



TENDER # 15- 164

SPECIFICATIONS FOR

Eric Spicer Building Re-roofing Phase 3 Fully Adhered Roof System With EPDM Membrane

PLANNING AND INFRASTRUCTURE
Halifax Regional Municipality

DATE: May 15, 2015

CLOSING DATE: 2:00 h p.m. June 05, 2015

CONSULTANT: Fowler Bauld & Mitchell Ltd.

TOUR: A **mandatory** site tour for general contractors is scheduled for Tuesday May 26, 2015. It is highly recommended that any subcontractors interested in bidding also attend. All interested parties are asked to meet promptly at 10:00 h, A.M. at 21 Mount Hope Ave. Dartmouth N.S.

<u>Section Number</u>	<u>Title</u>	Revision Date
00 01 10	Table of Contents	
00 01 15	List of Drawings	
00 01 20	List of Schedules	
00 41 13	Form of Tender	April 2011
00 41 30	Appendix "D" to Tender Form	
00 21 13	Instructions to Bidders	April 2011
00 72 13	General Requirements**	April 2011
07 53 23	Specification- Fully Adhered Roof System With EPDM Membrane	March 2015

** As found on the Halifax Regional Municipality Website at the following address:
<http://halifax.ca/procurement/terms.html>

END OF SECTION 00 01 10

Drawing Number

Title

A1

Floor Plan

A2

Details

End of Section 00 01 15

N/A

End of Section 00 01 20

FORM OF TENDER

Tender by _____

Ms. Anne Feist
Manager of Procurement
Halifax Regional Municipality
Suite 103, 1st Floor,
40 Alderney Dr.
Dartmouth Nova Scotia, B2Y 2N5

Having examined the drawings and specifications for the Eric Spic Re-roofing Project- Phase 3, as well as site conditions affecting the work, the undersigned offers to furnish all labour and materials required for a complete job in accordance with the said documents at a price as follows;

Total Price (excluding all taxes) \$ _____

Subcontractor Information

EDIT CATEGORIES AS REQUIRED

Provide subcontractor in accordance with 00 21 13 1.14.

Division	Subcontractor
Demolition	
Masonry	
Finish Carpentry	
Cabinetry	
Asphalt Roofing	
Siding	
Drywall	
Flooring	
Painting	
Mechanical	
Electrical	

We enclose herewith a certified cheque or bid bond* made payable to the Halifax Regional Municipality as specified in Section 00 21 13, Instructions to Bidders, Clause 1.2 - Deposit and Surety, to be held in escrow and dealt with as follows:

- a) In the event of the above tender being accepted within 90 days of the closing of tenders and our failing or declining to enter into a contract for the amount of our tender, the said cheque/bid bond shall be forfeited to the Owner in lieu of our failure of refusal to enter into such contract.
- b) In the event of our tender not being accepted within 90 days of the closing of tenders, the said cheque/bid bond will be returned to us forthwith unless a satisfactory arrangement is made with us covering its retention for a further period.
- c) In the event of our tender being accepted, the said cheque/bid bond will be retained as a guarantee of entering into a contract, to be released on receipt of a Performance Bond in the amount specified in Section 00 21 13, Instructions to Bidders, Clause 1.2 - Deposit and Surety Said Performance Bond to be replaced by a Maintenance Bond covering the one year warantee period. In cases where a certified cheque has been retained, such cheque will be released at the termination of the warantee period.
- d) The contractor, and/or supplier agrees that the Halifax Regional Municipality may apply all payments for work completed or goods supplied, or service provided, to amounts owing to the Municipality by the contractor or supplier, including related administration of late payment charges related to the amounts owing.

*See Section 00 21 13, Instructions to Bidders, Clause 1.2 - Deposit and Surety

Appendix 'A' must be signed and returned with the tender to be considered.

We hereby acknowledge receipt of the following addenda:

<u>ADDENDUM NO.</u>	<u>DATED</u>	<u>NO. OF PAGES</u>
1. _____		
2. _____		
3. _____		

We hereby agree to the General Requirements for Specified Price Contracts as posted on the Halifax Regional Municipality website at <http://halifax.ca/procurement/SpecifiedPriceContracts.html>

In submitting this tender, we recognize the rights of the Owner (HRM) to accept any tender at the price submitted, or portion thereof, or to reject all tenders as the Owner may determine to be in its best interests. We also recognize that the Owner (HRM) may evaluate or award contracts based upon price breakdowns, unit costs or alternate pricing called for in the tender documents but that the Owner will not award components of the tender separately in the same tender call unless so stated in the tender documents.

If we are notified of the acceptance of this tender within the time limit above specified, we will enter into a written agreement with the Halifax Regional Municipality and complete the entire work included in the contract within _____ days.

Should we fail to complete the Contract within the specified time, or specified time as amended, we agree that damage will be sustained by the HRM and that it is and will be impracticable and extremely difficult to ascertain

and determine the exact actual damage which the HRM will sustain in the event of and by any of such delay and reason we agree to pay the HRM the sum of one hundred dollars (\$100.00) for Liquidated Damages, and not as a penalty, for each and every calendar days delay in finishing the work in excess of the agreed upon Date of Completion of the work. We agree that this amount is a reasonable estimate of the actual damage to the HRM which will accrue during the period in excess of the agreed upon Date of Completion of the work. Liquidated Damages payable under this paragraph are in addition to and without prejudice to any other remedy, action or alternative that may be available to the HRM.

APPENDIX A

TO BE COMPLETED BY

V E N D O R

In witness whereof the Vendor/Contractor/Bidder herewith set his hand

this _____ day of _____ 20____.

Name of Contractor

Phone

Address of Contractor

Fax

Signed and Delivered in the presence of

Witness

Authorized Signing Officer

Title of Signing Officer

HALIFAX REGIONAL MUNICIPALITY

Witness

Authorized Signing Officer

Title of Signing Officer

Witness

Authorized Signing Officer

Title of Signing Officer

The Bidder must have the legal capacity to contract. If the Bidder is a sole proprietorship, a partnership or a corporate body, the Bidder must provide, if requested by the Contracting Authority, a statement and any requested supporting documentation indicating the laws under which it is registered or incorporated together with the registered or corporate name and place of business. This also applies to bidders submitting a bid as a joint venture. Failure to properly execute submitted documents or to properly complete Appendix "A" (where required) will result in rejection of your tender. IF YOU HAVE ANY QUESTIONS IN THIS REGARD, PLEASE CONTACT THE UNDERSIGNED PRIOR TO TENDER CLOSING TIME FOR CLARIFICATION OF THIS OR ANY OTHER DETAILS.

Anne Feist
Manager of Procurement

Occupational Health and Safety Division
Nova Scotia Labour and Workforce Development
5151 Terminal Road, 6th Floor
P.O. Box 697
Halifax, Nova Scotia
B3J 2T8

NOTICE TO NOVA SCOTIA DEPARTMENT OF LABOUR AND WORKPLACE DEVELOPMENT

This is to advise the Nova Scotia Department of Labour and Workplace Development, the Owner and the Engineer that if we, _____ (Tenderer's Name), are successful on the tender for the _____ (Project Name) that we will be the Contractor for the work and therefore will be the Constructor as defined by the Nova Scotia Occupational Health and Safety Act.

We will have control of the physical work and labour force and shall effectively direct and supervise the work. We will be solely responsible for construction means, methods, techniques, sequences and procedures and for coordinating the various parts of the work under the contract.

We shall be solely responsible for construction and worker safety at the place of the work and to ensure compliance with all rules, regulations, acts and practices required by applicable Construction Safety Legislation including the Nova Scotia Occupational Health and Safety Act, and the Occupational Safety General Regulations (pursuant to the Occupational Health and Safety Act) and the Human Resources Development Canada, Canada Labour Code.

Contractor's Name

Authorized Representative's Signature

Date

CSF-004

CONTRACTOR HEALTH & SAFETY QUESTIONNAIRE

Contractors wishing to submit proposals to HRM must complete this questionnaire and submit it to HRM Procurement with their bid information

GENERAL INFORMATION:

Company Name: _____

Company Address: _____

Telephone Number: _____

INSURANCE/WORKERS' COMPENSATION COVERAGE:

Is your company covered by general liability insurance, automotive insurance, umbrella policies, etc., that would cover the cost of damages to, and incidents involving third parties?

☐ Yes ☐ No

Is your company in good standing with the Workers' Compensation Board for the Province of Nova Scotia?

☐ Yes ☐ No

If no, please explain _____

SAFETY PERFORMANCE:

Does your company have any non compliance or outstanding issues with The Nova Scotia Department of Environment and Labour, such as stop work orders, pending charges/prosecutions, or recent (within the last year) convictions or fines?

☐ Yes ☐ No

If yes, please attach a note explaining the details, including current status or resolution.

SAFETY PROGRAM:

Does your company have a written health and safety policy signed by management?

☐ Yes ☐ No

Does your company have written safety policies, procedures, and safe work practices applicable to the scope of work to be performed, including clearly defined safety responsibilities for managers, supervisors and workers?

☐ Yes ☐ No

How do you communicate your safety policies and procedures?

How often do managers/executive officers visit the work site? _____

Please explain how you conduct on site inspections, including how often they are conducted, what they cover and who conducts them?

Does your company have a risk assessment procedure?

☐ Yes ☐ No

Does your company have a procedure in place for investigating incidents, accidents and near misses?

☐ Yes ☐ No

The Contractor shall attach a list and contact information of all supervisors you will be using on site, as well as any safety coordinator or persons responsible for job site safety.

Do you provide on the job training to all employees?

☐ Yes ☐ No

Please indicate how you inform your workers, other workers or persons at or near the workplace of any workplace hazards to which they may be exposed.

Do you have a disciplinary policy in place for anyone committing health and safety violations? Please describe:

☐ Yes ☐ No

Do you have a Joint Occupational Health and Safety Committee or Representative?

☐ Yes ☐ No

Do you have a preventative maintenance program for tools and machinery?

☐ Yes ☐ No

Do you have a health and safety policy in place for incorporating sub contractors into the workplace ?

☐ Yes ☐ No

Please provide any other information relating to other programs or activities that you believe demonstrates your company conducts their projects safely and in accordance with all health and safety requirements.

NOTE: PLEASE BE ADVISED THAT DURING THE TENDERING PROCESS OR AT ANYTIME DURING THE CONTRACTED WORK, HRM MAY REQUEST COPIES OF POLICIES, PROCEDURES, RECORDS

OR DOCUMENTATION OF PROOF FOR ANY QUESTIONS ANSWERED ON THIS QUESTIONNAIRE.

DO YOU AGREE TO PROVIDE THIS INFORMATION
IF REQUESTED ?

