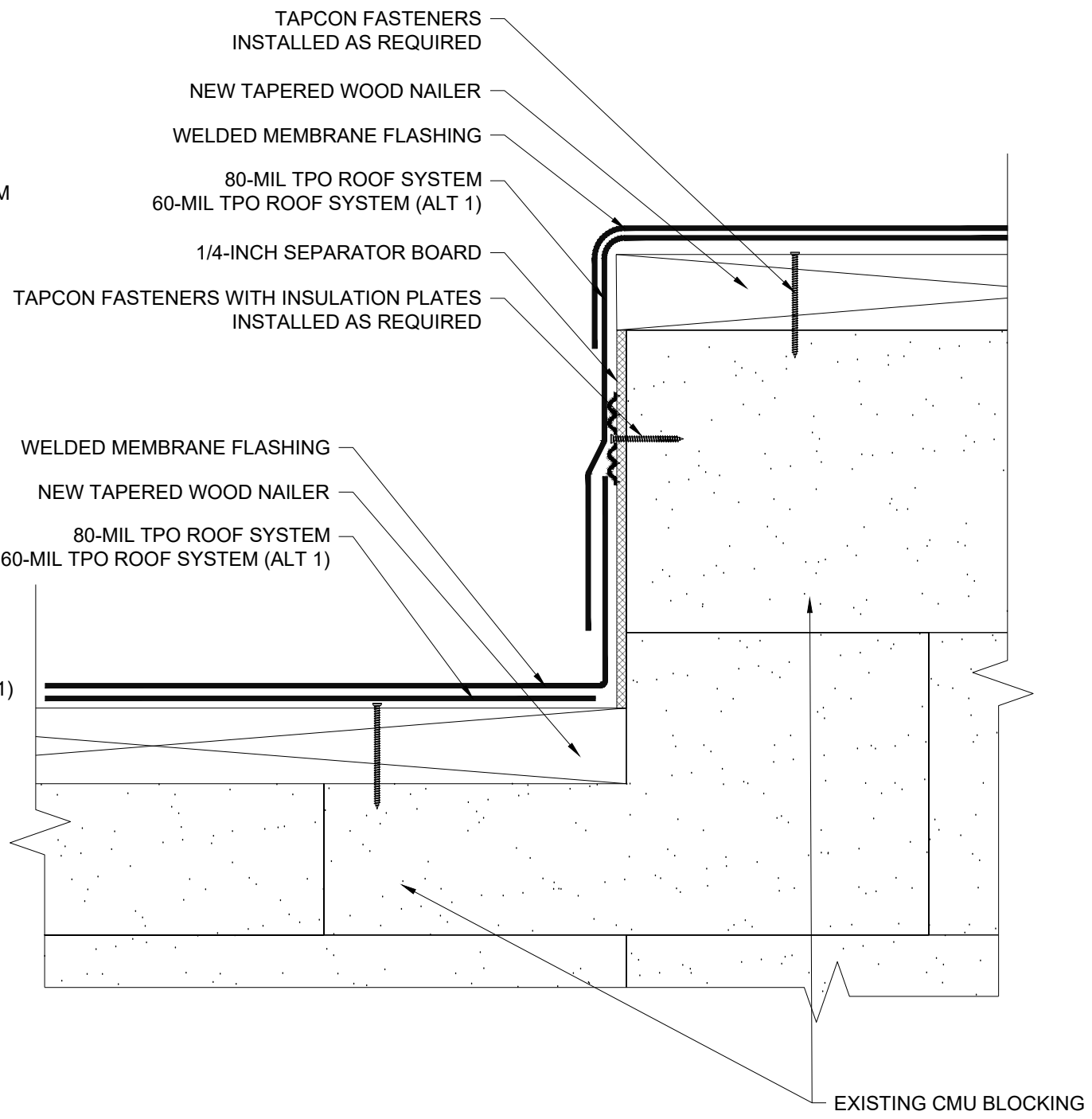
DESIGNED: RLB
DRAWN: RLB
CHECKED: PGP

JOB #: 23-019

