



201 Park Street Warehouse
Roof Replacement
Project #2025-010

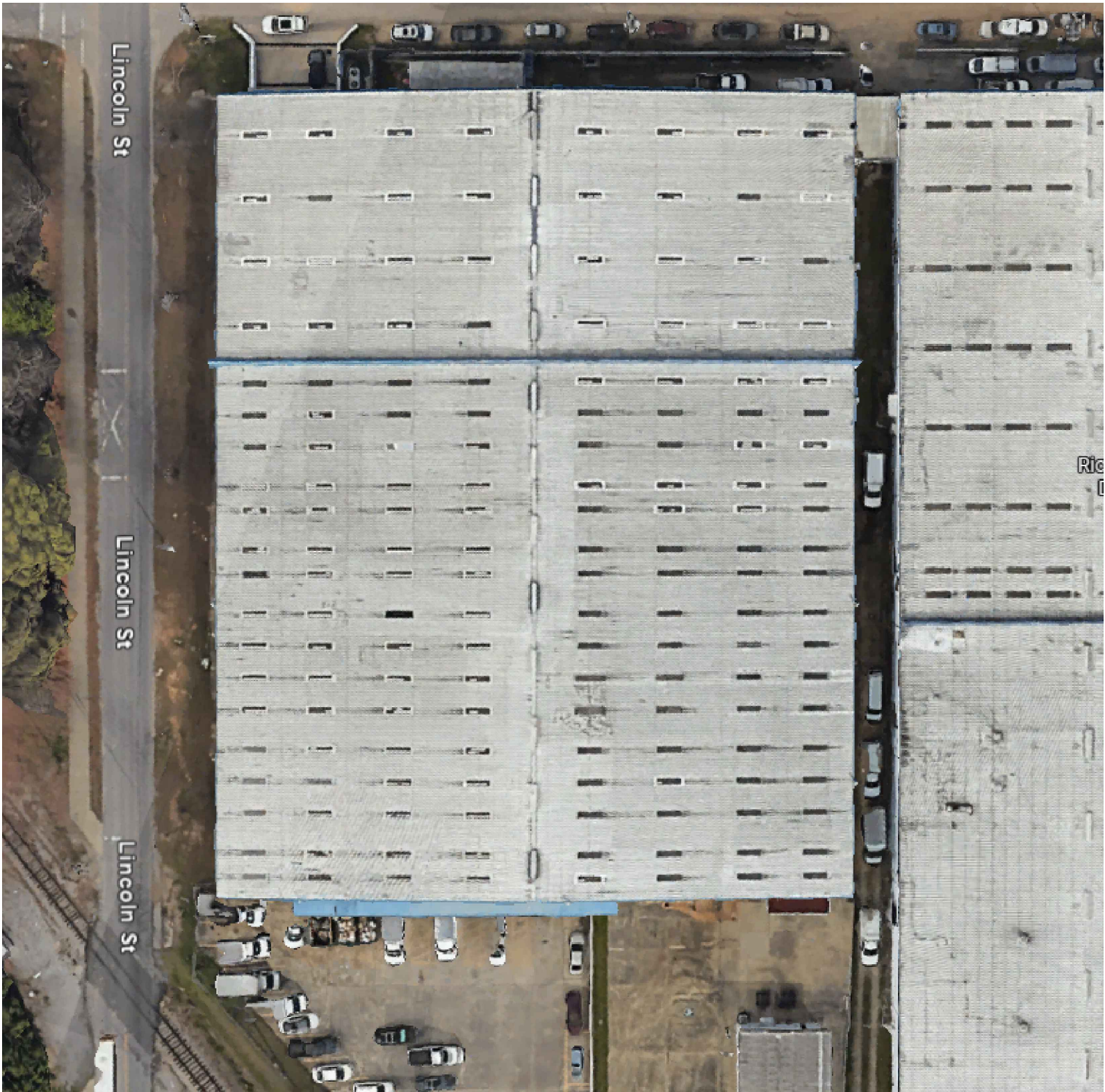
FORM F3-A RE-ROOFING ANALYSIS FORM
PROJECT: 201 Park Street Roof Replacement DISTRICT: Richland School District One Submittal: ☐ SCHEMATIC ☒ DESIGN DEVELOPMENT ☒ CONSTRUCTION DOCUMENT
DATE: 08/07/2024 CODE & EDITION: 2018 ICC GUIDE EDITION: 2020 Planning and Construction Guide

BASIC RE-ROOFING CODE INFORMATION							
DESIGNATED AREAS OF THE BUILDING		Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
CONSTRUCTION CLASSIFICATION TYPE (IBC 602)		Type II-A					
Roof Construction including supporting beams & joists (IBC Table 601)	As Required, Hrs.	1					
	As Designed, Hrs.	1					
	Testing Agency & Design No. (UL, FM, etc.)	UL					
	Wall/Partition Code	N/A					

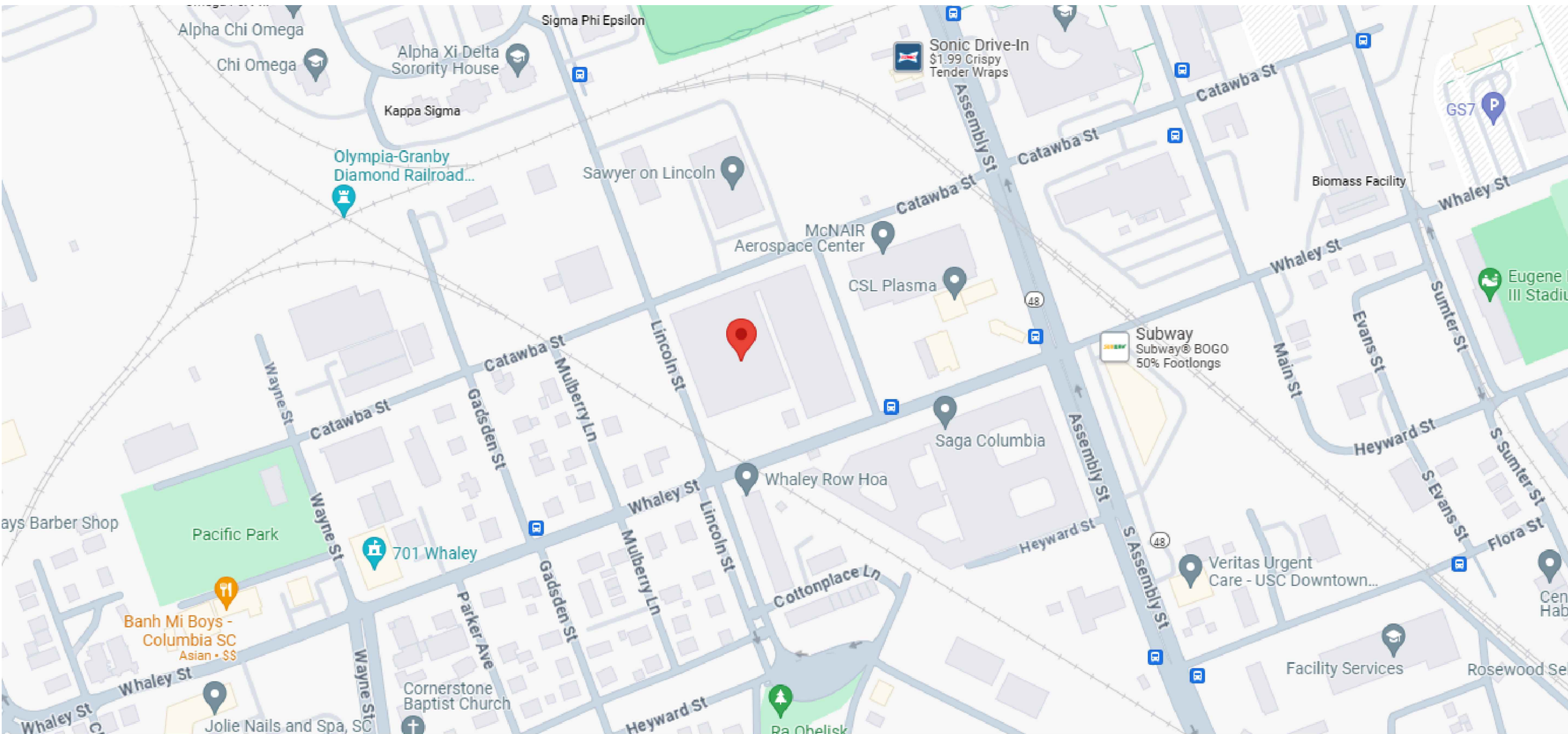
STRUCTURAL DESIGN INFORMATION, BUILDING		
WIND LOADS	Analysis Procedure (ASCE 7 or IBC 1609.6)	ASCE 7
	Basic Wind Speed, MPS (3 sec. gust IBC Fig 1609	V ₃₃ = 120
	Exposure Category	Cat. B
	Wind Importance Factor (ASCE 7 Table 6.1)	I _w = 1.15
	Internal Pressure Coefficient (ASCE 7)	GCP = +/- .18
	External Pressure Coefficient (ASCE 7)	GCP = Field = -1.00 Perimeter = -1.8 Corners = -2.8

Drawing Index:

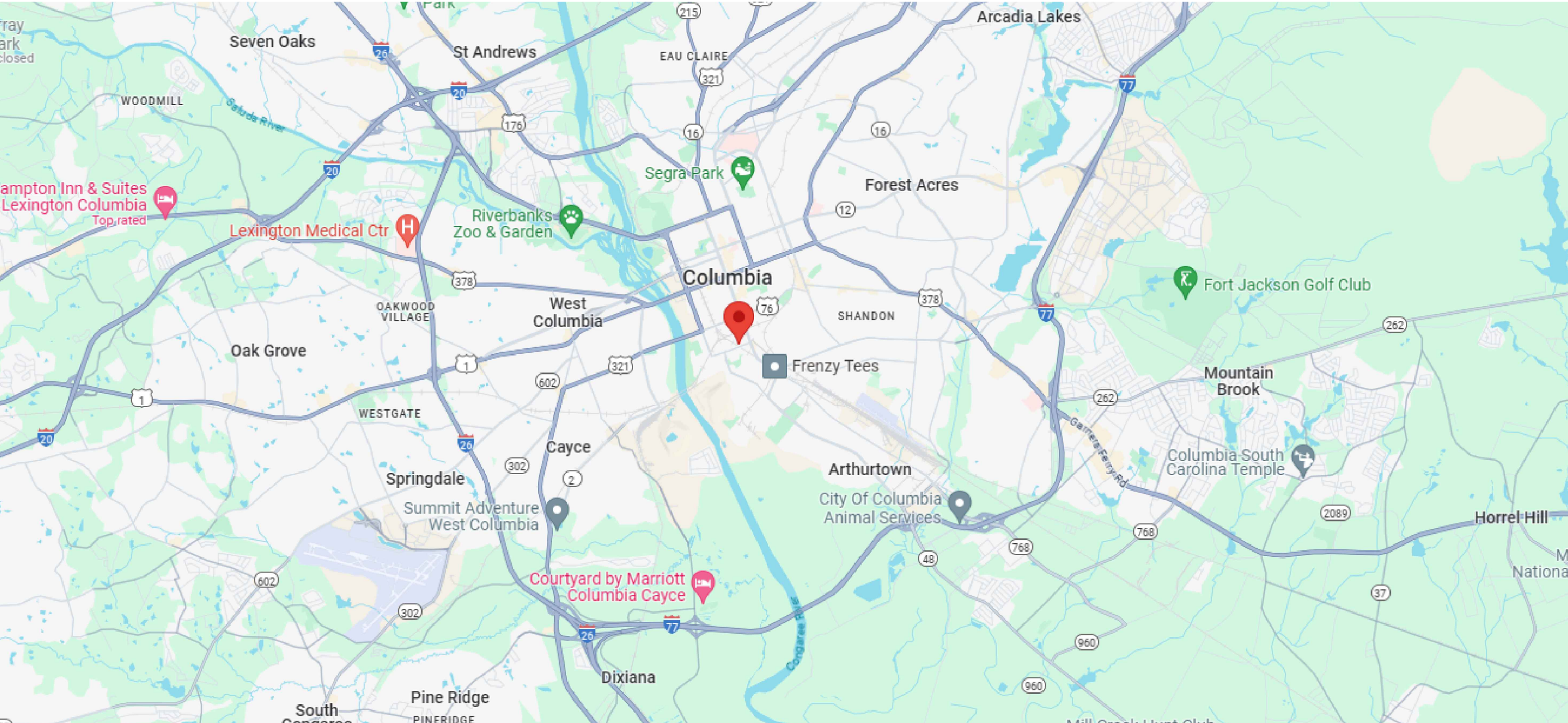
- T-1 Title Page
- N-1 Notes Page
- R-1 Existing Roof Plan
- R-2 New Roof Plan
- SM-1 Sheet Metal Details
- SP-1 Single Ply Details 1
- SP-2 Single Ply Details 2