☐ Yes ☐ No

Signature

Date

Position / Title

End of Section 00 45 00

1.0 INSTRUCTIONS TO BIDDERS

1.1 Tenders

- 1.1.1 Tenders will be received up to two o'clock (2:00h p.m.), local time, June 5, 2015 at the office of:
Halifax Regional Municipality
Procurement Section,
Suite 103, 1st Floor,
40 Alderney Dr. (Alderney Gate),
Dartmouth Nova Scotia,
B2Y 2N5

ATTENTION: Ms. Anne Feist
Manager of Procurement

- 1.1.2 Tenders must be deposited in sealed envelopes clearly marked as follows:

Tender # 15-164
Eric Spicer Re-roofing Phase 3

- 1.1.3 The Halifax Regional Municipality reserves the right to accept any tender at the price submitted or portion thereof or to reject any or all tenders as the Municipality may determine to be in its best interests.
- 1.1.4 Public opening of the tender will take place in Conference Room, Halifax Regional Municipality Procurement Section, Suite 103, 1st Floor, 40 Alderney Dr. (Alderney Gate), Dartmouth Nova Scotia, B2Y 2N5., immediately following the closing of the tender.
- 1.1.5 Tenders shall be for a stipulated sum on the form provided without escalator clause or other qualifications. All blank spaces on forms are to be filled in and all items must be bid, unless the tender specifically permits otherwise.
- 1.1.6 Project Documents are non-transferable. Tenders will not be accepted from Contractors that have not obtained the Documents from HRM Procurement, or its designate.
- 1.1.7 Firms submitting bids must have attended the Mandatory Site Visit on the date noted in the tender form or subsequent addenda. Any bids received from firms not attended the Mandatory Site Visit will be rejected.
- 1.1.9 The tender form must be signed in the space provided with the signature of the bidder or of a duly authorized official of the organization bidding. If a joint bid is submitted, it must be signed on behalf of each of the bidders. Tenders not properly signed will be rejected.
- 1.1.10 Tenders containing obvious arithmetic errors such as incorrect extensions or misplaced decimals will be accepted where the intent of the bidder is clear. Bid unit prices shall ordinarily be used to correct extensions.
- 1.1.11 HRM, in evaluating a tender will be guided by the following:
- 1.1.11.1 Where the bids submitted in response to an invitation to bid are higher than the estimated contract value, bids shall not necessarily be invalidated for this reason.

- 1.1.11.2 If the lowest competent bid is within 15% of the estimated contract value, the contracting authority may choose to:
- (a) Award the contract for the bid amount.
 - (b) Negotiate changes in the scope of work with the lowest competent bidder (Within the framework of the original tender call, including all subcontractors listed) to achieve an acceptable contract price. If negotiations fail, the contracting authority can make changes to the scope of work and re-tender the work.
- 1.1.11.3 If the lowest competent bidder is greater than 15% over the estimated contract value, the contracting authority may choose to:
- (a) Award the contract for the bid amount.
 - (b) Make major changes to the scope of work (10% of the estimated contract value or greater) and re-tender the work.
 - (c) Make minor changes to the scope of work (less than 10% of the estimated contract value) and negotiate changes with the lowest competent bidder to achieve an acceptable contract price. If negotiation fails, the contracting authority can make changes to the scope of work and re-tender.
- 1.1.11.4 Application of 1.1.11.2 and 1.1.11.3 is subject to budget availability

1.2 Deposit and Surety

- 1.2.1 For contracts with a value less than \$100,000, bid surety and contract security is not required
- 1.2.2 For tenders valued at over \$100,000, the bid shall be accompanied by bid security in the amount of 10% of the Lump Sum Price, in the form of a certified cheque, a bank draft, a money order, a bid bond, or any combination thereof, made payable without recourse, to the Halifax Regional Municipality, to be held in escrow and dealt with as called for in the 'Tender Form'.
- 1.2.3 After award, the successful tenderer shall replace the bid surety with a performance bond and Labour & Materials bond. Where the Bid Surety has taken the form of a certified cheque, the security of the successful bidder will be returned when he has fully complied with the conditions for performance surety outlined in the tender documents. .
- 1.2.4 For contracts with a value of \$100,000 to \$250,000 contract security may be in the form of either a bond in the amount of 50% of the Lump Sum Price or alternatively, a certified cheque or irrevocable letter of credit in the amount of 15% of the Lump Sum Price. For contracts with a value greater than \$250,000 but less than \$500,000 contract security may be in the form of a bond in the amount of 50% of the Lump Sum Price or alternatively, a certified cheque or letter of credit in the amount of 20% of the Lump Sum Price. For contracts with a value greater than \$500,000, security will only be accepted in the form of the 50% performance and labour and material bond.

1.3 Contract Documents

Contract documents shall be signed by the contractor within ten days of the written notification of acceptance of this tender. Contract shall be signed in the office of the City Solicitor, Legal Services, 3rd Floor, Duke Tower, 5251 Duke Street, Halifax, N.S.

1.4 Plans and Specifications

Specifications, form of tender, and all pertinent information may be examined and obtained at the office of the Halifax Regional Municipality Procurement Section, Suite 103, 1st Floor, 40 Alderney Dr. (Alderney Gate), Dartmouth Nova Scotia, B2Y 2N5

1.5 Tender Time Limit

Each contractor submitting a tender shall agree that the tender shall be valid for 90 days from the closing date, the closing date being considered the first day the tender is valid until 12 o'clock noon the 90th day. Should no acceptance be made within this period, the Contractor may, at their option, rule the tender invalid.

1.6 Competency of Bidder

The HRM intends to only contract with responsible bidders who are in the business of providing the goods and/or services bid upon and can provide proof that they can furnish satisfactory performance based on past work experience with the HRM, other companies, or government agencies, and have the financial, managerial, and resource capabilities for the size of project bid upon. Satisfactory performance includes meeting all of the requirements of the various federal and provincial regulations and agencies for completion of work and making payments to subcontractors in a timely basis. The evaluation process may include reference checks, third party credit checks, site visits, and/or your firm may be asked to allow the HRM to complete personal credit and/or criminal record checks if company information is not available or adequate. Bidders found unacceptable during the evaluation process will not be given further consideration.

1.7 Examination of Plans, Specifications and Site

Each bidder, before submitting their tender, shall carefully examine the contract documents and shall visit the site to ascertain all conditions existing, or to be anticipated, which may affect this work. No extra compensation will be allowed for expenses incurred during the progress of the work through failure to visit the site or to study drawings and specifications and make the necessary provisions in their tender price.

1.8 Questions Regarding Plans and Specifications

- 1.8.1 Should the bidder find errors or discrepancies in, or omissions from, the drawings or specifications, or be in doubt as to their meaning, they shall notify the Owner.
- 1.8.2 If necessary, the Owner will issue addenda, numbered and dated, clarifying any points in question. Addenda shall be incorporated in and become part of contract documents.
- 1.8.3 All questions concerning this Tender and all applications for alternate/equal materials or procedures must be forwarded in writing to the HRM Procurement Department (fax # 490-4206). All such correspondence must clearly state the Tender name, number and closing date.
- 1.8.4 No verbal instructions or verbal information to vendors will be binding on Halifax Regional

Municipality. All written instructions and specifications will be considered clear and complete unless written attention is called to any apparent discrepancies or incompleteness before the official closing. Should any alterations to the bid request form be deemed necessary by the Purchasing Agent, these alterations will be made in the form of written addenda which will be provided to all vendors who received a bid request. The addenda shall be considered as part of the request.

1.9 Drawings and Specifications

- 1.9.1 The drawings hereinafter referred to shall be those listed in these specifications, together with such other working and detailed drawings as may be issued by the Owner during the progress of the work.
- 1.9.2 It is the intention that the work shown on the drawings and/or called for in the specifications shall complete the contract in every respect. The submission of a Tender shall constitute an undertaking to do all work required to complete the contract to the full intent and meaning of the drawings and the specifications.

1.10 Materials

The contractor shall submit their tender based on materials and equipment specified. Materials, as specified, are to be considered minimum required quality. Alternatives shall be submitted to the Owner for approval not later than five (5) working days prior to tender closing date. NOTE: No consideration shall be given to alternatives after the Tender closing.

1.11 Co-ordination of Trades

It shall be the responsibility of the Contractor to co-ordinate all sub-trades and ensure that the sub-trades have placed their orders in sufficient time to allow for delivery on schedule. If, for any reason, a delay in delivery is encountered, the Contractor shall have available, extra copies of correspondence showing the date of ordering, date of delivery and reason for delay, and make this information available to the Owner upon request.

1.12 Work Schedule

- 1.12.1 Provide within 10 working days after Contract award, in a form acceptable to the Owner, a schedule showing anticipated progress stages and final completion of work within time period required by Contract Documents.
- 1.12.2 Interim reviews of work progress based on schedule submitted by the Contractor will be conducted as decided by the Owner and schedule updated by the Contractor in conjunction and with approval of the Owner.
- 1.12.3 Failure by the successful bidder to meet the above requirements will entitle HRM to cancel the award of the contract and to retain the tender deposit as compensation for damages sustained due to the Contractor's default. HRM may then award the contract to one of the other bidders or take such action as it chooses.

1.13 Amendment or Withdrawal of Tender

Tenders may be amended or withdrawn by letter, telegram or facsimile (902-490-4206). Amendment or withdrawal by telegram or facsimile must be certified by registered letter postmarked prior to date and time of closing.

Amendment of individual prices is the only acceptable price amendment and should only indicate the dollar amount of increase or decrease to the original unit price. Amendments shall not disclose either original or revised unit prices or the original or revised total tender price.

Head amendment or withdrawal as follows:

[Amendment]/[Withdrawal] of Tender for [], Tender #[]. Sign as required for Tender, and submit at the address given for receipt of tenders prior to time of Tender Closing.

1.14 Subcontractor and Supplier Information

1.14.1 The list of subcontractors and suppliers named by the bidder shall be the approved slate of contractors and suppliers. Any changes following the acceptance of tender shall only be with the written approval of the Owner and only as a result of extraordinary circumstances.

1.14.2 The bidder shall not use the term 'Own Forces' or like expression in a particular classification of work or subtrade unless the bidder has demonstrated expertise and experience, and is actively engaged in that specific area. The Owner reserves the right to expect verification of such qualifications on demand. Failure to provide verification to the satisfaction of the Owner may be cause for rejection of the tender.