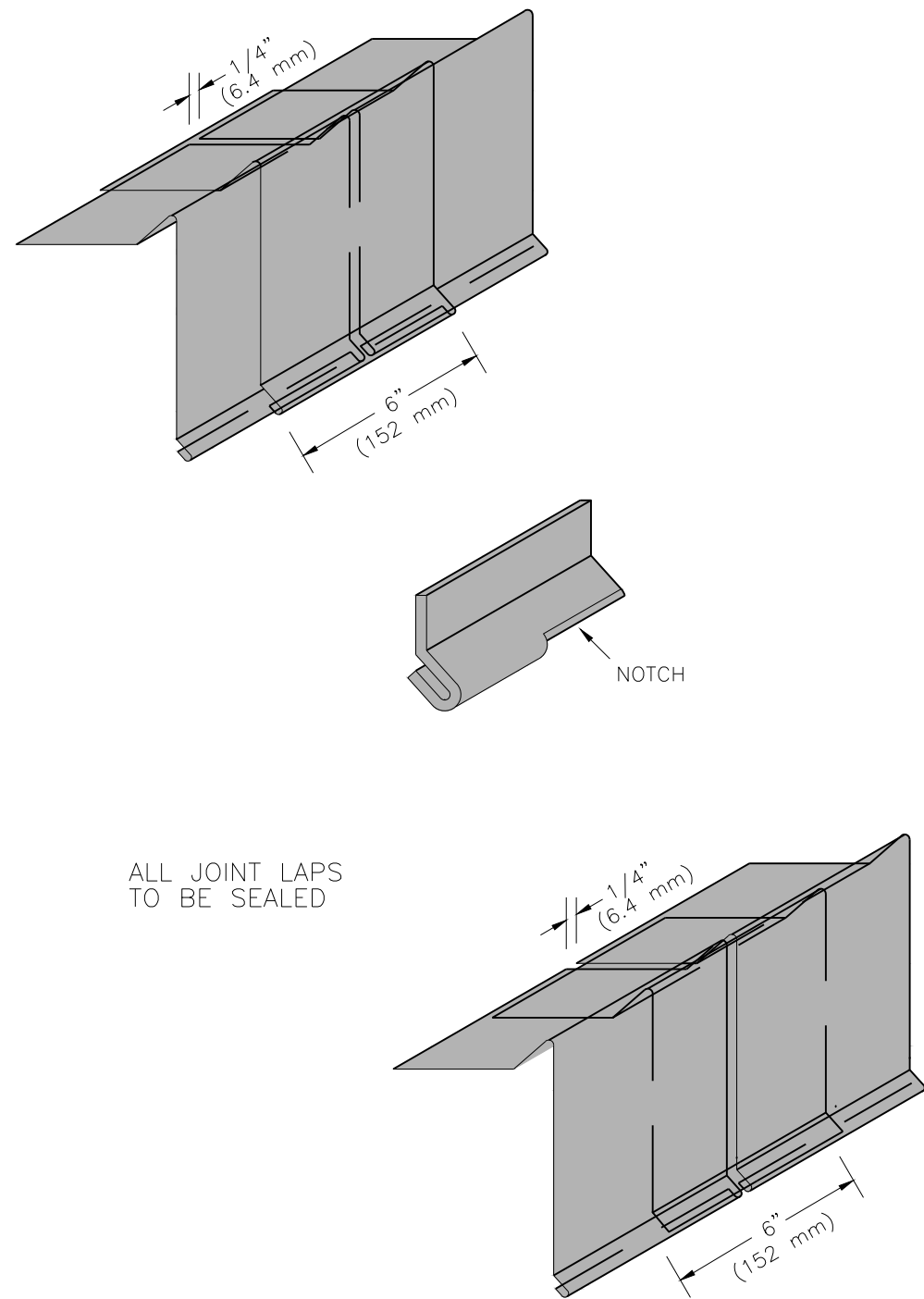
A3.7



DETAIL TYPICAL INTERIOR PARAPET **1**
SCALE: NTS **A3.7**



DETAIL STEP-DOWN AT