Satellite View of 201 Park Street, Columbia, SC 29201

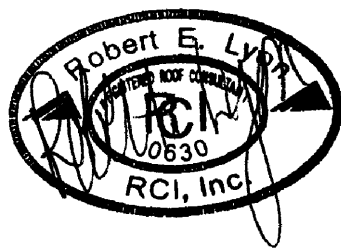


201 Park Street, Columbia, SC 29201 Building Location



201 Park Street, Columbia, SC 29201 Regional Map

Notes:



REV:	DESCRIPTION:	BY:	DATE:
STATUS: ISSUE			

L&A
Lyon & Associates, LLC
Roofing and Waterproofing Consultants

CLIENT:	Richland County School District #1 201 Park Street Columbia, SC 29201
CONSULTANT:	Lyon & Associates, LLC PO Box 722 White Rock, SC 29177

SITE:	201 Park Street Warehouse		
TITLE:	Title Page		
SCALE:	NTS	DATE:	03/2024
PROJECT NO:		DRAWN:	MC
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SCOPE OF WORK (ABBREVIATED):

The Work of Project is defined by the Contract Documents and consists of the following (Numbered sequence is not necessarily indicative of workflow):

1. General:
- a. Contractor is to verify that all gutters and downspouts are free of debris and free flowing prior to the start of work and at the end of the project. Owner and Consultant are to be notified of any drainage related issues.

2. Roof Replacement

a. Remove existing skylights as indicated on "Existing Roof Plan". Install new metal roof panels in skylight locations. New metal panels to span 3 purlins.

b. Remove large ridge vents. Temporarily cover openings until new ridge vent detail is installed.

c. Remove existing gutters and downspouts.

d. Install wood nailers at roof perimeter to match final insulation thickness.

e. Install loose laid factory bevel cut polyisocyanurate insulation. Thickness to match metal panel rib height.

f. Install second layer of 2" polyisocyanurate insulation over flute fill insulation.

g. Install ½" gypsum coverboard with facers approved for use in this application by roof system manufacturer.

h. "Gang" screw all insulation and cover board components into existing metal roof panels.

i. Install induction welded TPO roof membrane secured to purlins.

j. Wrap firewall with TPO membrane and install new metal coping cap.

k. Raise existing pipes as necessary to achieve 8" height above final roof surface.

l. Install new gutters and downspouts.

m. Install new metal roof edges in compliance with ANSI-SPRI ES-1.

n. After all work is complete, thoroughly clean roof surface of debris and foreign matter.

o. Contractors are responsible for all disconnection and reconnection of applicableequipment and are instructed to use only qualified, licensed personnel where applicable.

p. Provide owner with a manufacturer's 20-year non prorated labor and material warranty.

CONSTRUCTION NOTES

1. SUBSTRATE SHALL BE INSPECTED AND REPAIRED AS SPECIFIED PRIOR TO SYSTEM INSTALLATION.
2. PROVIDE ALL NEW WOOD PRODUCTS AS REQUIRED TO PROVIDE FOR INDICATED DETAILS AND TO MEET SPECIFIED REQUIREMENTS. CONTRACTOR MAY REUSE EXISTING CARPENTRY WHICH ARE SOUND AND COMPATIBLE WITH THE NEW WORK SPECIFIED. EXISTING DAMAGED OR DETERIORATED CARPENTRY NOT OTHERWISE INDICATED FOR REPLACEMENT SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH SECTION 01 21 10, UNIT PRICES AND ALLOWANCES, AND SECTION 06 10 00, ROUGH CARPENTRY.
3. CARPENTRY THICKNESSES AS REQUIRED TO MATCH BUILDING CONDITIONS. STACKED CONFIGURATIONS AND VARYING THICKNESSES MAY BE REQUIRED TO MATCH INSULATION THICKNESSES WITHIN A 1/4" TOLERANCE IN ALL DIRECTIONS.
4. ROOFING AND SHEET METAL WORK SHALL BE IN STRICT ACCORDANCE WITH THE CONTRACT REQUIREMENTS. ANY CLARIFICATIONS OR ADDITIONAL INFORMATION SHALL BE IN ACCORDANCE WITH PUBLISHED GUIDELINES OF NRCA ROOFING AND WATERPROOFING MANUAL (5th EDITION) AND SMACNA ARCHITECTURAL SHEET METAL MANUAL (7th EDITION).
5. ALL FLASHING TERMINATIONS SHALL HAVE CONFORMING WATERTIGHT SHEET METAL CLOSURES, AND WATERPROOF UNDERLAYMENT ALL SHEET METAL BELOW W/ SEALED LAPS.
6. SPECIFIC AND TYPICAL DETAILS ARE PROVIDED W/ GENERIC TYPE DECK SHOWN. TYPICAL DETAILS APPLY TO ALL INSTANCES WHERE SIMILAR CONDITION OCCURS.
7. ALL WORK SHALL BE CONDUCTED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH SPECIFIED REQUIREMENTS.
8. INSTALL TAPERED CRICKETS TO PROVIDE POSITIVE DRAINAGE ON THE UPSLOPE SIDE OF ALL NON-ROUND PENETRATIONS GREATER THAN 24" WIDE.
9. WALKPADS ARE REQUIRED AT ALL ROOF ACCESS POINTS AND AROUND ALL MECHANICAL EQUIPMENT. INSTALL EACH WALKPAD 12" FROM THE NEXT AND 12" AWAY FROM WALLS AND CURBS.

PROTECTION NOTES:

1. FACILITIES MAY BE OCCUPIED DURING CONSTRUCTION. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE FACILITY, CONTENTS, AND OCCUPANTS.
2. THE BUILDING SHALL BE WATERTIGHT AT THE END OF EACH DAY'S WORK AND WHEN INCLEMENT WEATHER THREATENS.
3. CONTRACTOR SHALL PROTECT THE BUILDING EXTERIOR AND GROUNDS INCLUDING SURFACES, GRASS, PLANTS, TREES, SHRUBS, AND OTHER LANDSCAPING. THE CONTRACTOR SHALL RETURN THE SITE AND ANY DAMAGED ITEMS TO THEIR PRIOR TO PROJECT START.
4. ANY SURFACES STAINED, MARRED, OR DAMAGED BY THE WORK OR THE CONTRACTOR, THE CONTRACTOR SHALL RETURN THE SITE AND ANY DAMAGED ITEMS OF THE SITE OR FACILITY TO ORIGINAL OR BETTER CONDITION AND MATCH ADJACENT SURFACES.
5. WORK SHALL BE SEQUENCED TO MINIMIZE TRAFFIC ON THE NEW WORK.

GENERAL NOTES:

1. PRIOR TO PERFORMING WORK, CONTRACTOR SHALL INSPECT DECK SURFACES AND SUBSTRATE CONDITIONS. PROVIDE FOR THE SAFETY AND PROTECTION OF WORKERS AND OCCUPANTS THROUGHOUT THE COURSE OF WORK.
2. ALL BUILDING DIMENSIONS, EXISTING CONDITIONS, ITEM LOCATIONS, AND SIZE AND QUANTITY OF PENETRATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BID.
3. LAYDOWN / STORAGE AREA IS LIMITED AND SHALL BE AS APPROVED BY THE OWNER.
4. SITE SHALL BE CLEANED ON A DAILY BASIS AND SECURED AT THE END OF EACH WORK DAY.
5. BUILDING ACCESS SHALL BE COORDINATED WITH THE OWNER AND SHALL BE ONLY AS REQUIRED TO ACCOMPLISH CONTRACT WORK.

MECHANICAL/ELECTRICAL/PLUMBING COORDINATION NOTES:

1. DISCONNECT AND REMOVE ALL ROOFTOP MECHANICAL AND ELECTRICAL EQUIPMENT AS NECESSARY TO COMPLETE THE WORK AND REINSTALL UPON COMPLETION OF WORK. PROVIDE FOR EXTENSION AND MODIFICATION OF SERVICE, UTILITIES, INTERIOR COMPONENTS AND ALL CONNECTIONS AS NECESSARY TO ACCOMMODATE NEW HEIGHTS AND LOCATIONS.
2. ANY CABLES, WIRES, SATELLITE OR MICROWAVE DISHES, ANTENNAS AND ROOFTOP MECHANICAL, ELECTRICAL OR ELECTRONIC COMPONENTS SHALL BE

MECHANICAL/ELECTRICAL/PLUMBING COORDINATION NOTES (CONT'D):

3. TEMPORARILY DISCONNECTED AND RECONNECTED BY QUALIFIED CRAFTSMEN. THIS INCLUDES ROOF AREAS, FLASHINGS AND ADJACENT WALL AREAS.
4. EXTEND/RAISE ALL PENETRATIONS, CURBS, MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS TO A MINIMUM 8" ABOVE THE FINISHED ROOF SURFACE.
5. A MINIMUM DISTANCE OF 12 INCHES SHALL EXIST BETWEEN ANY AND ALL PENETRATIONS AND/OR TERMINATIONS.
6. USE ROUND SHAPES TO CONSTRUCT EQUIPMENT SUPPORTS AND DO NOT USE PITCH PANS.
7. INSTALL NEW PVC CONDENSATE LINES WITH "P-TRAPS" ROUTED INTO DRAINS/GUTTERS FROM HVAC UNITS.
8. ANY LOCATIONS/CONDITIONS WHERE THE ABOVE REQUIREMENTS CANNOT BE MET, SHALL BE BROUGHT TO THE ATTENTION OF THE ROOF CONSULTANT/ENGINEER OR OWNER IMMEDIATELY.

DEMOLITION NOTES:

1. REMOVE EXISTING SYSTEMS IN THEIR ENTIRETY DOWN TO THE EXISTING DECK IN INDICATED AREAS OF ROOF REPLACEMENT. AVOID DAMAGING THE ROOF DECK. NO MORE ROOFING SHALL BE REMOVED THAN CAN BE REPLACED BY THE COMPLETE NEW ROOF SYSTEM THE SAME DAY.
2. BUILDING ENVELOPE DEMOLITION IS REQUIRED TO THE VARIOUS COMPONENTS AND SYSTEMS TO COMPLETE THE REQUIRED REPAIRS, MODIFICATIONS AND REPLACEMENTS OF THIS PROJECT.
3. REMOVE IDENTIFIED ABANDONED PENETRATIONS SHOWN ON DRAWINGS.
4. EXISTING NAILERS AND BLOCKING SHALL BE ADDRESSED PER CONSTRUCTION NOTES.
5. REMOVE ALL ROOF, TRIM, SIDING, FLASHINGS AND ACCESSORIES AS NOTED, SPECIFIED OR REQUIRED TO COMPLETE THE WORK, ALL NEW SHEET METAL REQUIRED UNLESS OTHERWISE INDICATED.
6. ALL DEMOLITION SHALL ADHERE TO ANSI AND OSHA GUIDELINES, AND SECTION 01 52 05

UNIT PRICE QUANTITIES:

1. IN ACCORDANCE WITH SECTION 011100, SUMMARY OF WORK, THE CONTRACT DOCUMENTS INCLUDE WITHIN THE BASE BID SPECIFIC QUANTITIES.
2. THE SPECIFIC QUANTITIES ARE LISTED WITHIN THE INDIVIDUAL SPECIFICATION SECTIONS OF THIS PROJECT AND ARE INCLUDED ON THE BID FORM AS NOTED.