1.15 Post-Bid Submissions

1.15.1 To be eligible to receive award of Contract the Contractor shall provide within 48 hours after the tender closing but before award of Contract a copy of the following documents:

Evidence of compliance with the requirements of the Province of Nova Scotia with respect to Workers' Compensation Safety Audit Program. This shall be in the form of a current and valid letter of Good Standing issued by a safety audit firm endorsed by Worker's Compensation Board of Nova Scotia (WCB) to audit for the type of work covered by this tender. The letter must indicate that the tenderers current standing falls into one of the following categories:

- .1 Certificate of Recognition
- .2 Audit Pending

Where the Proponent has not yet obtained a Certificate of Recognition, the Proponent must submit a letter from the WCB endorsed audit firm indicating the Proponent is in the process@ (maximum six (6) months) of obtaining the Certificate of Recognition. AIn the process@ has been defined as the completion of the four mandatory courses (Safety Basics, Safety Orientation, Safety Audit and Leadership) and completion of training required by the Occupational Health and Safety Act (such as, but not limited to WHMIS, TDG, TCP, Confined Space and First Aid) and for a period no greater than six (6) months.

- 1.15.2 The Contractor shall also provide evidence of compliance with the requirements of the Province of Nova Scotia with respect to Workers' Compensation Insurance including payments due thereunder. WCB Clearance Letters provide clarity as to who is covered and who is not covered for individual firms (e.g. Directors not taking a T4 from the company are excluded from coverage, owners of sole proprietorships and partnerships are excluded from coverage, family members living in the household of a director, proprietor or partner are excluded from coverage) It will be the responsibility of the Principal Contractor to ensure coverage is in place for their employees and employees of any their sub-contractors. **Individuals not covered by WCB are not permitted on Halifax Regional Municipality property.**
- 1.15.3 At any time during the term of the Contract, when requested by the Owner, the Contractor shall provide such evidence of compliance for both of the above requirements.

END OF SECTION 00 21 13

CONTRACTOR MUST COMPLETE APPENDIX "D" AND RETURN ONE ORIGINAL COPY WITH THE ORIGINAL TENDER.

1. ROOFING CONTRACTOR: _____
ADDRESS: _____
TELEPHONE & FACSIMILE: _____
CONTACT PERSON: _____

2. List minimum 3 principal EPDM roofing projects your firm, joint venture and/or subcontractor has completed within the last 10 years. (Note: Additional projects may be included on additional sheets).
 - 1 .1 Project Name & Address: _____
.2 Owner: _____
.3 Reference Person to Contact: _____
.4 Phone Number: _____
.5 Architect/Engineer: _____
.6 Phone Number: _____
.7 Brief Project Description _____
.8 Project Value: _____
.9 Identify specific types of work your firm was responsible for on this project:

 - 2 .1 Project Name & Address: _____
.2 Owner: _____
.3 Reference Person to Contact: _____
.4 Phone Number: _____
.5 Architect/Engineer: _____
.6 Phone Number: _____
.7 Brief Project Description _____

.8 Project Value: _____

.9 Identify specific types of work your firm was responsible for on this project:

3 .1 Project Name & Address: _____

.2 Owner: _____

.3 Reference Person to Contact: _____

.4 Phone Number: _____

.5 Architect/Engineer: _____

.6 Phone Number: _____

.7 Brief Project Description _____

.8 Project Value: _____

.9 Identify specific types of work your firm was responsible for on this project:

3. Key Site Personnel:

.1 Project Superintendent:

.1 Name: _____

.2 History of Employment: (Names of employers and duties of employment over the past fifteen years.) If insufficient space, type requested information on separate sheets.

-
- .3 List and Description of Projects Involving installation of EPDM Roofing: If insufficient space, type requested information on separate sheets.

.2 Roofing Foreman:

- .1 Name: -
- .2 History of Employment:
(Names of employers and duties of employment over the past fifteen years.) If insufficient space, type requested information on separate sheets.

- .3 List and Description of Projects Involving installation of EPDM Roofing: If insufficient space, type requested information on separate sheets.

.3 Roofer 1 (Minimum 2 years working on EPDM Roofing)

- .1 Name: -
- .2 History of Employment:
(Names of employers and duties of employment over the past fifteen years.) If insufficient space, type requested information on separate sheets.

- .3 List and Description of Projects Involving installation of EPDM roofing: If insufficient space, type requested information on separate sheets.

.4 Roofer 2 (Minimum 2 years working on EPDM Roofing)

- .1 Name: _____
.2 History of Employment:
(Names of employers and duties of employment over the past fifteen years.) If insufficient space, type requested information on separate sheets.

- .3 List and Description of Projects Involving installation of EPDM roofing: If insufficient space, type requested information on separate sheets.

*****END*****

NOTE - THIS SPECIFICATION IS WRITTEN BASED ON CARLISLE FLEECEBACK EPDM INSTALLED WITH FLEXIBLE FAST 100 ADHESIVE IN EXTRUDED BEAD FORM. ALTERNATE SYSTEMS FOR FIRESTONE AND CARLISLE USING TWO PART FOAM ADHESIVE UP TO AND INCLUDING INSULATION AND INSULATION COVERBOARD AND MEMBRANE ADHERED WITH BONDING ADHESIVE ARE OUTLINED AT ITEM 1.11 AND ARE TO BE PRICED AS ALTERNATE SYSTEMS ON THE TENDER FORM.

NOTE - THE PHASE 2 ROOF HAS BEEN AWARDED TO McCarthy's ROOFING AND WILL BE COMPLETED IN 2015 PRIOR TO THE START OF THE PHASE 3 ROOF.

PART 1 - GENERAL

1.1 RELATED WORK

- | | | |
|----------------------------------|----|--|
| <u>PERFORMED BY OWNER</u> | .1 | The owner will disconnect power to fans. The roofer is to lift and reset the fans after curbs have been raised to 12" above new roof membrane level. |
|----------------------------------|----|--|

**1.2 RELATED WORK
PERFORMED
BY ROOFER**

- | | |
|----|---|
| .1 | The roofer is to replace roof drains with new drains. |
|----|---|

1.3 REFERENCES

- | | |
|----|--|
| .1 | CSA B35.3-1962 Tapping and Drive Screws (Slotted and Recessed Head, Thread) and Factory Mutual approved. |
| .2 | EPDM Membrane - to D 4637 Type 1 - non reinforced and Type 2 - reinforced. |
| .3 | Canadian Roofing Contractors Association - CRCA Roofing Specifications Manual - latest edition. |
| .4 | CAN/ULC-S704-03 Thermal Insulation, Polyurethane and Polyisocyanurate, Boards, Faced. |

1.4 SHOP DRAWINGS

- | | |
|----|--|
| .1 | Provide product data for each component / material to be provided. |
|----|--|

**1.5 STORAGE AND
HANDLING**

- | | |
|----|--|
| .1 | Provide and maintain dry, off-ground weatherproof storage to comply with manufacturer's written instructions. |
| .2 | Store rolls of FleeceBACK membrane properly supported on sleepers in a dry area. Moisture absorbed by the fleece backing must be removed using a wet vac prior to installation in adhesive.. |
| .3 | Store roll goods on end in a dry area, protected from water. |
| .4 | Store materials containing solvents in a dry, well ventilated area at temperatures between 15 degrees C and 32 degrees C with proper fire and safety precautions. |
| .5 | Remove only in quantities required for same day use. |
| .6 | Place plywood runways over work to enable movement of material and other traffic. |

- .7 Store insulation off the ground and protected from weather with a waterproof covering.

1.6 PROTECTION

- .1 The building will continue to be occupied during the re-roofing process.
- .2 Do not overload any portion of the building by either use of or placement of equipment or storage of debris.
- .3 **FIRE EXTINGUISHERS - THERE IS TO BE NO SMOKING ON THE ROOF:** Provide and maintain 9 kg size ULC labeled for A,B, and C class, stored pressure rechargeable type fire extinguishers with hose and shut off nozzle for fire protection. Frequency - one unit on the roof, close to the work area, for every 6 meters of application length where primers and adhesives are being used.
- .4 Take adequate measures to maintain drains clear of all debris and remove any temporary plugs at the end of each day.
- .5 Protect finished areas of roof where construction traffic is expected using 3/4" plywood with 1" foam insulation as a cushion below.
- .6 New roofing is to be tied into existing roofing in a watertight manner at the end of every day.

1.7 ENVIRONMENTAL REQUIREMENTS

- .1 Do not install roofing when wind chill temperature remains below - 4 degrees C.
- .2 Install roofing on dry deck, free of snow and ice, use only dry materials and apply only during weather that will not introduce moisture into roofing system.
- .3 Drums of Flexible FAST 100 adhesive must be at a minimum of 21 degrees C at time of use.
- .4 Flexible FAST 100 is to be extruded in bead form to reduce over spray. Over spray is to be controlled with hand held screens as required.
- .5 Install sheets in shingle fashion with no laps through drains.

1.8 WARRANTY

- .1 Contractor hereby warrants that EPDM roofing and membrane flashings as follows:
 - .1 30 year Carlisle Total System Warranty covering both labour and material with no dollar limit.
 - .2 Maximum wind speed coverage shall be peak gust of 144 KPH (90 MPH) measured at 10 meters above ground level. Certification is required with tender indicating the manufacturer has reviewed and agreed to this wind coverage.
 - .3 Warranty shall cover leaks caused by accidental puncture and repair of such leaks to the extent of 32 man hours per year.
 - .4 Include with warranty proof of the manufacturer's warranty reserve.

- 1.9 COMPATIBILITY .1 Compatibility between components of roofing system is essential. Provide written declaration to Architect stating that materials and components, as assembled in system, meet this requirement.
- 1.10 UNFORSEEN WORK - EXTRA WORK
- .1 The contractor must have approval from HRM's project manager before proceeding with unforeseen and / or extra work.
- .2 On the Form of Tender provide a price per square foot for replacement of metal decking found to be in poor condition. Cost is to include all labour, equipment and materials.
- .3 On the Form of Tender provide an hourly rate for unforeseen work.
- .4 Contractor must provide HRM with the actual supplier / vendor invoice (s) for materials related to unforeseen work. HRM will pay the contractor at a rate of a 15% mark up above the suppliers' / vendors invoiced price for the Contractor for the material (s) related to unforeseen work.
- 1.11 ALTERNATE ROOFING SYSTEMS - .1 **Carlisle 90 mil unreinforced EPDM fully adhered with 90-8-30A bonding adhesive to the surface of insulation which has been secured with two part foam adhesive to the deck.**
- .1 Existing steel deck.
- .2 Clean all existing vapour barrier off deck with sharp edged scrapers.
- .3 Prime top flutes of deck with Carlisle CCW Cav-Grip Primer.
- .4 5/8" Dens-Deck Prime deck cover board adhered with Carlisle Flexible FAST 100 using one bead per flute. Bead to be applied at 1" diameter and run continuous on each high flute.
- .5 Apply Carlisle 725TR Air & Vapour Barrier with Carlisle CCW Cav-Grip. Seal all perimeters and roof penetrations as per Carlisle detail SU G-08 Option 1.
- .6 Two layers of insulation installed with all joints staggered. First layer of insulation is 2" SecureShield Polyiso Grade 2 and second layer is 2 ½" Carlisle SecureShield HD Composite Roof. Insulation boards to be 4' x 4'.
- .7 Insulation adhered over entire roof with ½" beads of adhesive at 4" c/c.
- .8 Membrane to be 90 mil Carlisle Sure Seal non reinforced EPDM with 6" wide Factory Applied Tape using Sure Seal 90-8-30A Bonding Adhesive.
- .9 Flashing to be Carlisle SecureEDGE 2000 as per base specification.
- .10 Double overlay all splice intersections and membrane overlays. Double wrap all flashings. Roof membrane to be mechanically secured at roof perimeter, all curbs, all large penetrations and inside angle changes. In addition all Carlisle requirements applicable to the required warranty listed below are to be followed:
- .11 Warranty to be 30 year Carlisle Total System Warranty with maximum wind speed coverage for peak gusts of 145 KPH (90 MPH) at 10 meters above grade. Warranty shall provide for a maximum of 32 man hours of labour per year for repair of accidental punctures.