INTERIOR PARAPET **2**
SCALE: NTS **A3.7**

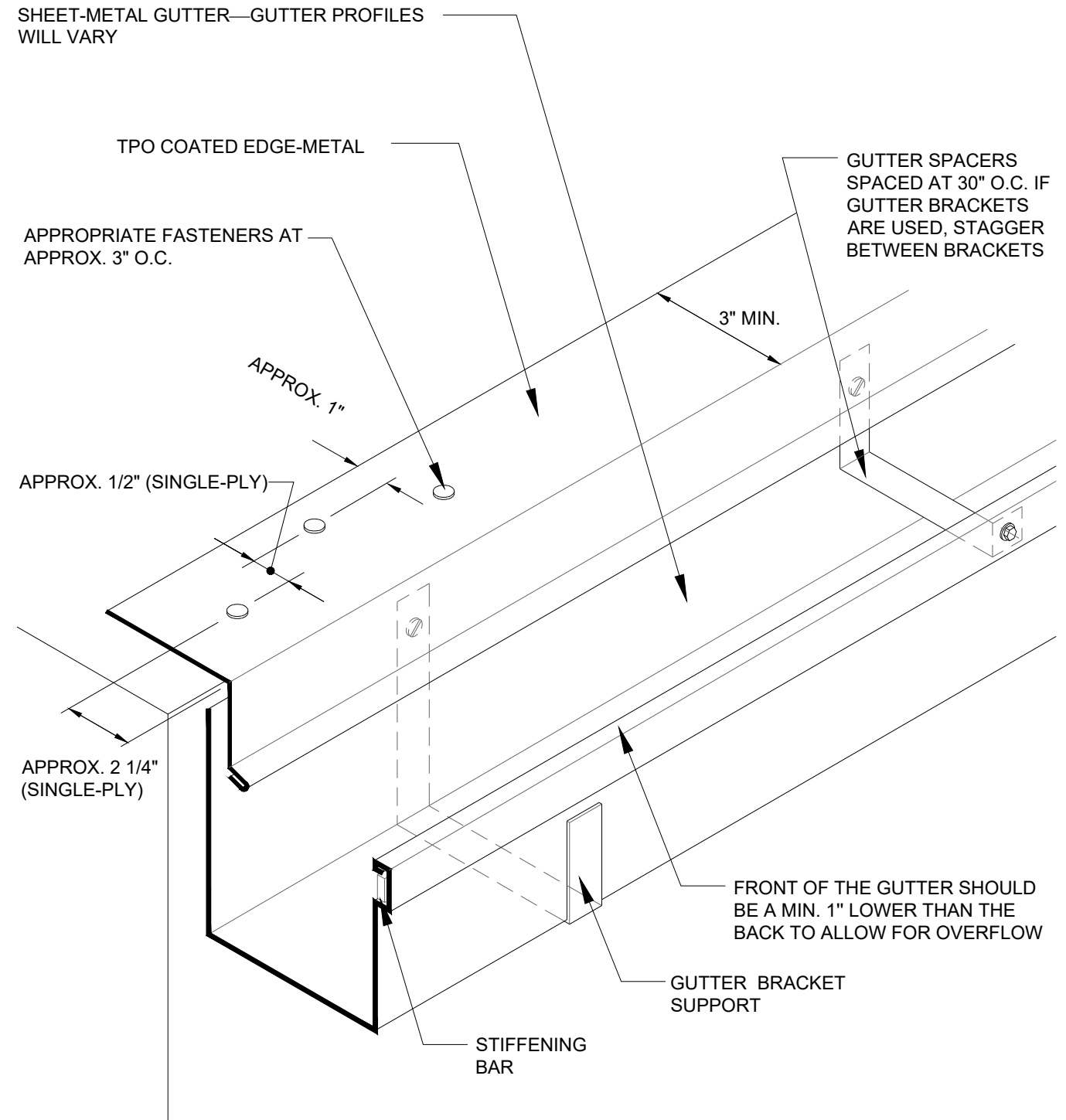


DETAIL

TYPICAL EDGE METAL LAP