A SINGLE UNIT PRICE WILL BE PROVIDED FOR EACH ITEM, TO BE USED AS AN 'ADD' OR 'DEDUCT', BASED ON ACTUAL FIELD CONDITIONS. ANY QUANTITY ABOVE OR BELOW THESE SPECIFIED AMOUNTS WILL RESULT IN AN 'ADD' OR 'DEDUCT' TO THE CONTRACT SUM BASED ON THE REQUIRED UNIT PRICES.
3. IN ACCORDANCE WITH SECTION 01220, UNIT PRICES AND ALLOWANCES, THE FOLLOWING DOCUMENTATION IS REQUIRED.

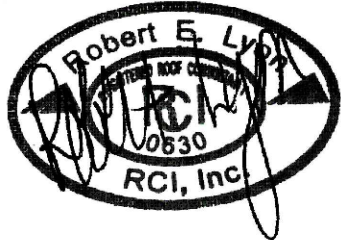
A. THE CONTRACTOR SHALL MAINTAIN A LOG OF ALL REPAIR UNIT PRICED QUANTITIES USED BASED ON CONTRACT REQUIREMENTS.

B. PROVIDE PHOTOGRAPH OR VIDEOTAPE DOCUMENTATION OF REPAIRS AND ACTUAL QUANTITIES USED.

C. LOCATE QUANTITIES AND SHOW THEIR LOCATIONS ON DRAWINGS.

D. PROVIDE ACTUAL USED QUANTITIES ON EACH APPLICATION FOR PAYMENT REQUEST.

Notes:



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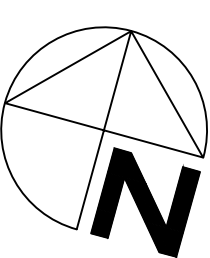
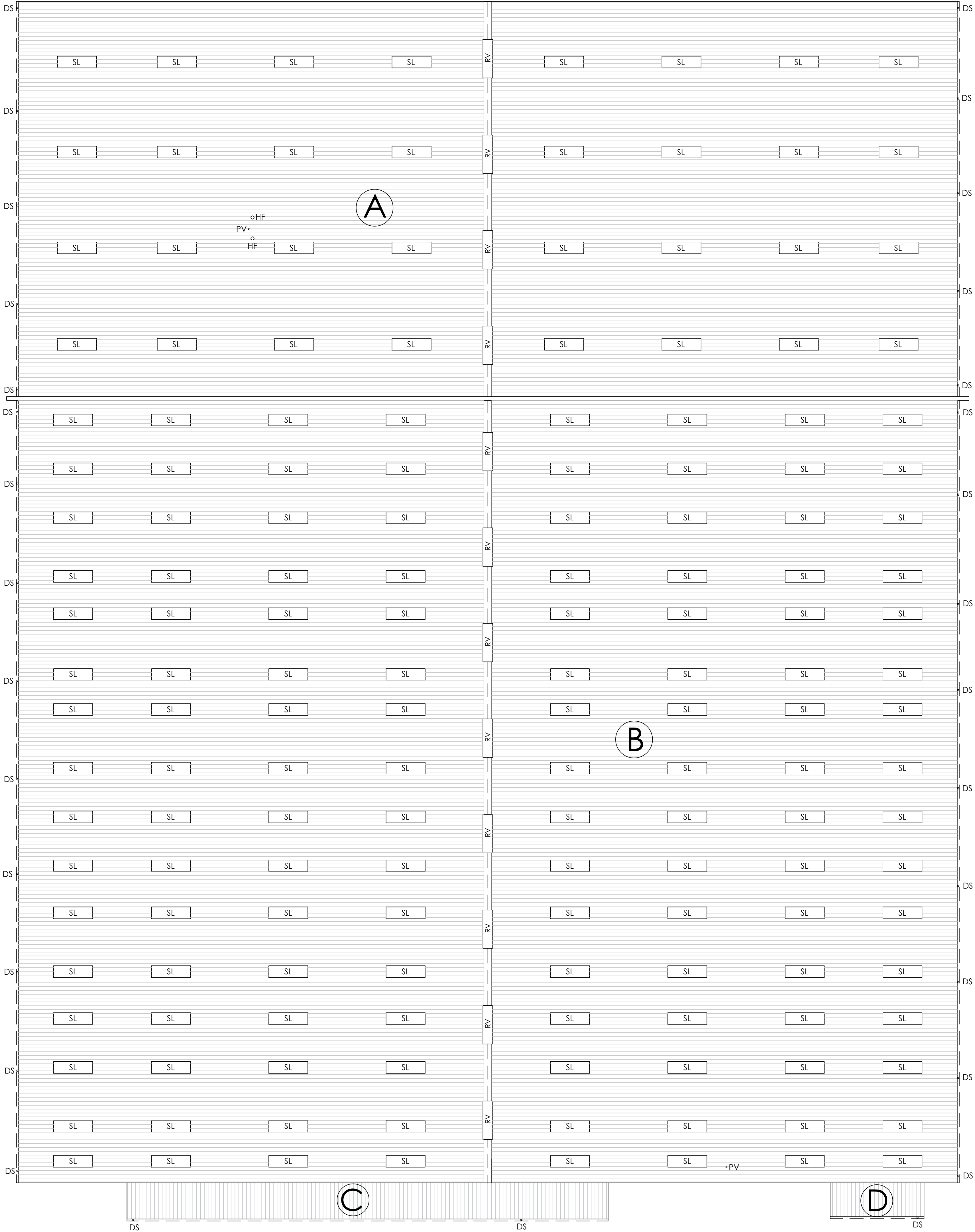
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Lyon & Associates, LLC

Roofing and Waterproofing Consultants

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	201 Park Street
	Columbia, SC 29201
CONSULTANT:	Lyon & Associates, LLC
	PO Box 722
	White Rock, SC 29177

SITE:	201 Park Street Warehouse		
TITLE:	Notes Page		
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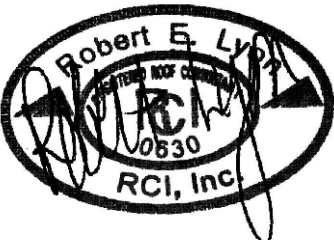


All existing skylights
are to be removed
and new metal roof
panels installed. Min.
span: 3 purlins

Notes:

KEY

- DS Down Spout
- SL Sky Light
- PV Pipe Vent
- HF Heater Flue



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STATUS:	ISSUE		

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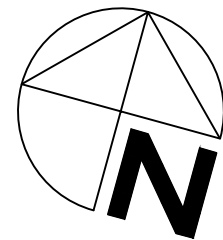
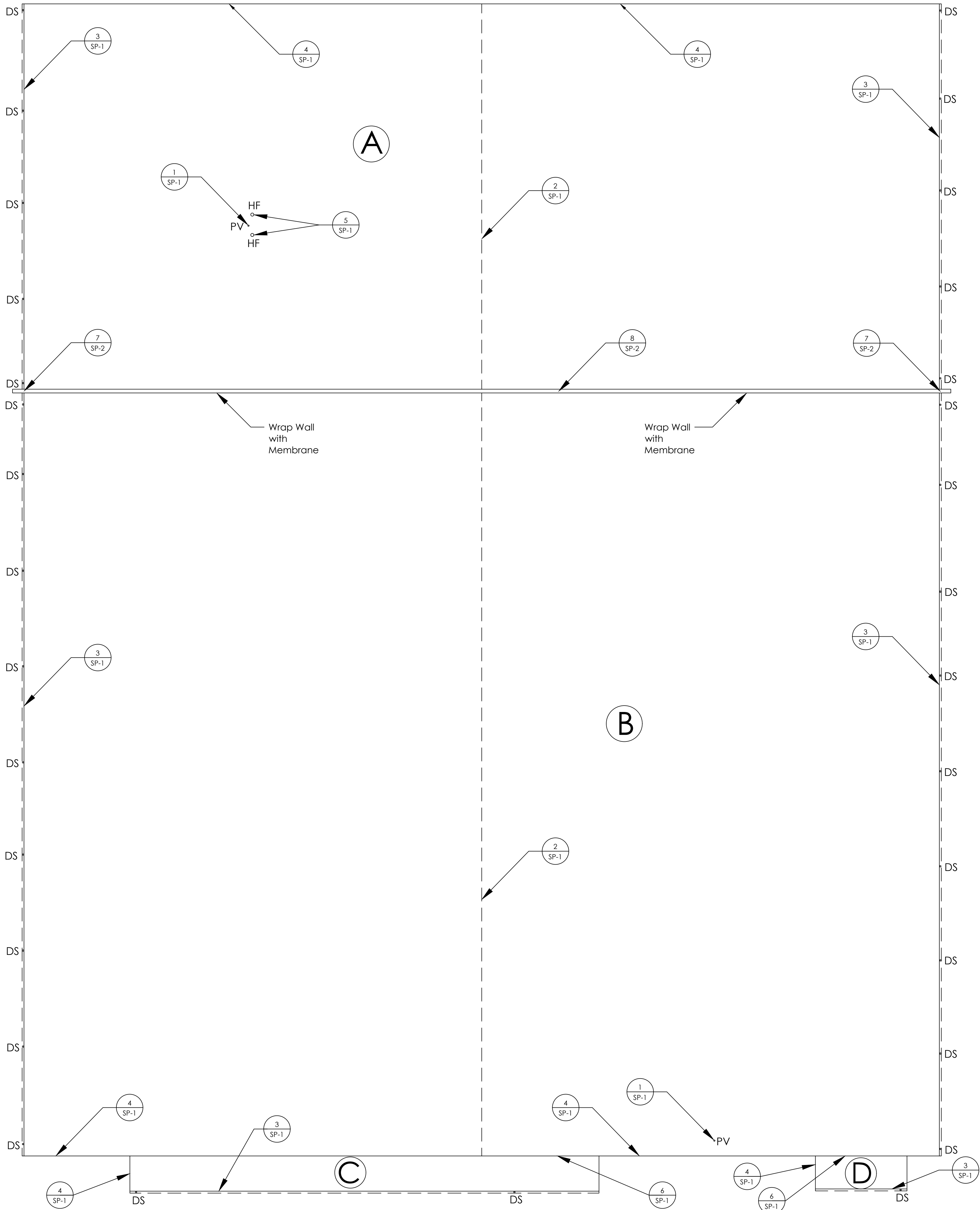
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TITLE: **Existing Roof Plan**

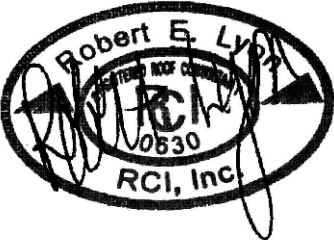
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Notes:

KEY

- DS Down Spout
- SL Sky Light
- PV Pipe Vent
- HF Heater Flue



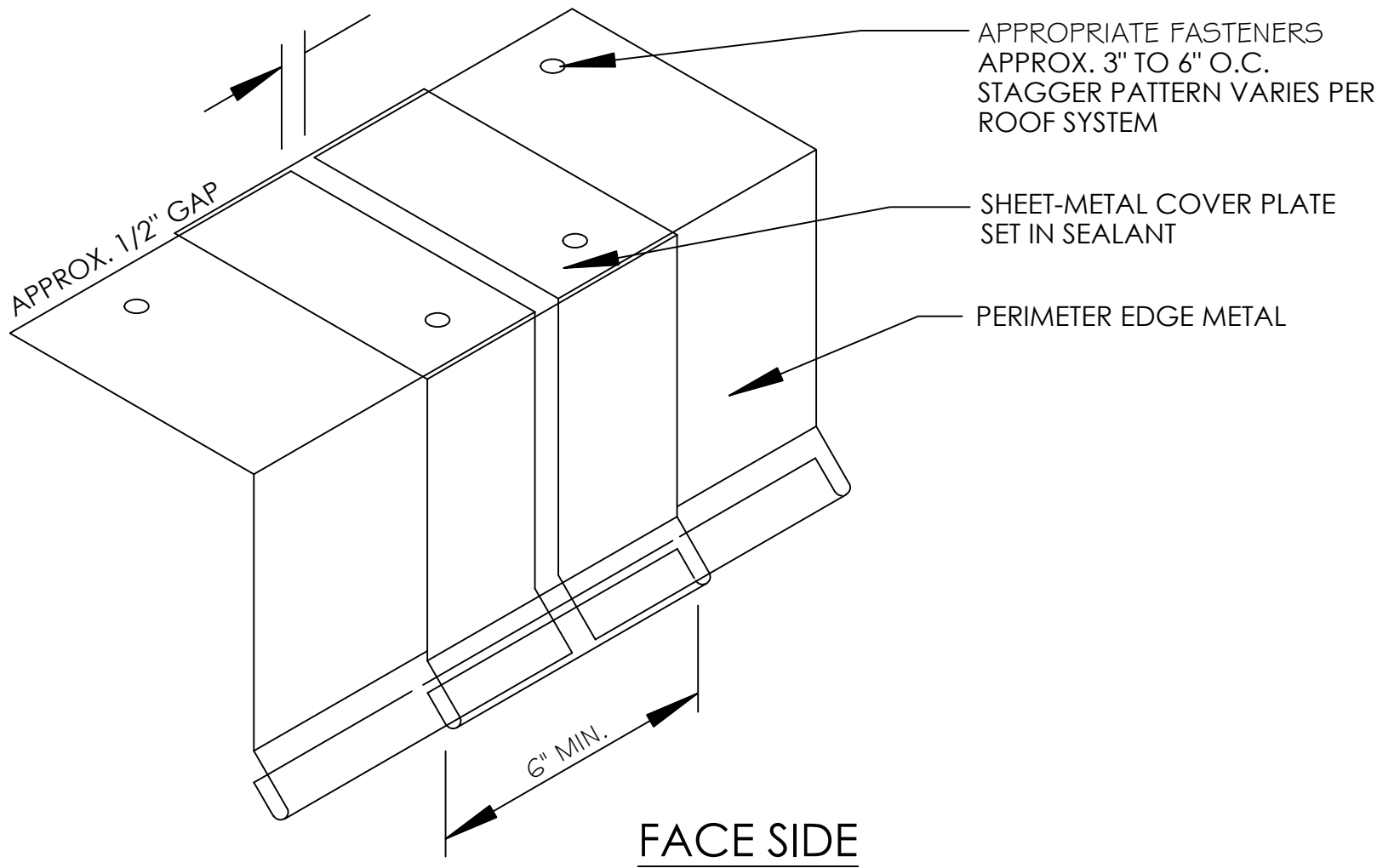
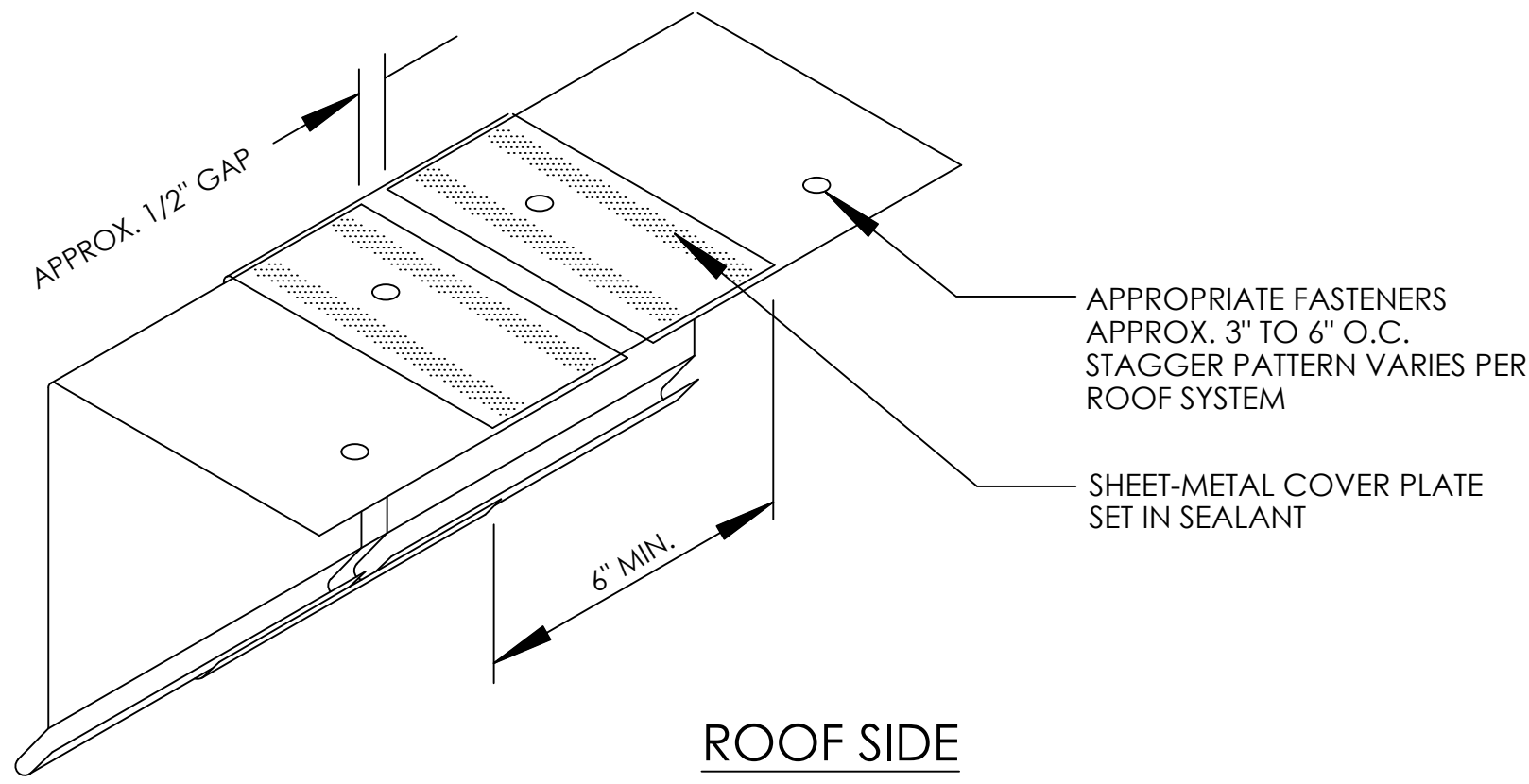
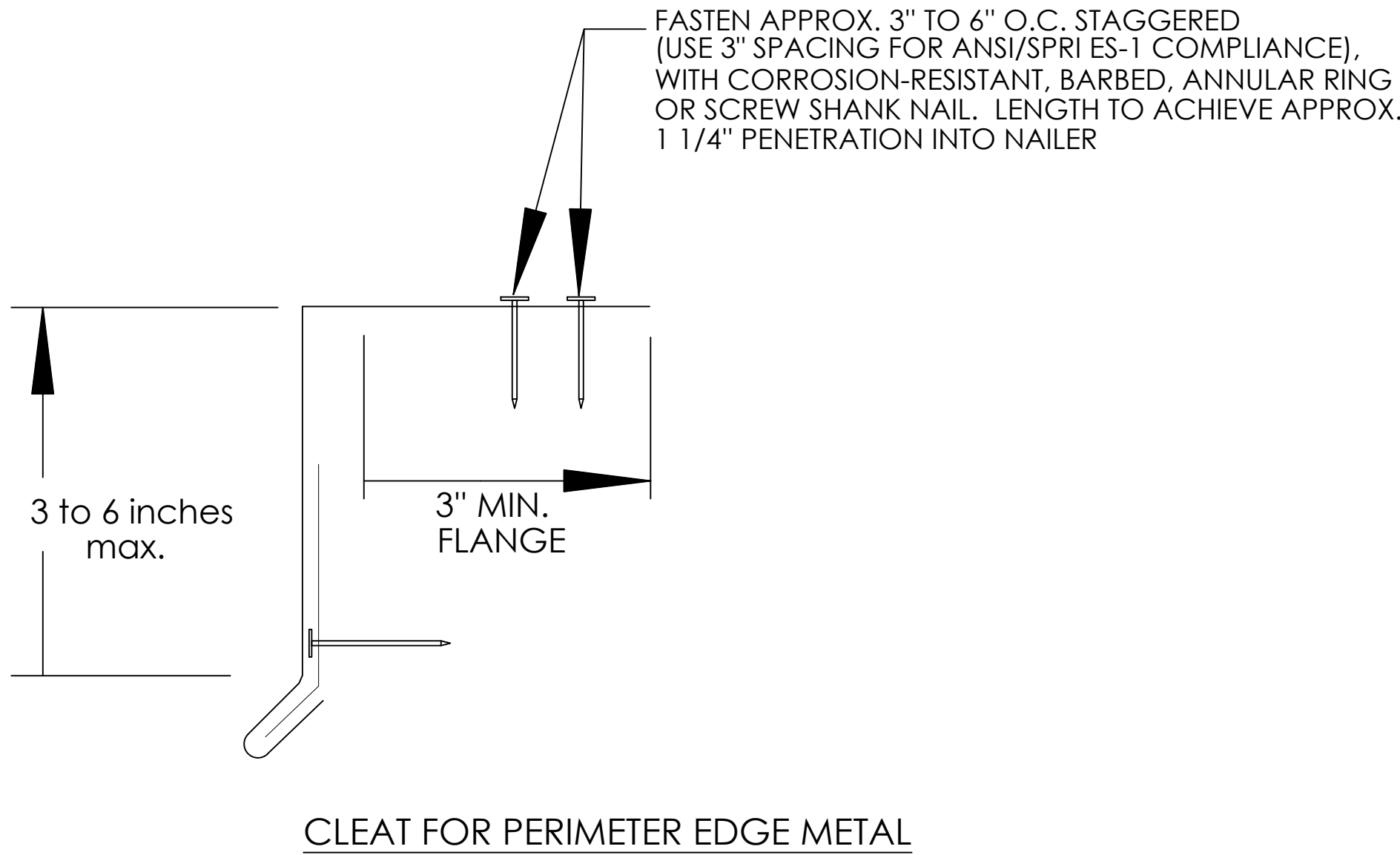
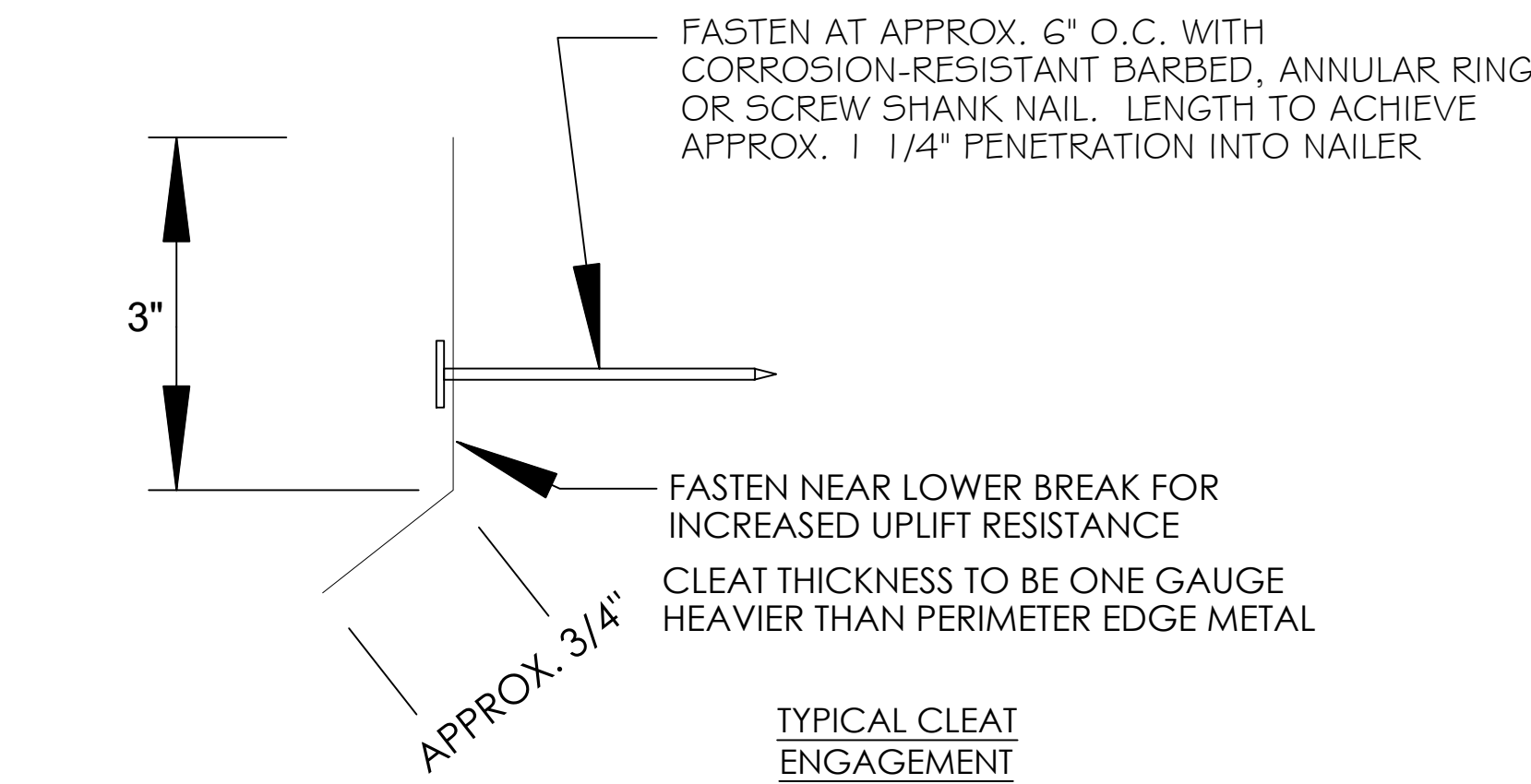