2. **Firestone 90 mil unreinforced EPDM fully adhered with BA-2004(T) bonding adhesive to the surface of insulation which has been secured with two part foam adhesive to the deck.**
 - .1 Existing steel deck.
 - .2 Clean all existing vapour barrier off deck with sharp edged scrapers.
 - .3 Wash deck with 6% white vinegar until no soil comes off on a clean white cloth.
 - .4 Dens DeckPrime deck cover board, thickness 5/8" adhered with I.S.O. Twin Pack using one bead per flute of deck. Bead to be 1" diameter and run continuous on each high flute.
 - .5 Apply V-Force vapour barrier with approved primer.
 - .6 Insulation base layer - 2" ISO 95+ in I.S.O. adhered with Twin Pack in 1/2" diameter beads (spacing 12" c/c field, 6" c/c edge width and 4" c/c corner. Insulation top layer - 2.5" ISOgard HD Composite adhered with I.S.O. Twin Pack adhesive (bead size and spacing same as above.)
 - .7 Edge width to be 12 feet.
 - .8 Membrane to be Platinum EPDM thickness 90 mil.
 - .9 Flashing to be AnchorGard Platinum 6 1/2" wide 0.040" thickness.
 - .10 Double overlay all splice intersections and membrane overlays. Double wrap all flashings. Roof membrane to be mechanically secured at roof perimeter, all curbs, all large penetrations and inside angle changes. In addition all Carlisle requirements applicable to the required warranty listed below are to be followed.
 - .11 Warranty 30 year AnchorGard Platinum with a wind speed of 145 KPH (90 MPH) at 10 meters above grade. Warranty shall also provide for repair of accidental punctures for the life of the warranty.

PART 2 - PRODUCTS

- | | | |
|--|----|--|
| <u>2.1 DECK COVER BOARD</u> | .1 | Fiberglass Mat Faced Gypsum Roof Board - DensDeck Prime. Thickness 5/8" |
| <u>2.2 VAPOR BARRIER</u> | .1 | Carlisle 725TR Air & Vapour Barrier. A 40 mil composite consisting of 35 mils of self-adhering rubberized asphalt laminated to 5-mil polyethylene film with adhesion textured surface. |
| <u>2.3 MEMBRANE</u> | .1 | Carlisle Sure-Seal FleeceBACK EPDM, membrane, thickness 145 mil. 10 feet wide by 50 feet or 100 feet long with factory applied splice tape along length of the membrane. |
| <u>2.4 INSULATION</u> | .1 | Base layer to be 2" SecureShield Grade 2, Top layer to be 2.5" Secure Shield HD Composite Grade 2. Both as supplied by Carlisle SynTec. |
| | .2 | Size 4' x 4' square edge. |
| | .3 | Sump insulation at drains by 1". |
| <u>2.5 SEALERS
ADHESIVES &
CLEANERS</u> | .1 | As supplied by Carlisle and specifically formulated for the purpose. |

<u>2.6 METAL FLASHING</u>	.1	Carlisle SecureEDGE 2000
	.2	Model 2070 - 7".width - Standard
	.3	0.040 Kynar Coated Aluminum
	.4	Color - to match existing used on Phase 1
<u>2.8 FASTENERS</u>	.1	#12 FM approved screws for securing wood blocking to existing deck and parapet and securing pieces of blocking to each other.
	.2	Screws and plates as supplied by Carlisle for securing membrane to perimeter blocking.
	.3	Epoxy adhesive to be Hilti HIT HY 150 or Redhead Epcon Ceramic 6.
<u>2.9 ROOF DRAINS</u>	.1	Replace all roof drains with new Zurn Z-100 drains complete with sump receiver, under deck clamps and metal dome.
<u>2.10 PLYWOOD AND WOOD</u>	.1	Wood for blocking to be No. 1 or better S-P-F NOT PRESSURE TREATED.
	.2	Plywood to be softwood plywood - select.
<u>2.11 PLUMBING VENT FLASHING</u>	.1	Pre-formed flashings by Carlisle.
<u>PART 3 - EXECUTION</u>		
<u>3.1 WORKMANSHIP</u>	.1	Do roofing work in accordance with the printed instructions of Carlisle Syn Tec.
<u>3.2 REMOVALS</u>	.1	Remove the existing roof system to bare steel deck. Dispose of all debris legally off site.
<u>3.3 PROTECTION</u>	.1	Cover walls and adjacent work where materials are hoisted or used.
	.2	Locate dumpster where directed by the owner.
	.3	Use warning signs and barriers. Maintain in good order until completion of work.
	.4	Use measures as required to ensure there is no overspray beyond the confines of the roof.
	.5	Ensure that all roof drains remain operation from the start of the project until completion. Temporarily lower existing drains to the level of the air vapour barrier and reconnect with MJ coupling so a blocked drain line cannot back up and drain into the building.
	.6	Protect roof from traffic and damage. Comply with precautions deemed necessary by Architect.

- .7 At end of each day's work or when stoppage occurs due to inclement weather seal new roof membrane and or new vapour barrier acting as a temporary roof to the existing membrane to provide protection for completed work and the interior of the building.

3.4 EXAMINATION ROOF DECKS

- .1 Strip existing roof off to bare steel deck and dispose of all material legally off site.
- .2 Examine roof decks and immediately inform Architect in writing of defects.
- .3 Remove all existing vapour barrier from high flutes of deck with sharp edged scrapers and prime high flutes with Cav-Grip Primer.
- .4 Prior to commencement of work ensure:
 - .1 All roof edge blocking has been installed.
 - .2 New roof drains as specified have been installed as detailed to accommodate a 1" sump and allow the vapour barrier to seal to the sump receiver and the roof membrane to the vapour barrier.
 - .3 Fan curbs have been raised to 12" above new roof level.
 - .4 Service boxes and new machine sleepers have been constructed where noted.

3.5 INSTALLATION OF DECK COVER BOARD - STEEL DECK

- .1 Clean top flutes of deck with a sharp edged scraper to remove all adhered roofing materials to leave a solid surface. Blow deck flutes clean.
- .2 Prime top flutes with Carlisle Cav-Grip primer.
- .3 Install a continuous bead of FAST 100 adhesive on every high flute and install deck cover board with the length of the sheet running at right angles to the deck flutes and ends of boards supported on top flutes. Bead diameter to be 1".

3.6 INSTALLATION OF VAPOUR BARRIER ON DRYWALL- STEEL DECK

- .1 Prime drywall and let primer dry.
- .2 Install Carlisle 725 Air and Vapour Barrier self adhesive membrane free of voids and fish mouths to the 5/8" Dens Deck Prime deck cover board. Ensure that a continuous seal is made at all perimeters, curbs, penetrations and roof drains.
- .3 Seal all plumbing vent pipes to the air vapour barrier with a finger flashing made from 725 membrane and a bead of pourable sealer.

3.7 INSTALLATION OF INSULATION

- .1 Apply beads of Flexible FAST 100 adhesive spaced at 4" c/c on the surface of the Carlisle 725 Air and Vapour Barrier and set the first layer of insulation into the adhesive.

- .2 Adhere the second layer of insulation to the first layer using beads of Flexible FAST 100 adhesive spaced at 4" c/c with all joints staggered from those in the first layer.
- .3 Walk all boards into place and temporarily ballast with 5 gallon buckets of roof gravel until adhesive has achieved maximum adhesion.

3.8 INSTALLATION OF MEMBRANE

- .1 Fully adhere FleeceBACK membrane to insulation with Flexible FAST 100 adhesive extruded in beads at a spacing of 4" c/c on the substrate only.
- .2 Roll the membrane into the wet adhesive once it has foamed up and roll the membrane with a weighted (100 to 150 pound) steel roller.
- .3 Complete membrane laps, splices and details according to Carlisle printed instructions.
- .4 Flash walls and curbs with cured membrane. Continue the deck membrane as wall flashing where practicable.

3.9 TERMINATION BAR

- .1 Secure termination bar at a maximum of 6" c/c using 1/4" Zamac pin bolts or screws as applicable.