SCALE: NTS

1
A3.8



DETAIL

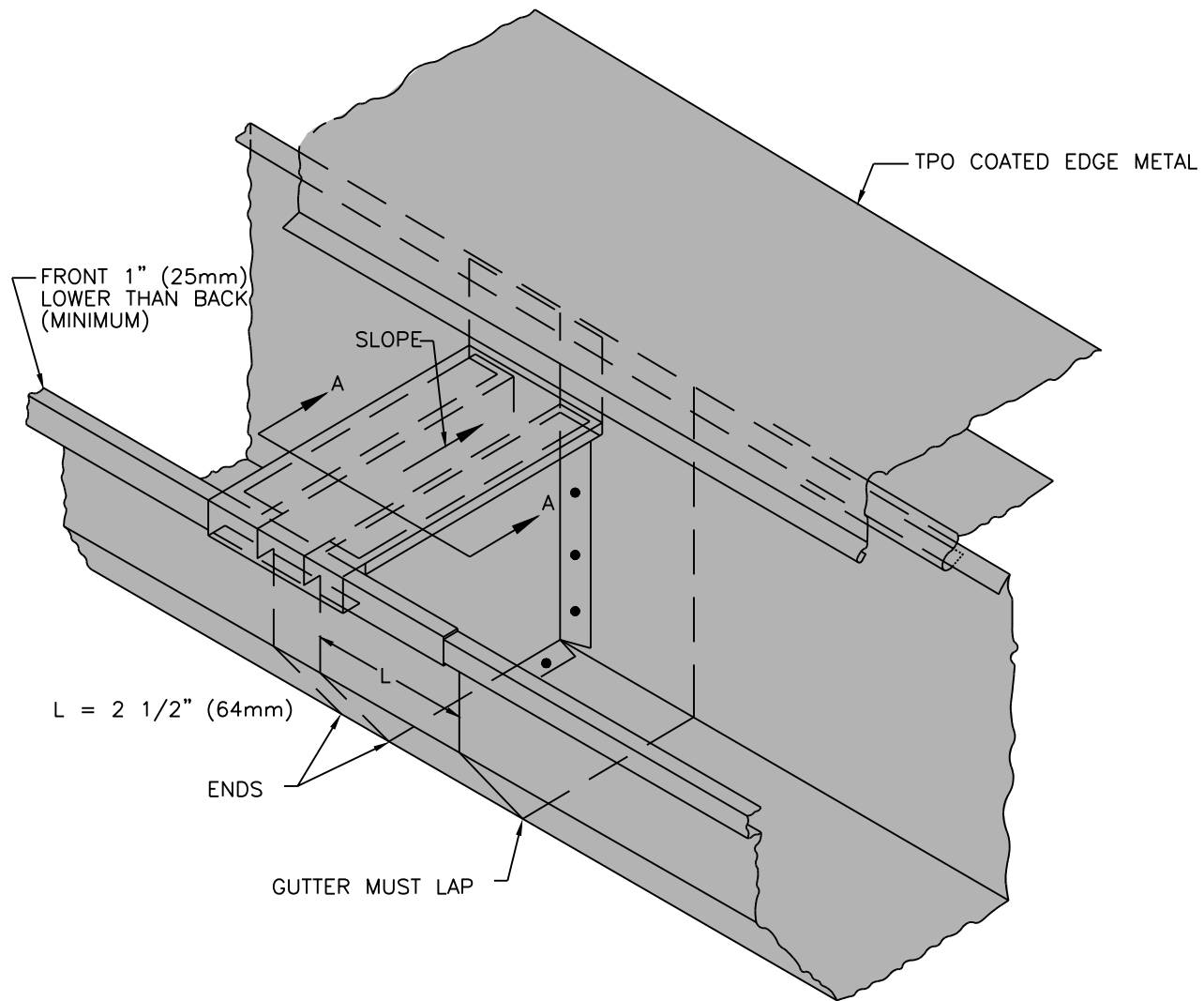
TYPICAL GUTTER

SCALE: NTS

2
A3.8

NOTES:

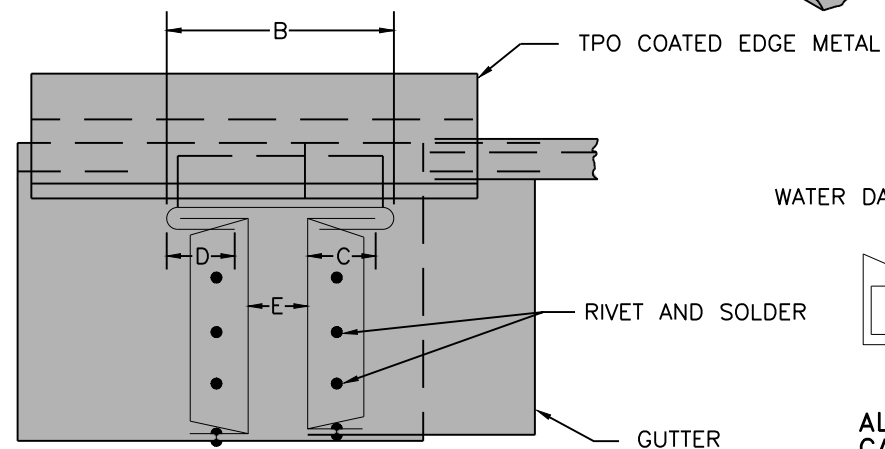
1. ROOF MEMBRANE, ASSOCIATED FLASHINGS AND METAL JOINERY NOT SHOWN FOR CLARITY
2. REFER TO THE INTRODUCTION OF THE CONSTRUCTION DETAILS CHAPTER FOR ADDITIONAL INFORMATION
3. PROVIDE EXPANSION JOINT AT A MAXIMUM OF 50-FEET ON CENTER



L = 2 1/2" (64mm)

ENDS

GUTTER MUST LAP



SECTION A-A

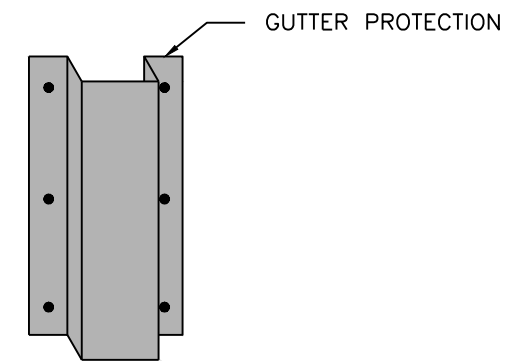
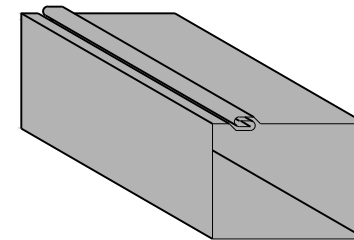
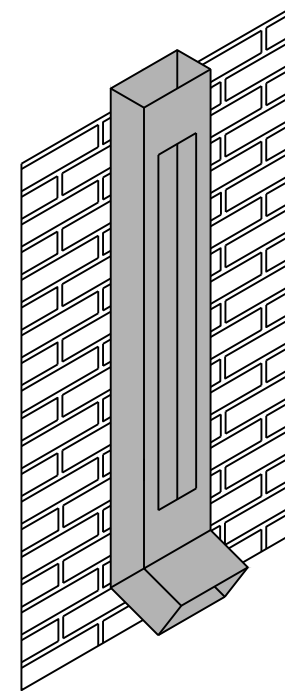
NOTES:

1. PROVIDE EXPANSION JOINT AT A MAXIMUM OF 50-FEET ON CENTER

DETAIL TYPICAL GUTTER EXPANSION JOINT

SCALE: NTS

1
A3.9



NOTES:

1. STRAP SPACING NOT TO EXCEED 5-FEET ON CENTER WITH STRAPS WITHIN 2-FEET OF EITHER END

DETAIL

TYPICAL DOWNSPOUT

SCALE: NTS

2
A3.9

NUM DESCRIPTION DATE FOR BID

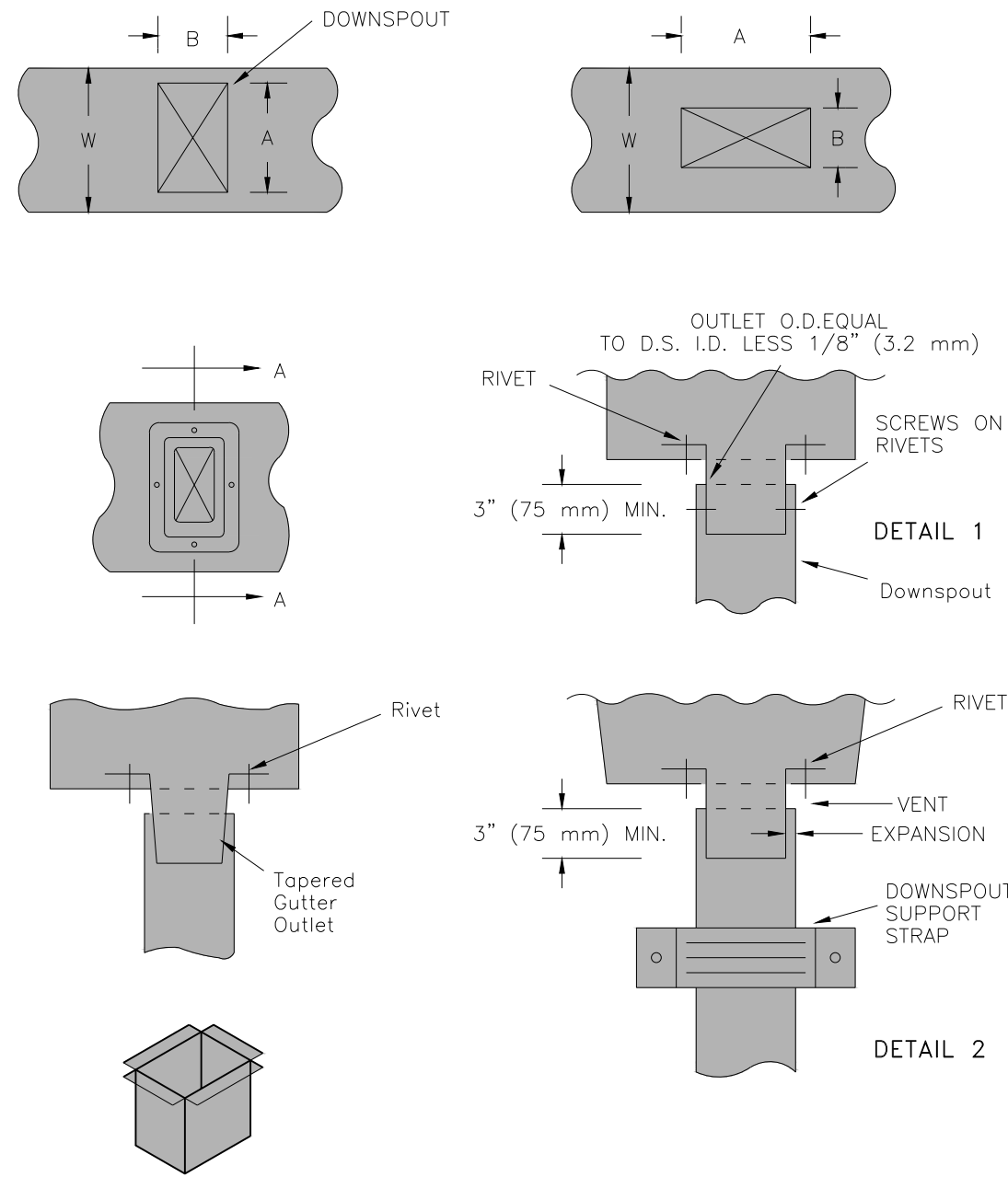
0 06/07/23

TYPICAL ROOF
DETAILS

DESIGNED: RLB
DRAWN: RLB
CHECKED: PGP

JOB #: 23-019

A3.9



NOTES:

1. STRAP SPACING NOT TO EXCEED 5-FEET ON CENTER WITH STRAPS WITHIN 2-FEET OF EITHER END

DETAIL TYPICAL DOWNSPOUT OUTLET **1**
SCALE: NTS **A3.10**

NUM	DATE	DESCRIPTION:
0	06/07/23	FOR BID

**TYPICAL ROOF
DETAILS**

DESIGNED: RLB
DRAWN: RLB
CHECKED: PGP

JOB #: 23-019

A3.10