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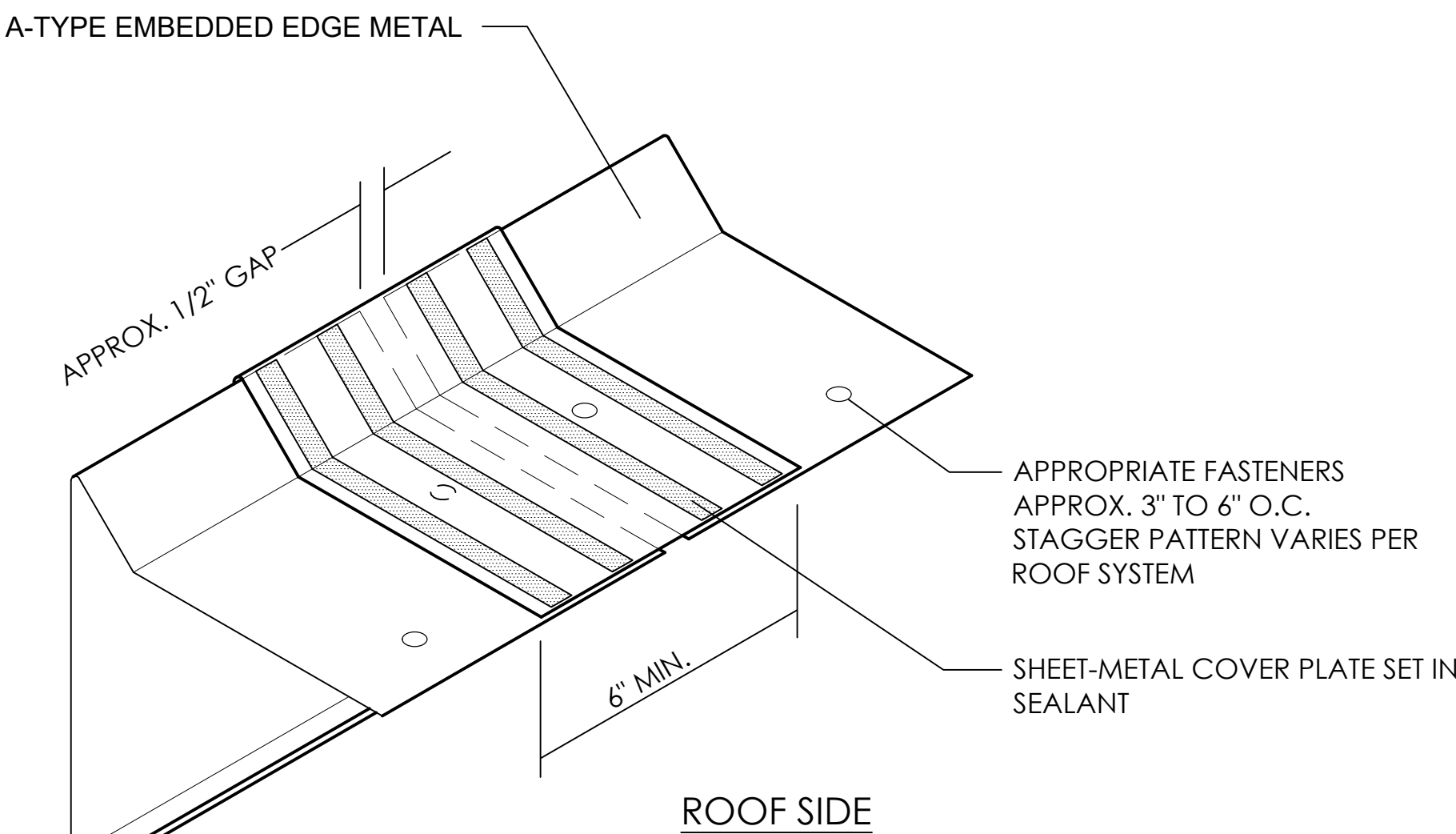
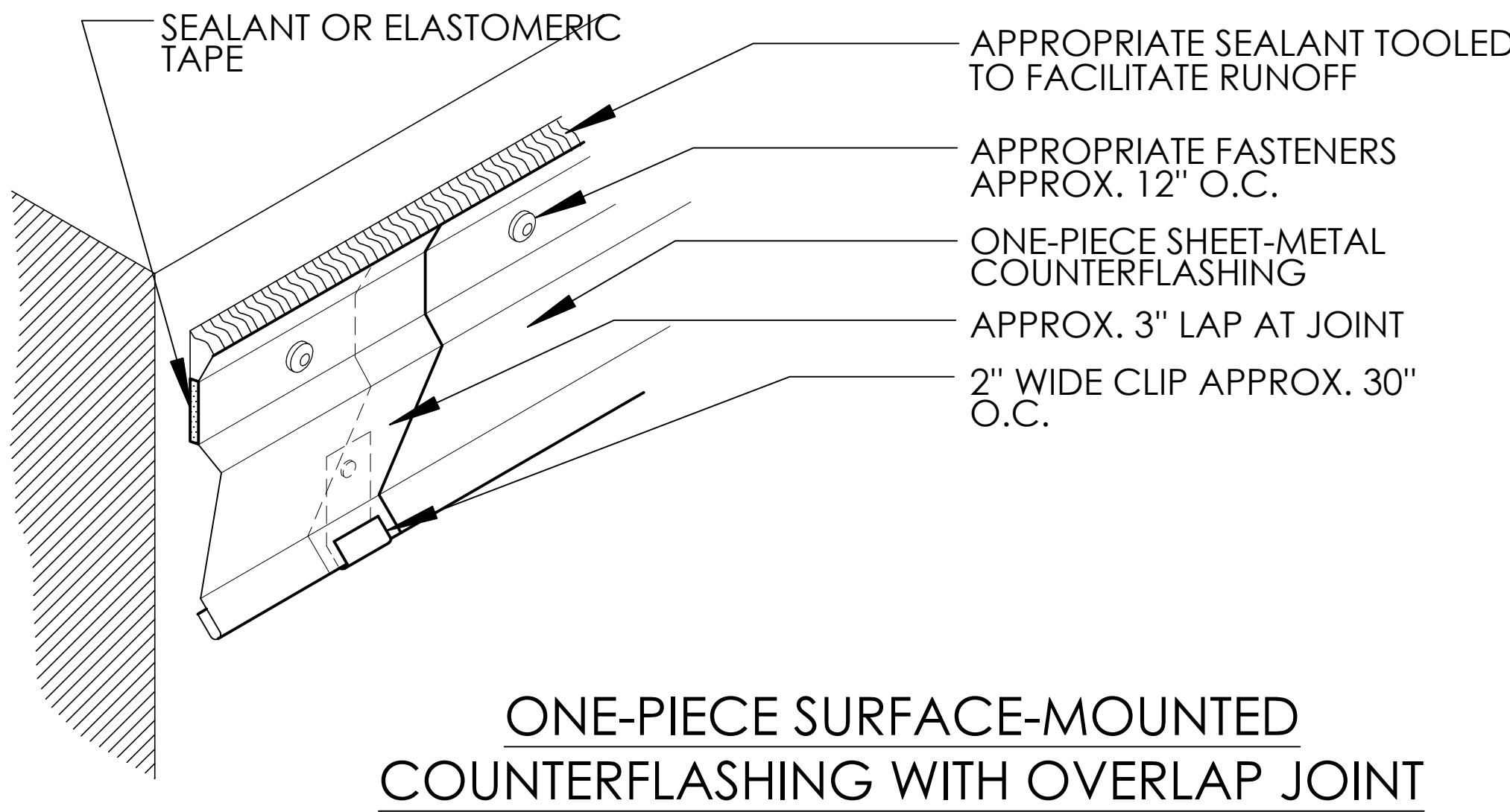
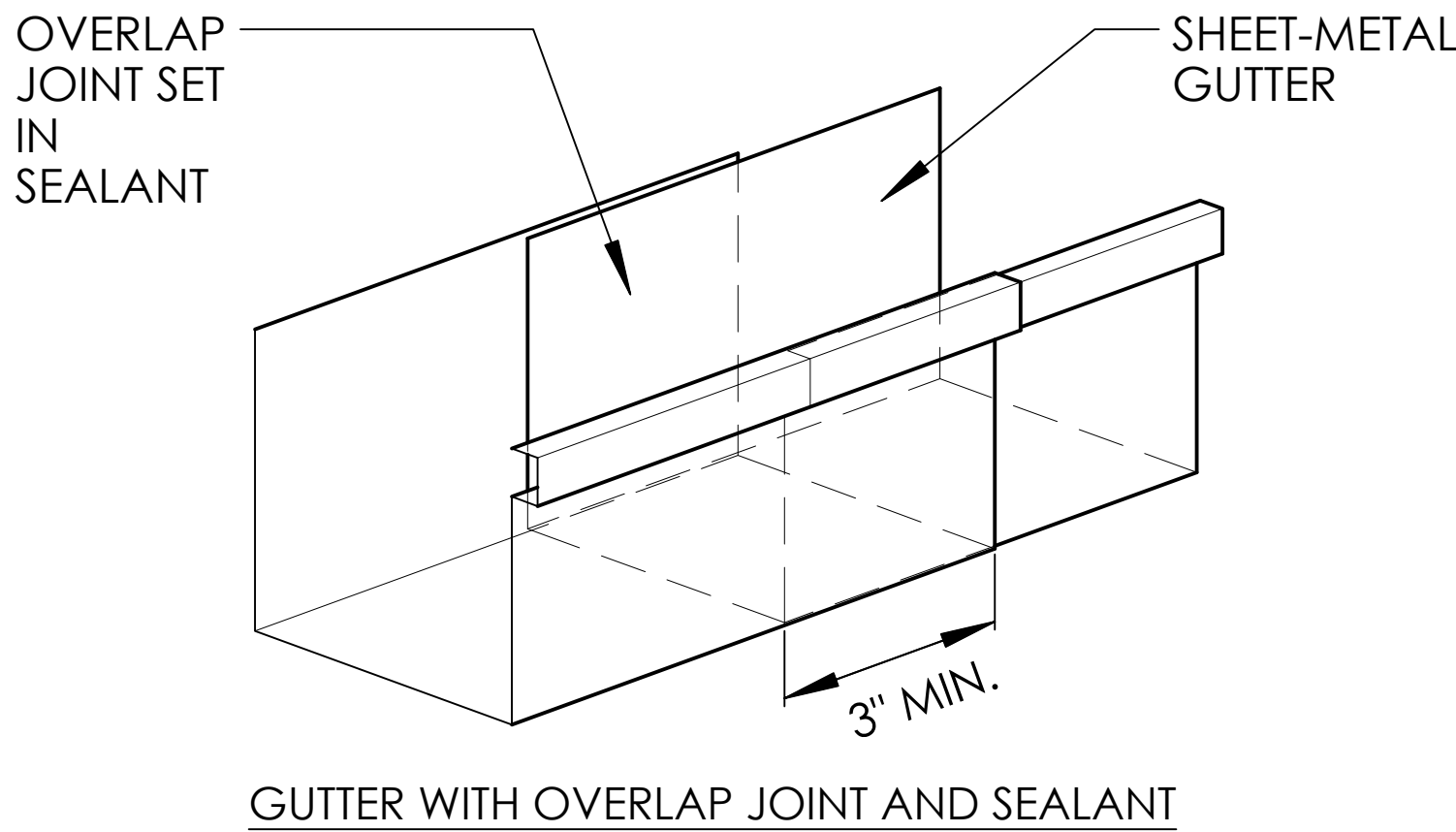