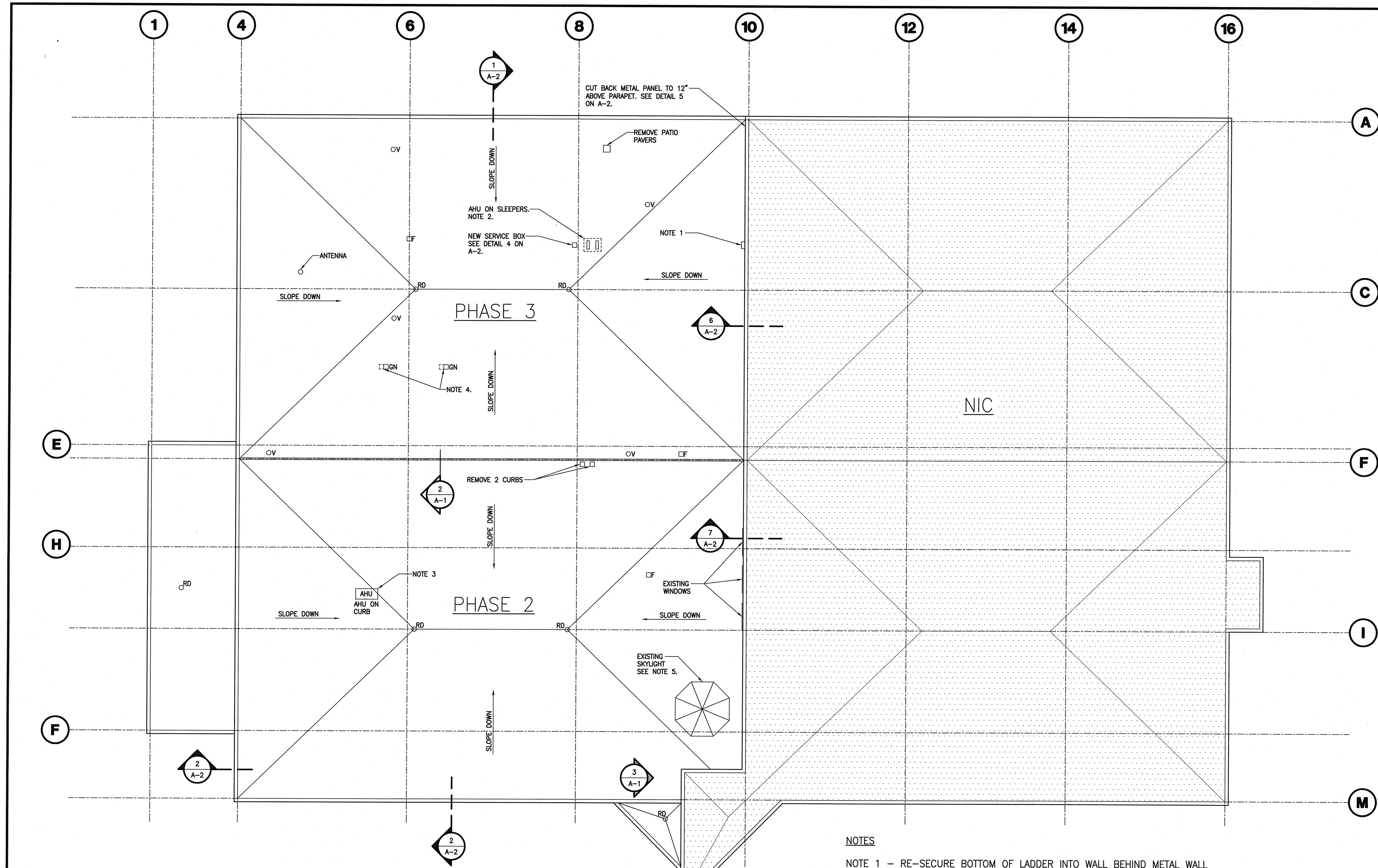
3.10 CLEANING

- .1 Remove overspray from finished surfaces.
- .2 In areas where finished surfaces are soiled by work of this section consult manufacturer of surfaces for cleaning advice and comply with their documented instructions.
- .3 Repair or replace defaced or disfigured finishes caused by work of this section.

3.11 FIELD QUALITY CONTROL

- .1 Periodic site review of roofing application will be carried out by Architect.

END OF SECTION

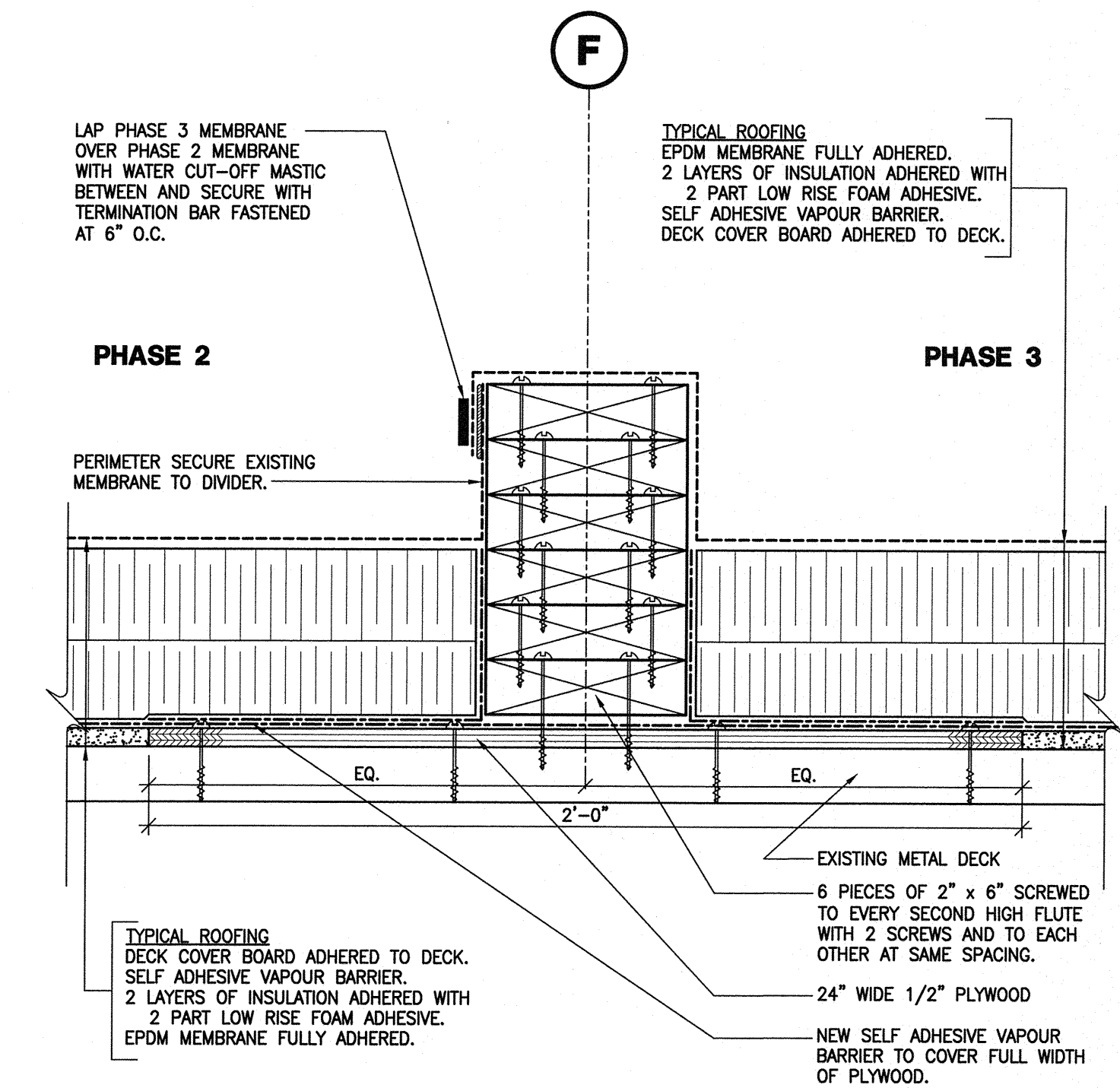


- LEGEND**
- OV — PLUMBING VENT
 - CF — FAN
 - IGN — GOOSE NECK VENT — REMOVE AND REINSTALL
 - RD — ROOF DRAIN. NEW AS PER SPEC.
 - AHU — AIR HANDLING UNIT.

1 ROOF PLAN

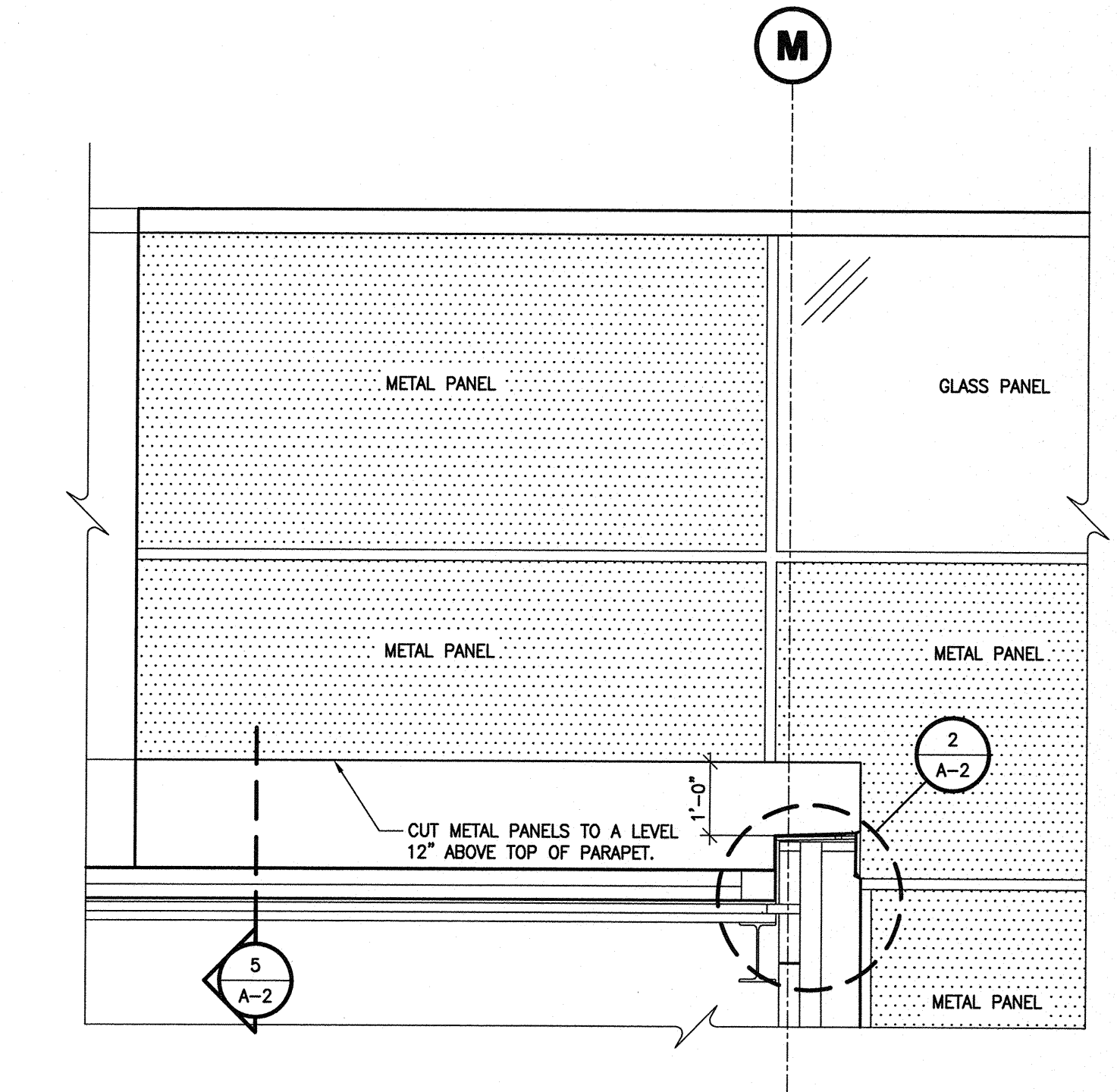
0 0.5' 1' 2' 3'