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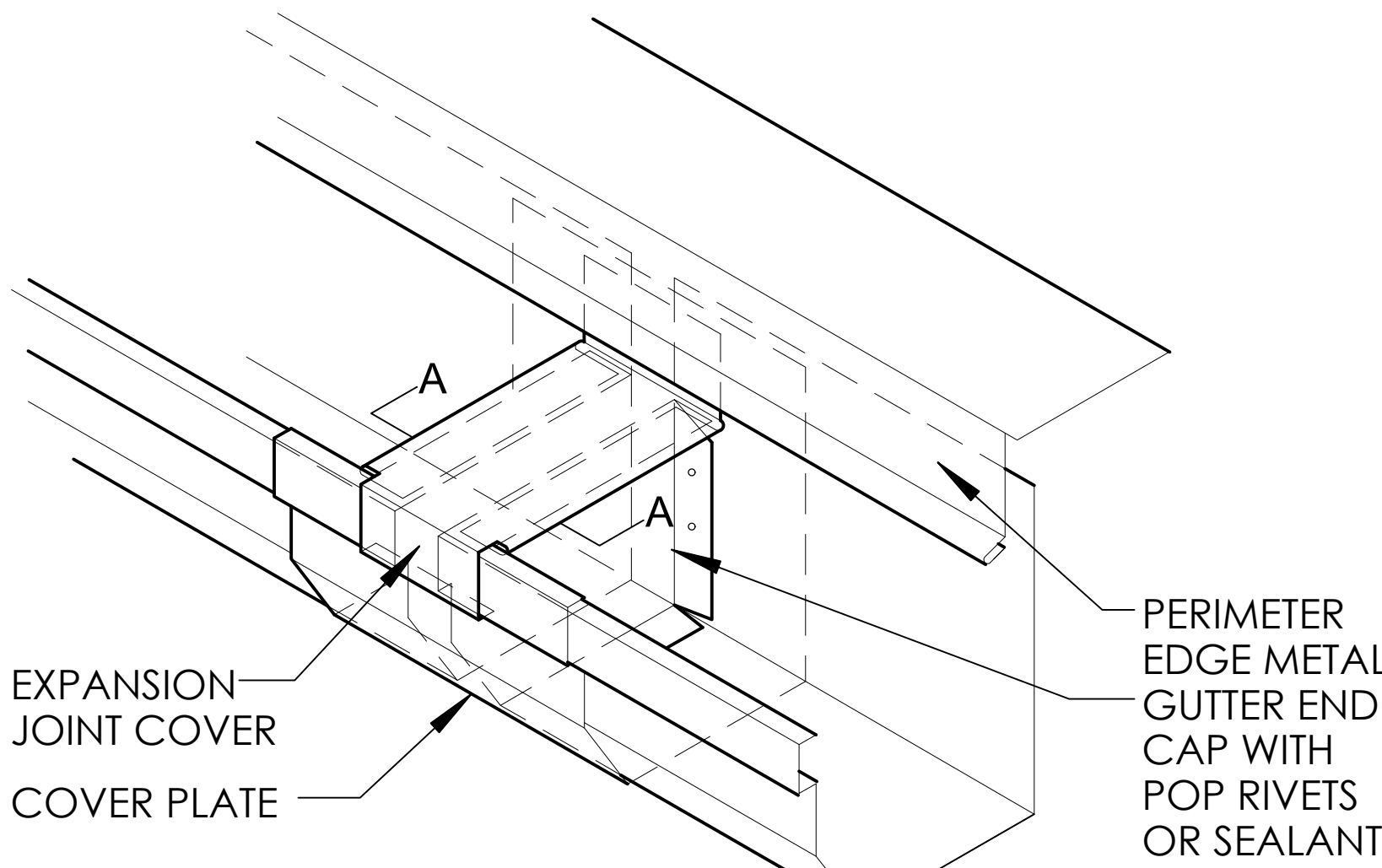
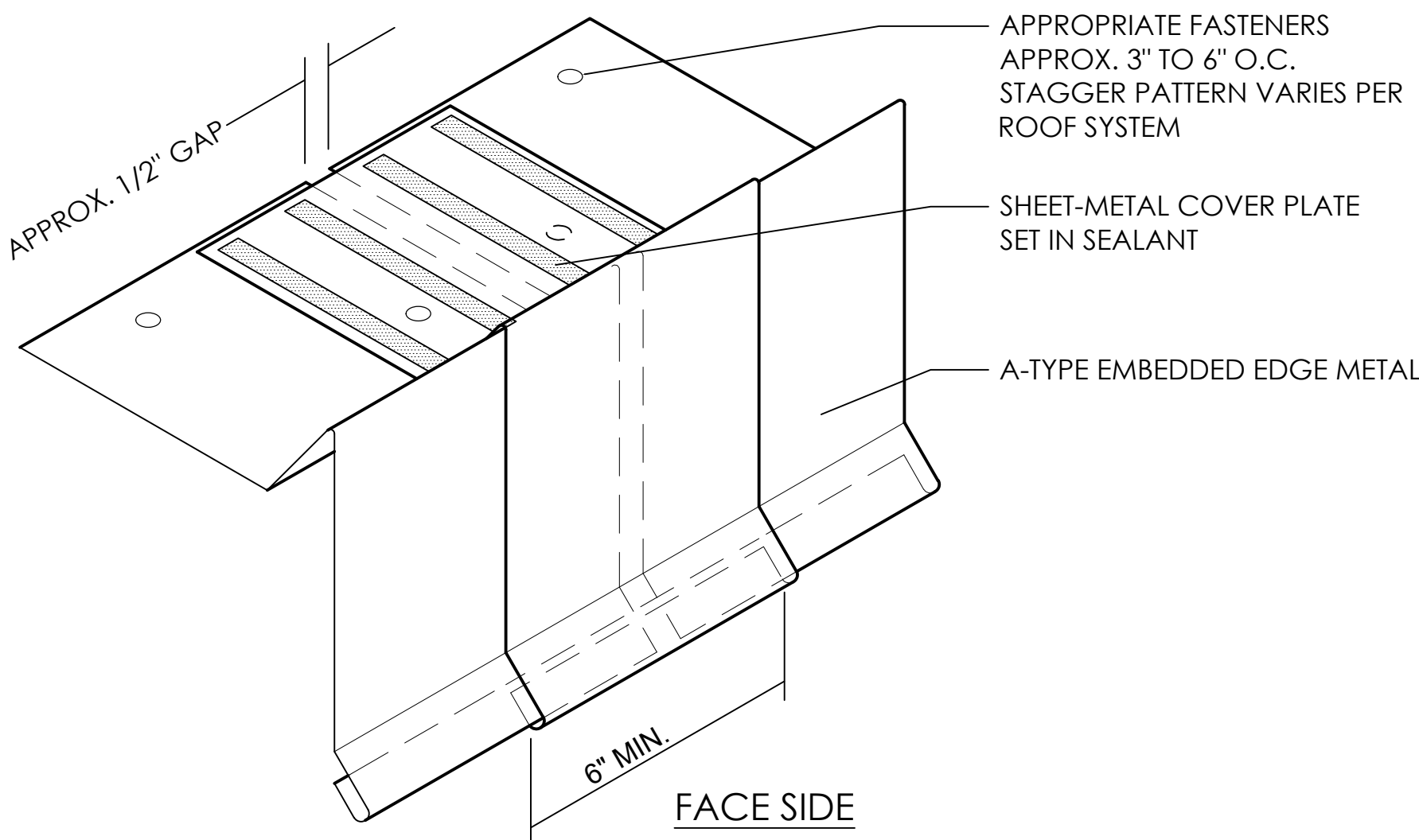
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PERIMETER EDGE METAL WITH COVER PLATE (DRAINING TYPE)