- NOTES**
- NOTE 1 — RE-SECURE BOTTOM OF LADDER INTO WALL BEHIND METAL WALL WITH 2 NEW BRACKETS.
- NOTE 2 — OWNER WILL HAVE THE AHU DISCONNECTED. ROOFER TO BUILD NEW SERVICE BOX AND PROVIDE TWO 6"x6" WOOD SLEEPERS 6 FT. LONG. EACH SLEEPER TO SET ON 2-24"x24" PATIO PAVERS WITH 2" CUSHION OF ROOF MATE UNDER. OWNER WILL HAVE AHU RESET AND RECONNECTED.
- NOTE 3 — AHU TO REMAIN IN PLACE. NEW ROOF MEMBRANE TO BE INSTALLED OVER EXISTING MEMBRANE AND TIGHT UP TO THE UNDERSIDE OF THE UNIT WITH TERMINATION BAR ALL THE WAY AROUND.
- NOTE 4 — GOOSE NECK VENTS TO REMAIN IN PLACE. METAL FORM TO BE PROVIDED TO SPAN FROM TOP OF CURB TO SIDE OF VENT TO SUPPORT NEW EPDM. MEMBRANE TO SEAL TO METAL DUCT AND BE SECURED WITH TERMINATION BAR.
- NOTE 5 — SKYLIGHT TO REMAIN IN PLACE. EXTEND NEW EPDM UP ALL SIDES OF CURB TIGHT TO SKYLIGHT FRAME AND SEAL WITH WATER CUT-OFF MASTIC BEHIND MEMBRANE AND TERMINATION BAR SECURED AT 6" O.C.



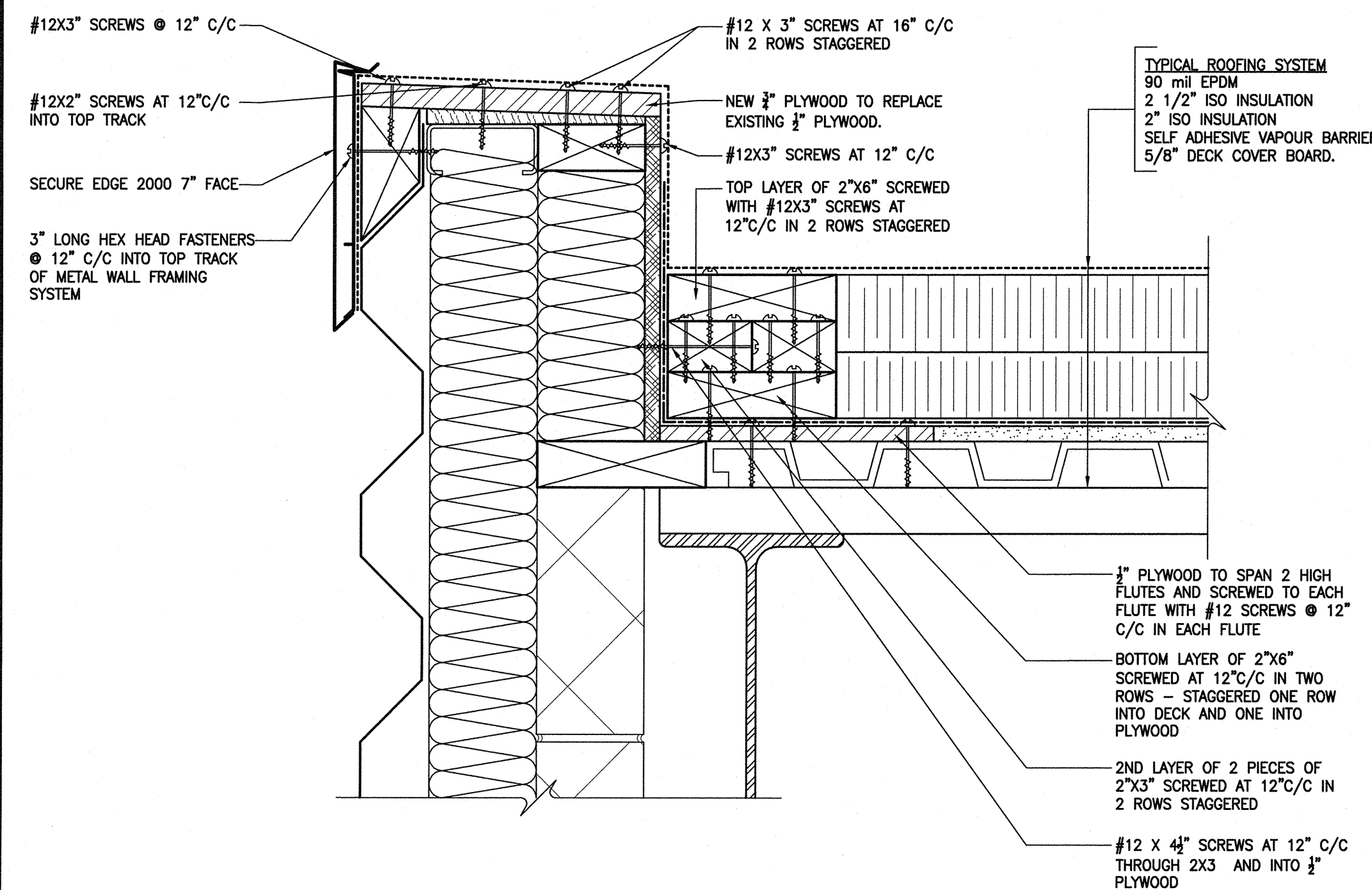
2 SECTION DETAIL — ROOF DIVIDER

0 1" 2" 4" 8"



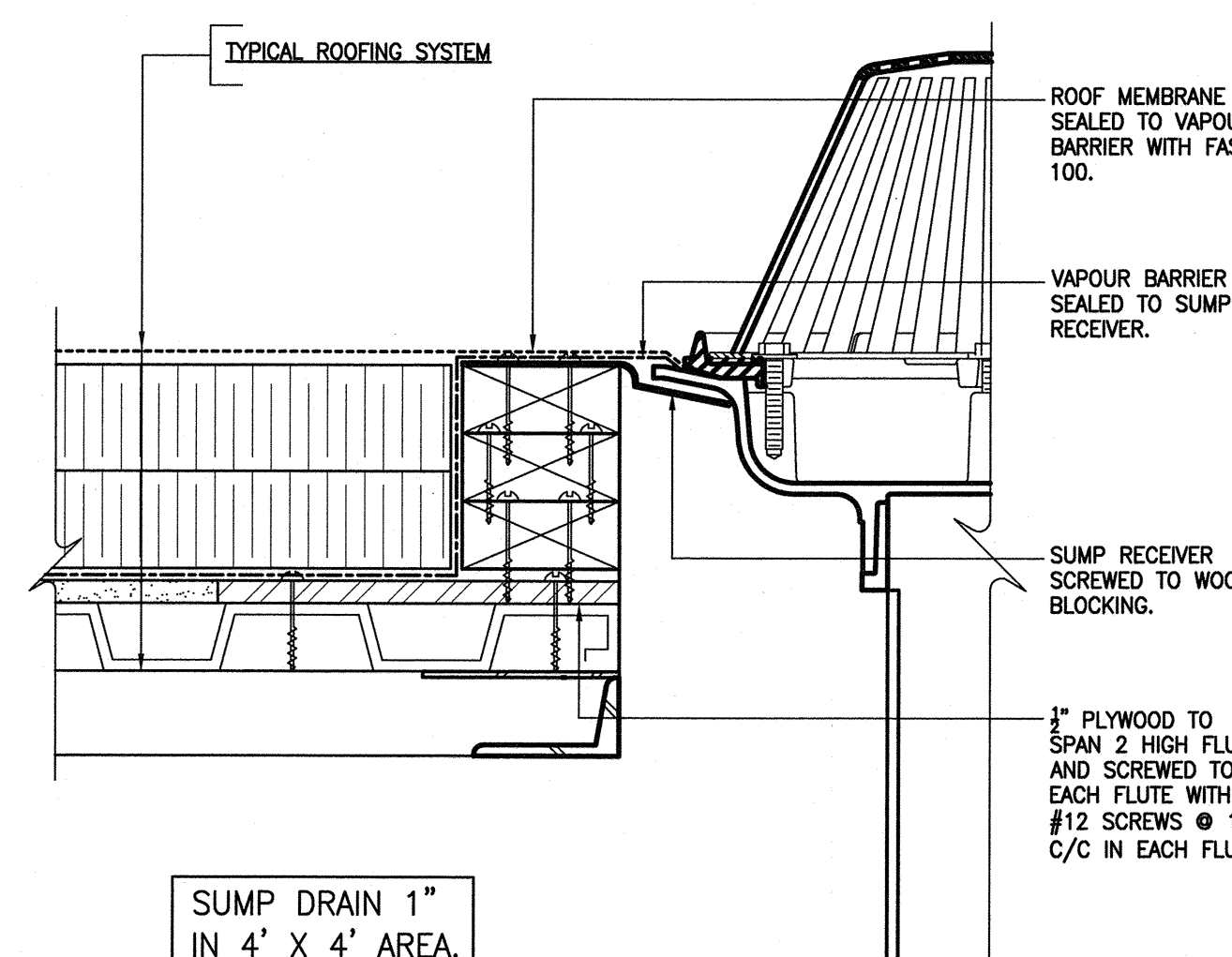
3 ELEVATION — METAL PANELS CUT AT PARAPET

0 .5 1 2 4 FEET



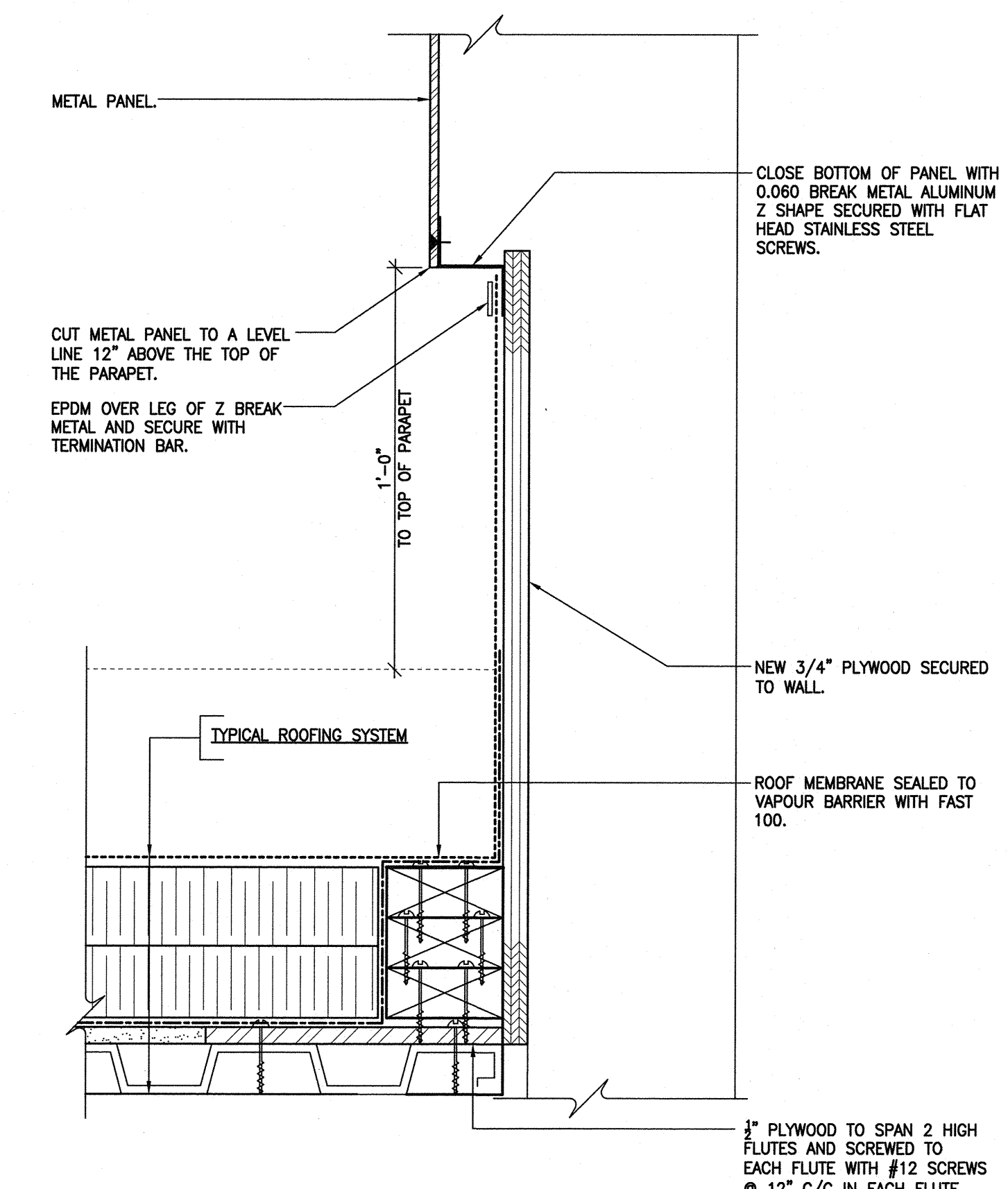
1 SECTION DETAIL - ROOF EDGE AT METAL WALL

0 1" 2" 4" 8"



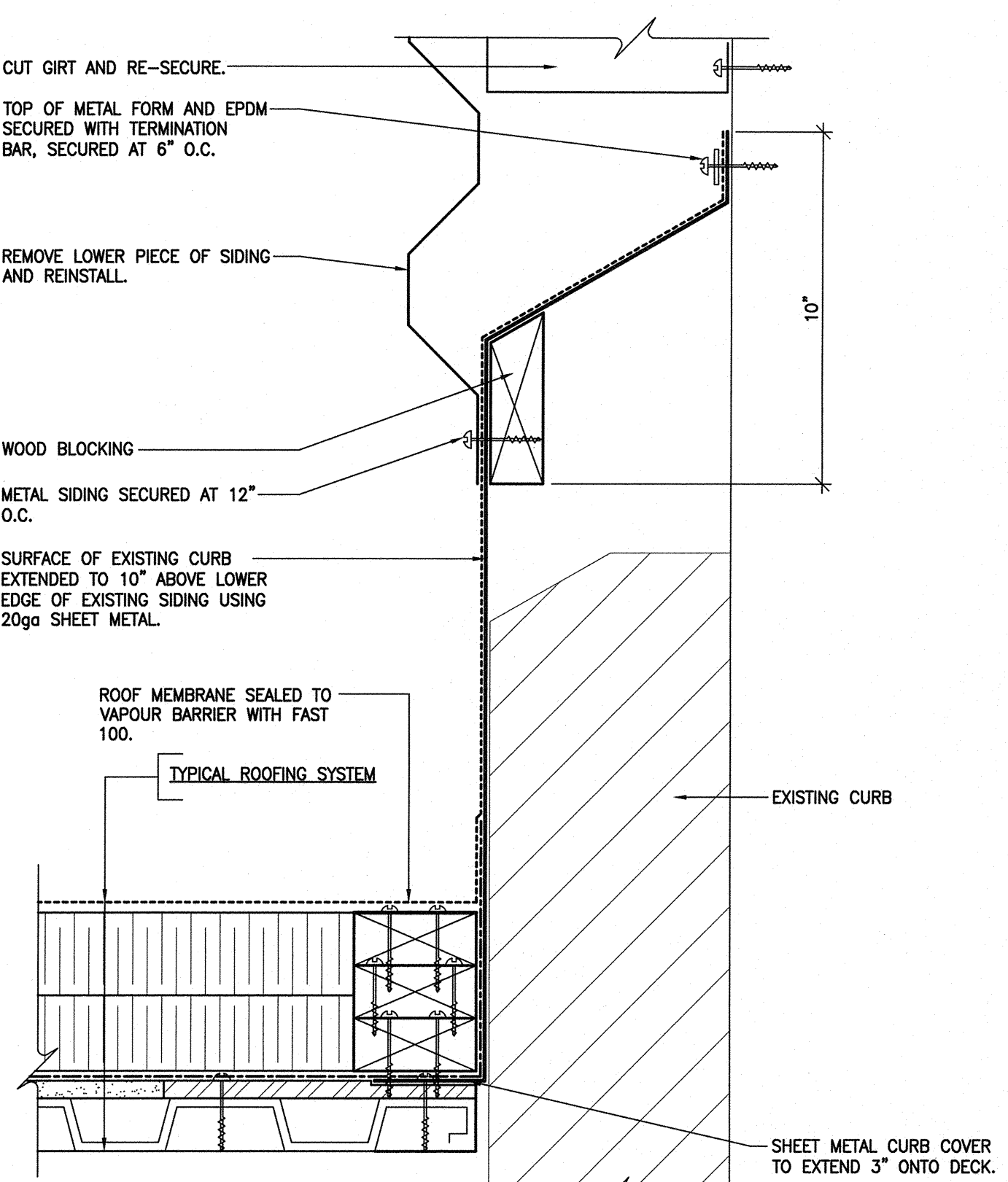
3 SECTION DETAIL - ROOF DRAIN

0 1" 2" 4" 8"



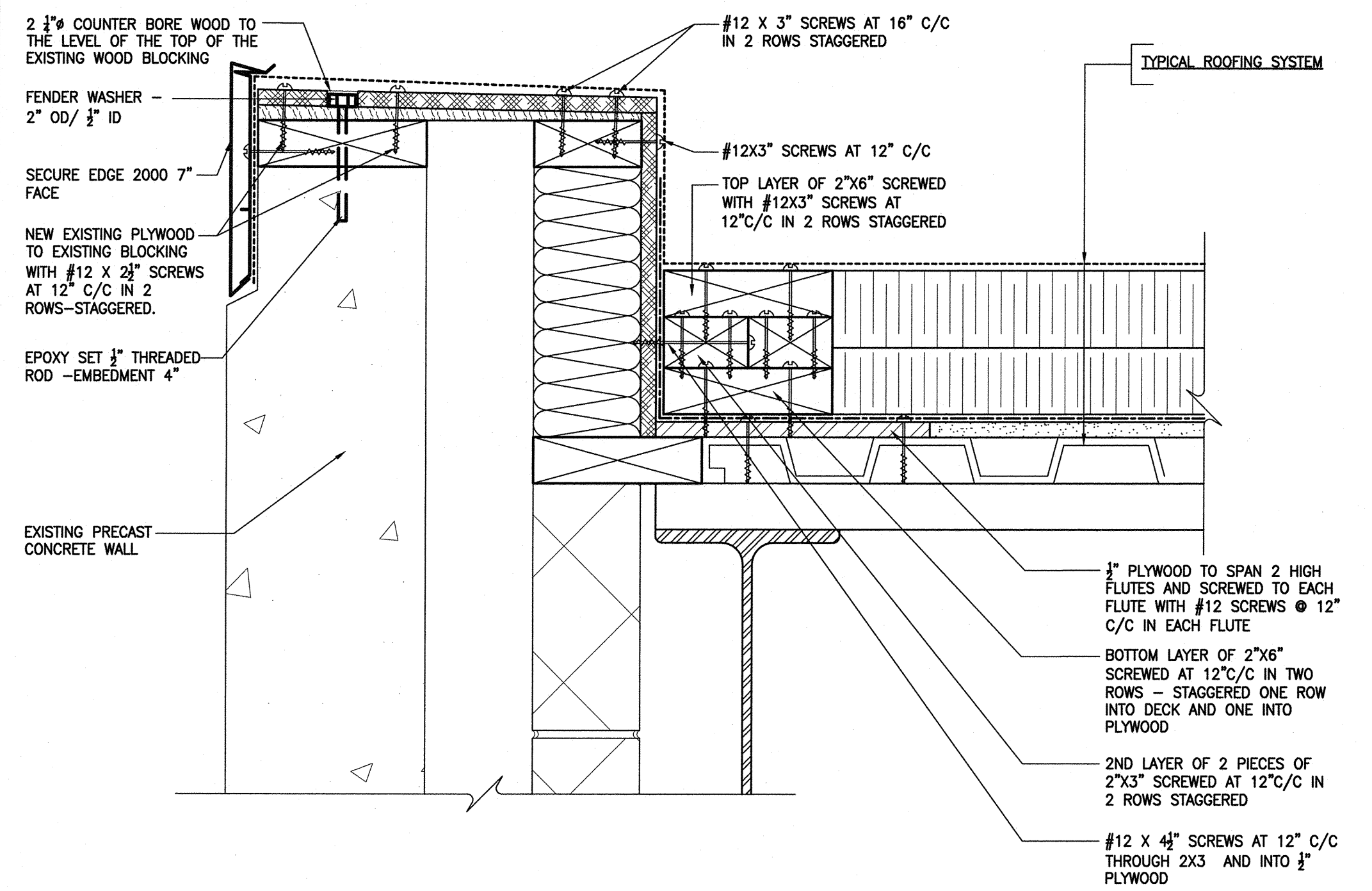
5 SECTION DETAIL - AT METAL WALL PANEL

0 1" 2" 4" 8"