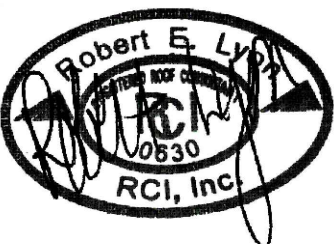


A-TYPE RAKE EDGE METAL WITH COVER PLATE



FOR ILLUSTRATING EXPANSION JOINT ONLY - USE GUTTER PROFILE "A" SHOWN ABOVE

GUTTER EXPANSION JOINT STYLE

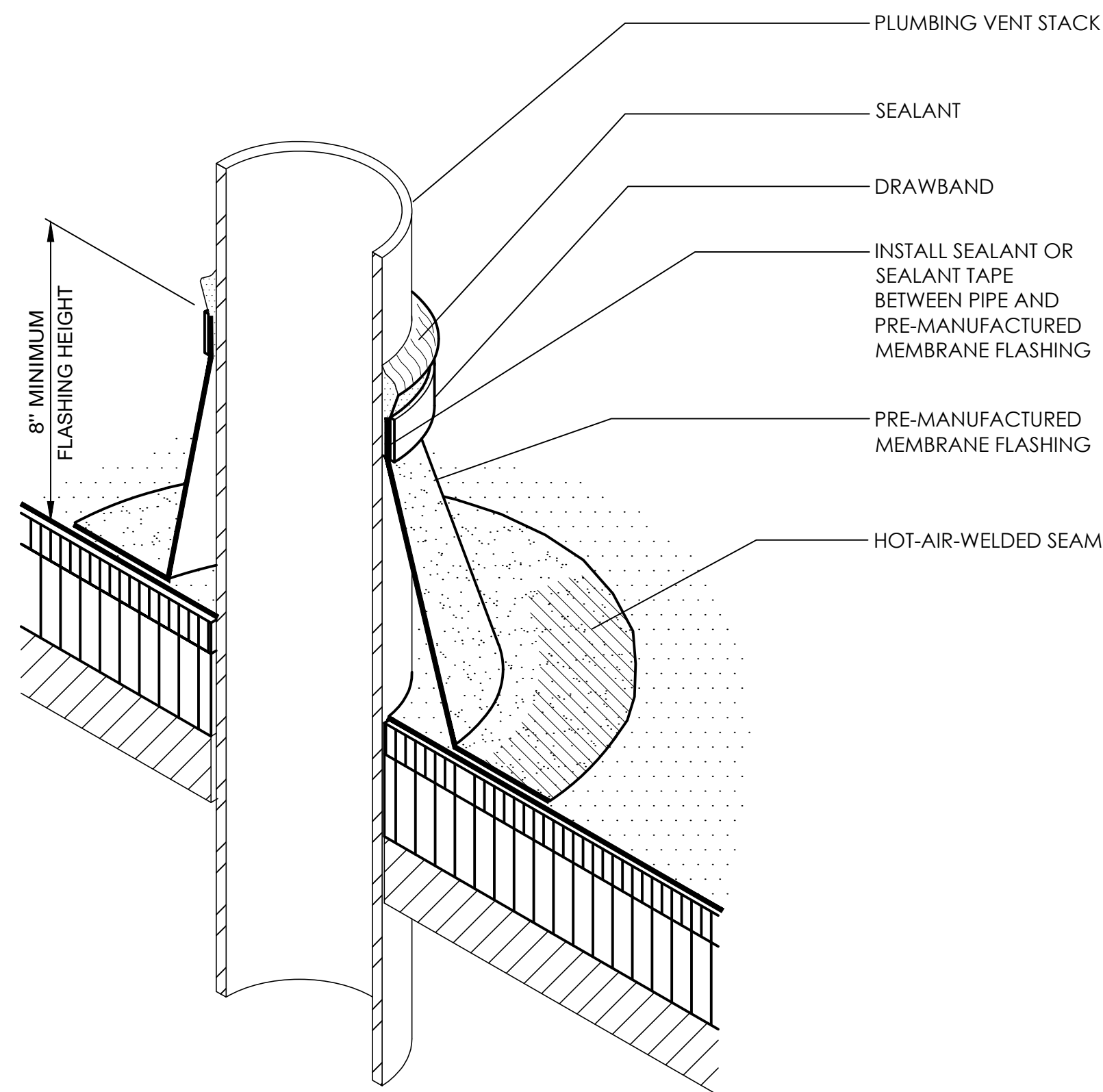


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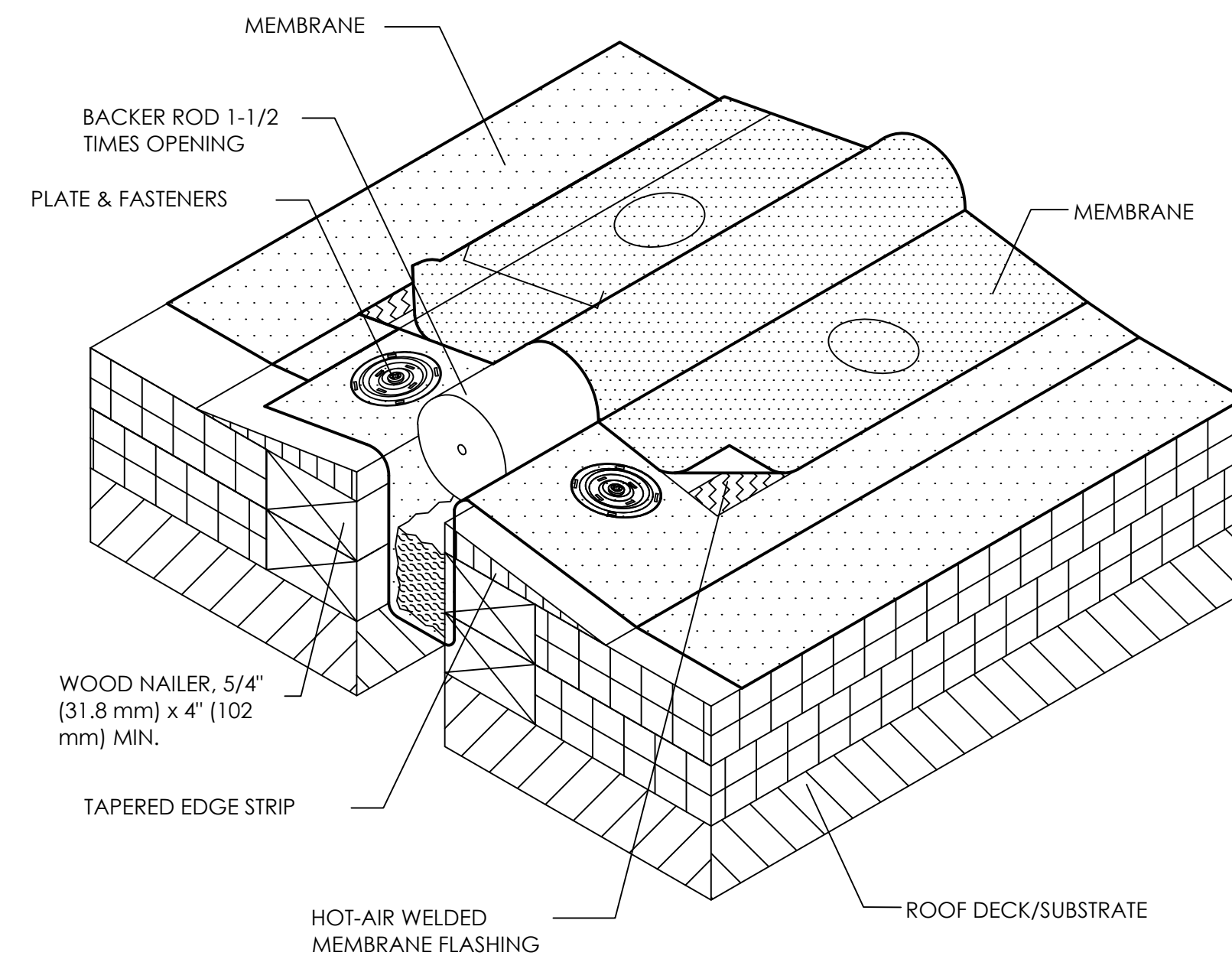
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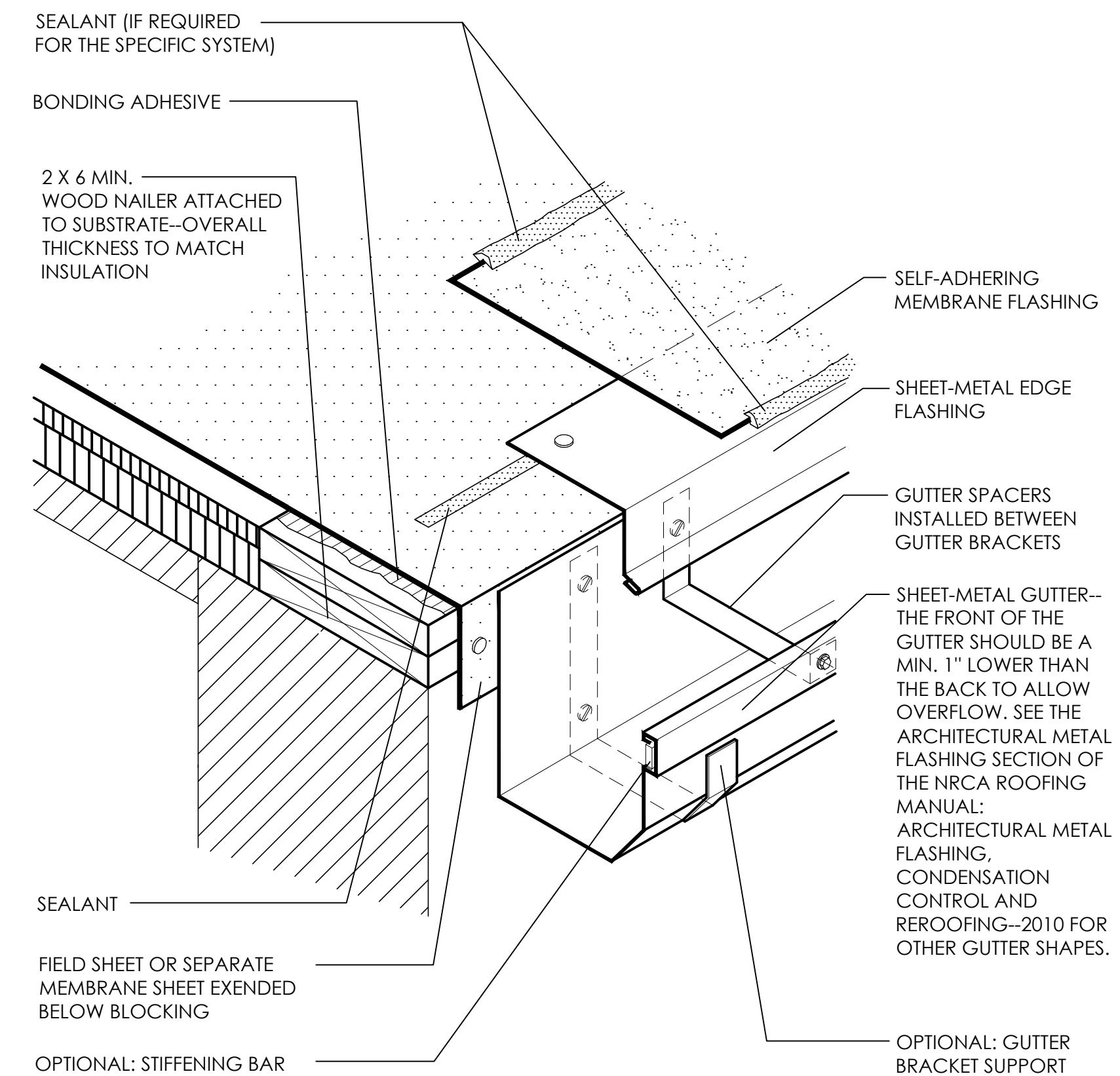
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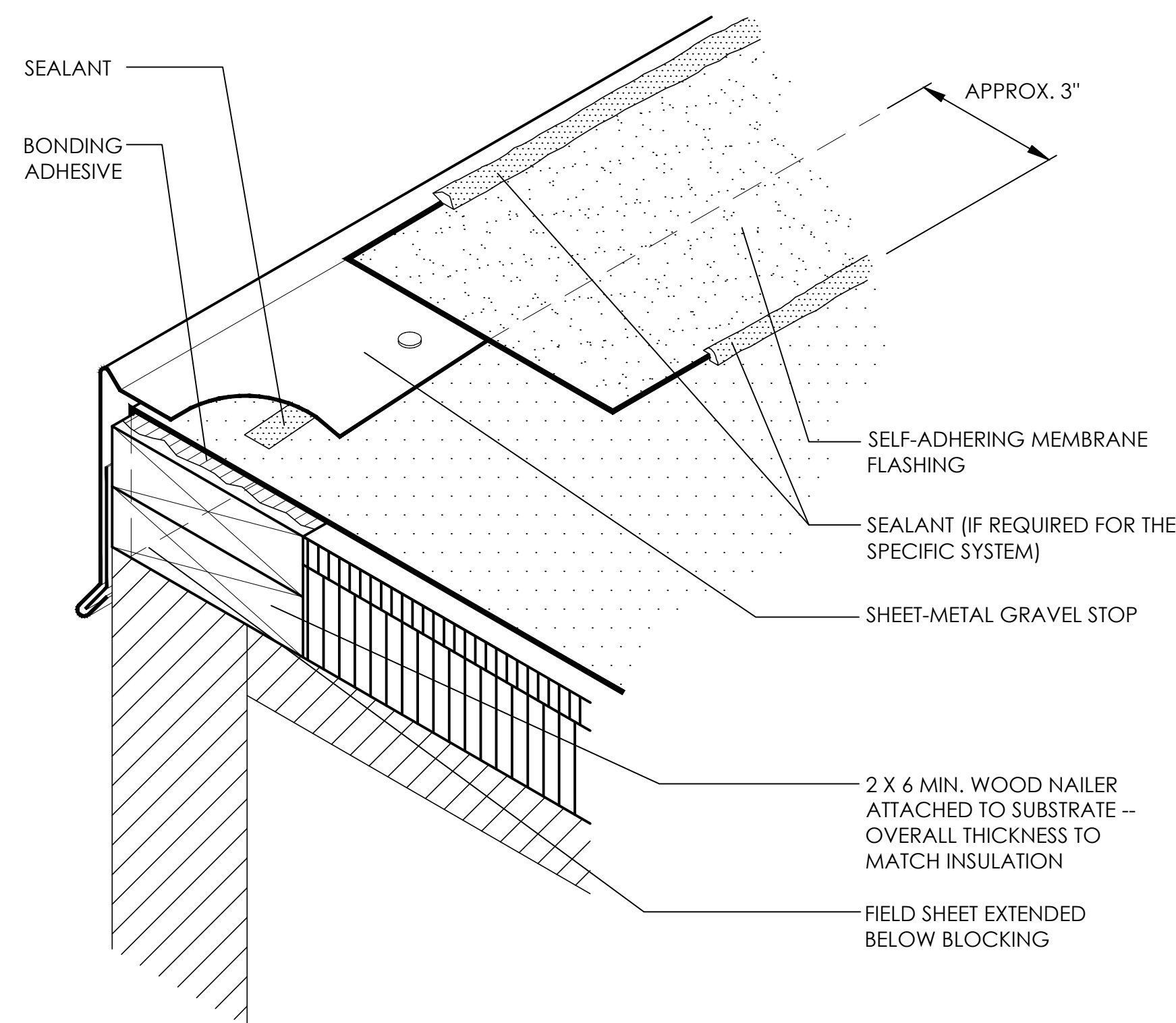
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SP-1 PLUMBING VENT