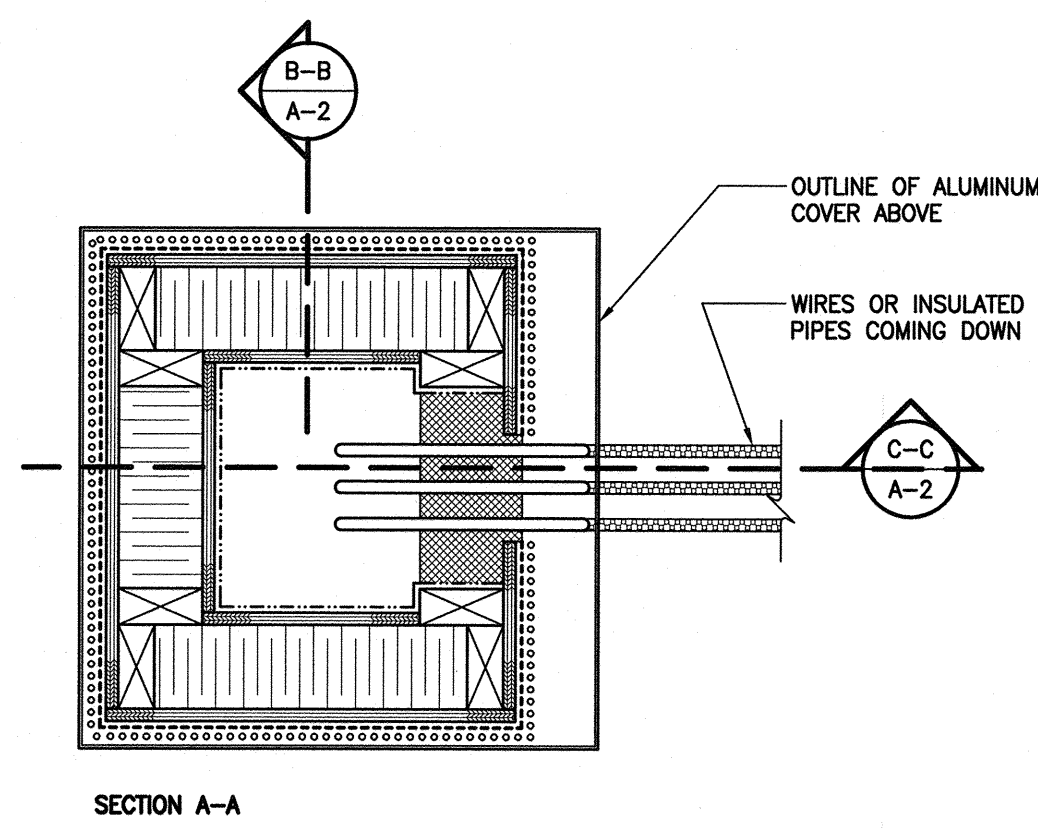
6 SECTION DETAIL - AT HIGHER METAL WALL

0 1" 2" 4" 8"



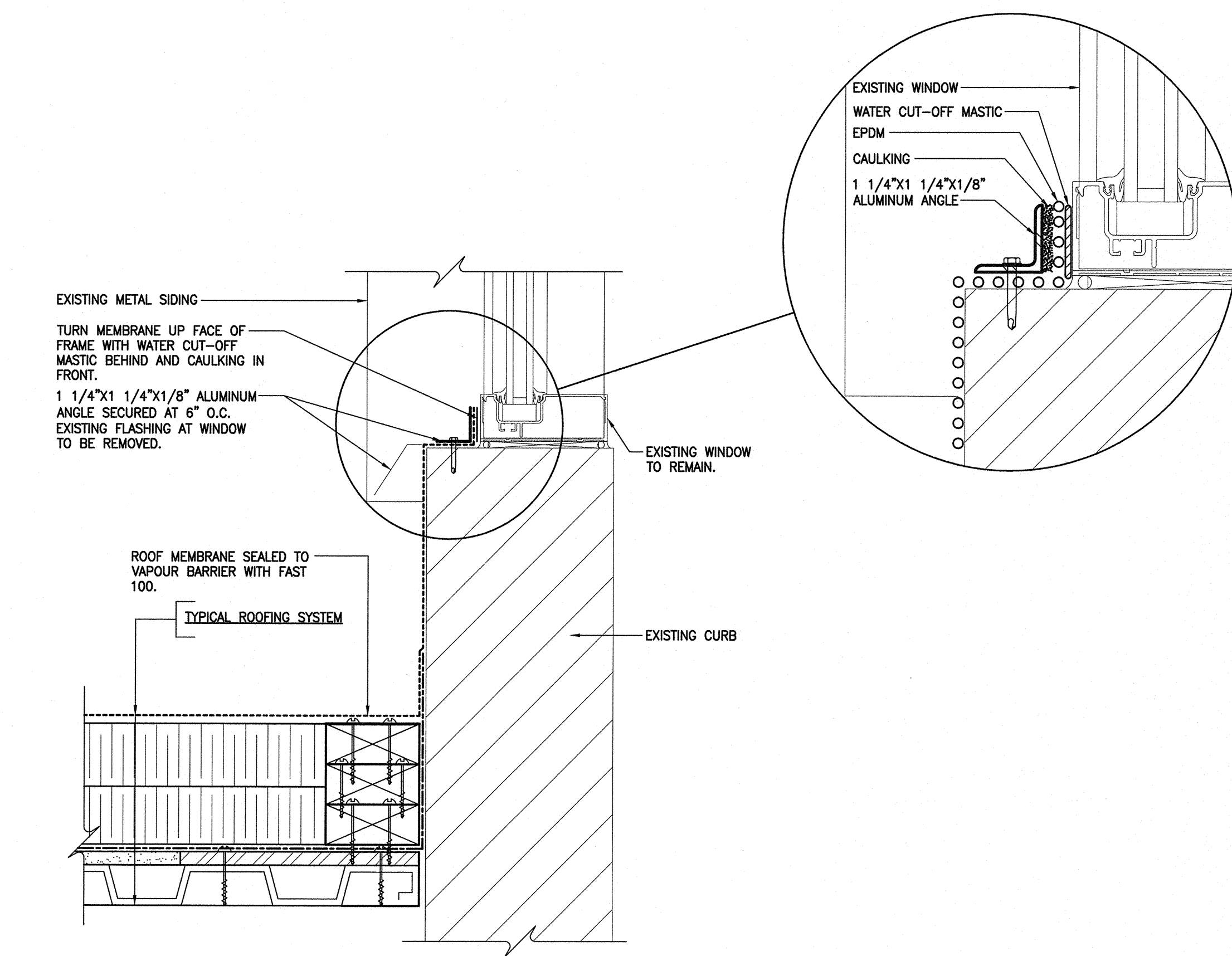
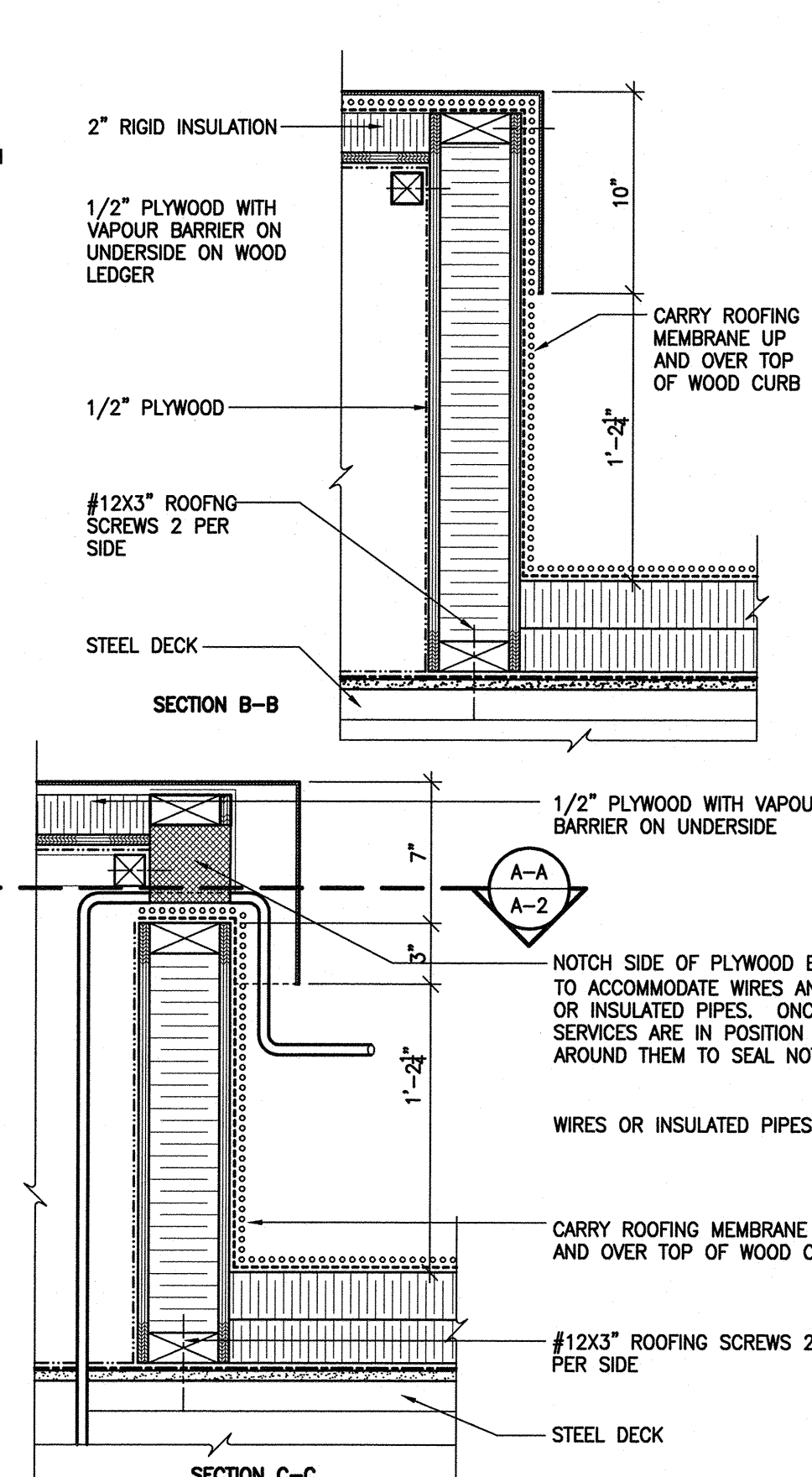
2 SECTION DETAIL - ROOF EDGE AT PRECAST CONCRETE WALL

0 1" 2" 4" 8"



4 DETAILS - SERVICE BOX

0 2" 4" 8" 16"



7 SECTION DETAIL - AT WINDOW SILL

0 1" 2" 4" 8"