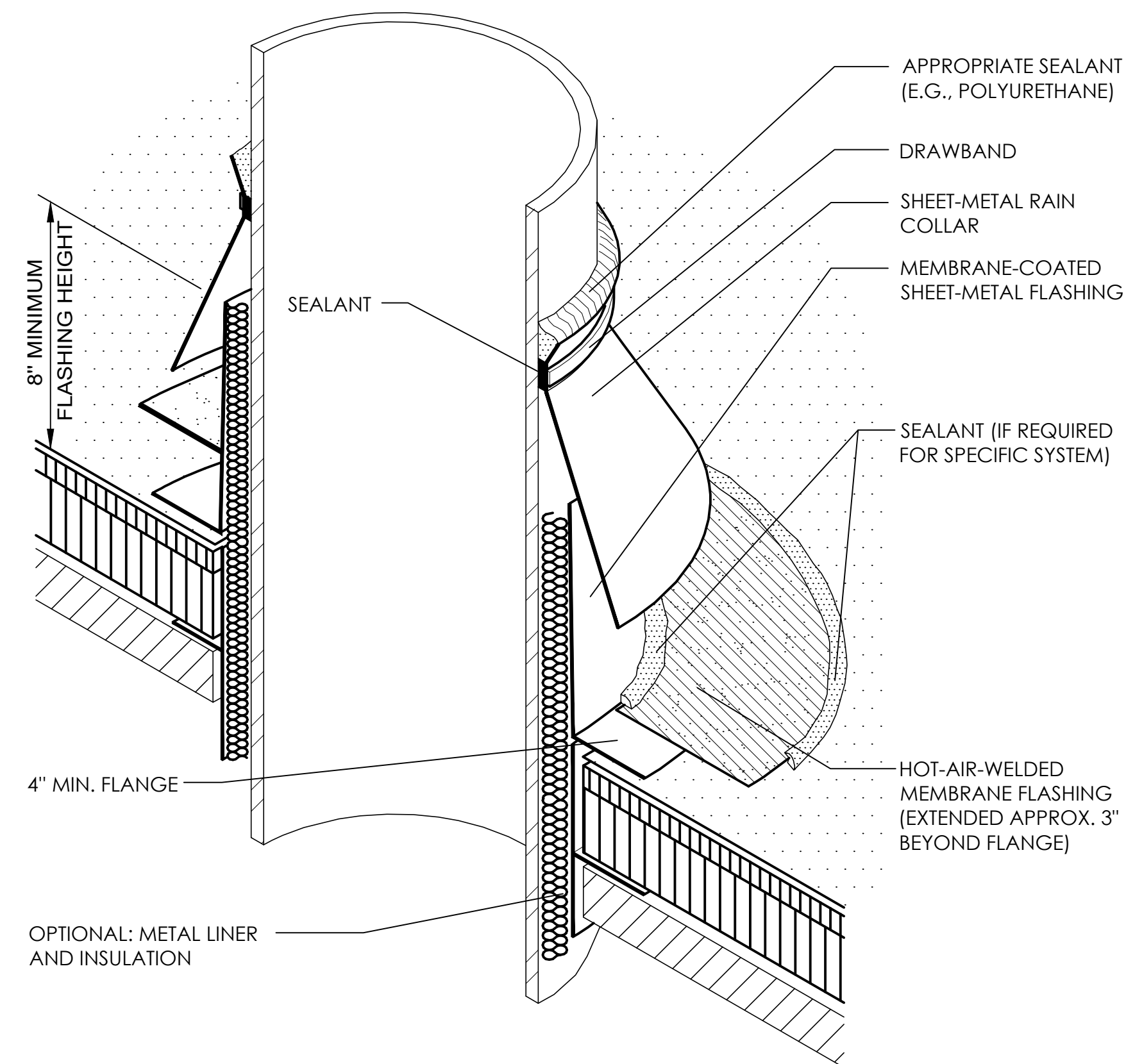
2
SP-1 FLASHING AT RIDGE



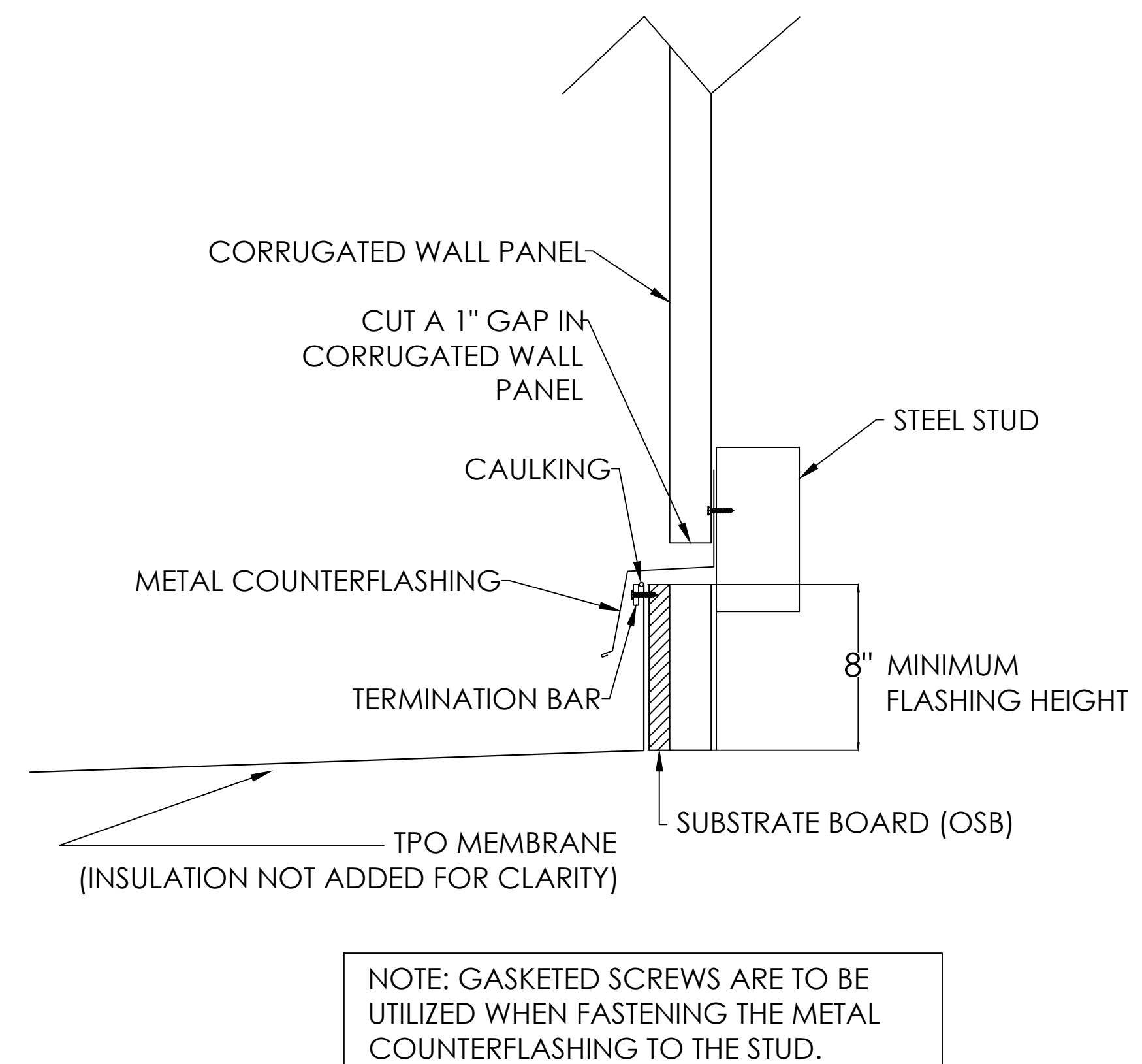
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SP-1 GUTTER WITH PERIMETER EDGE METAL



4
SP-1 EMBEDDED EDGE-METAL FLASHING

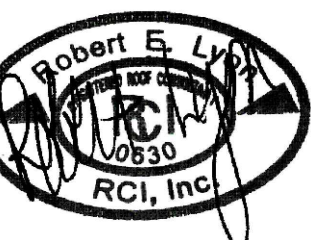


5
SP-1 HEATER FLUE



6
SP-1 BASE FLASHINGS AT METAL WALL PANELS

Notes:

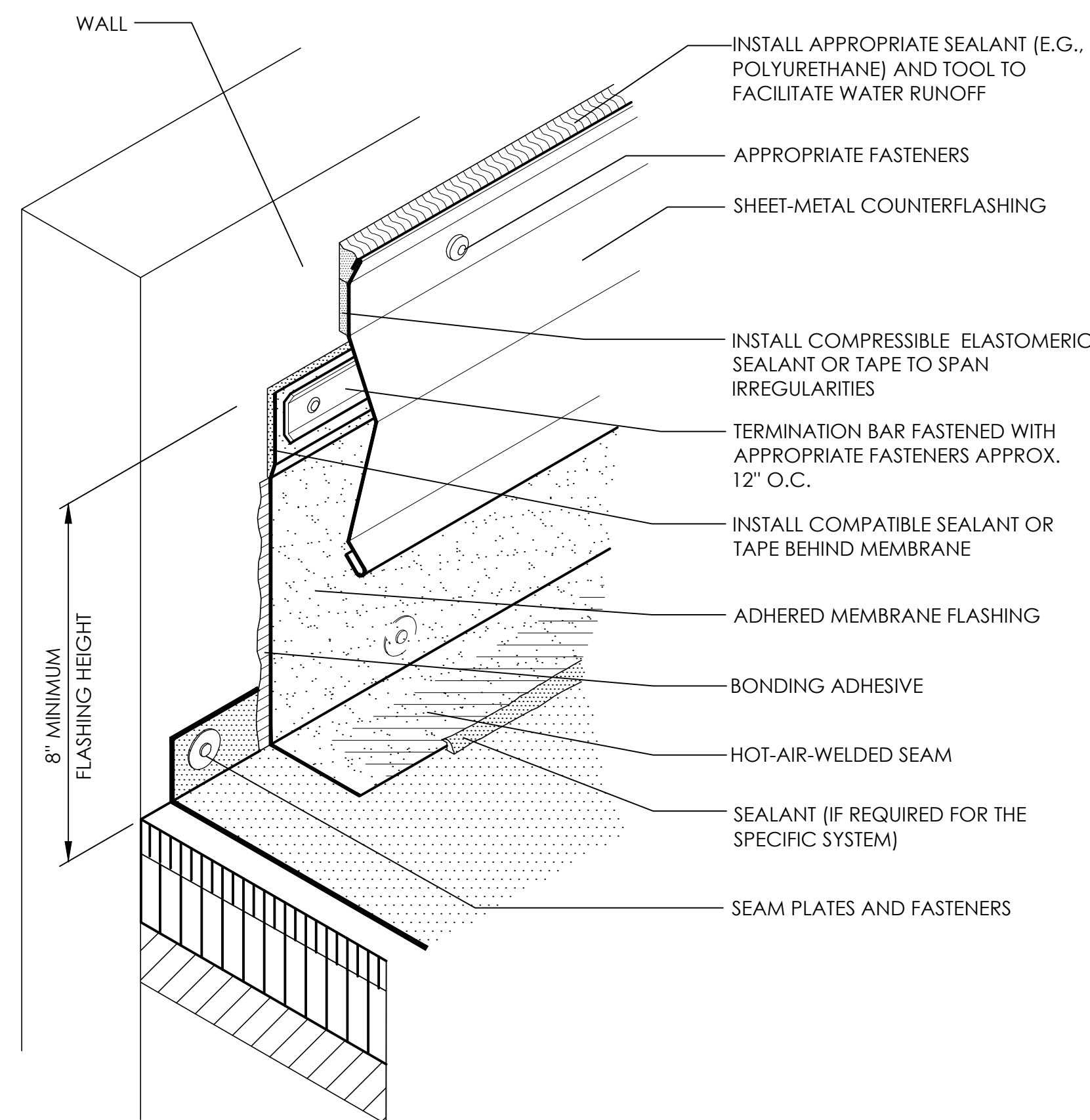


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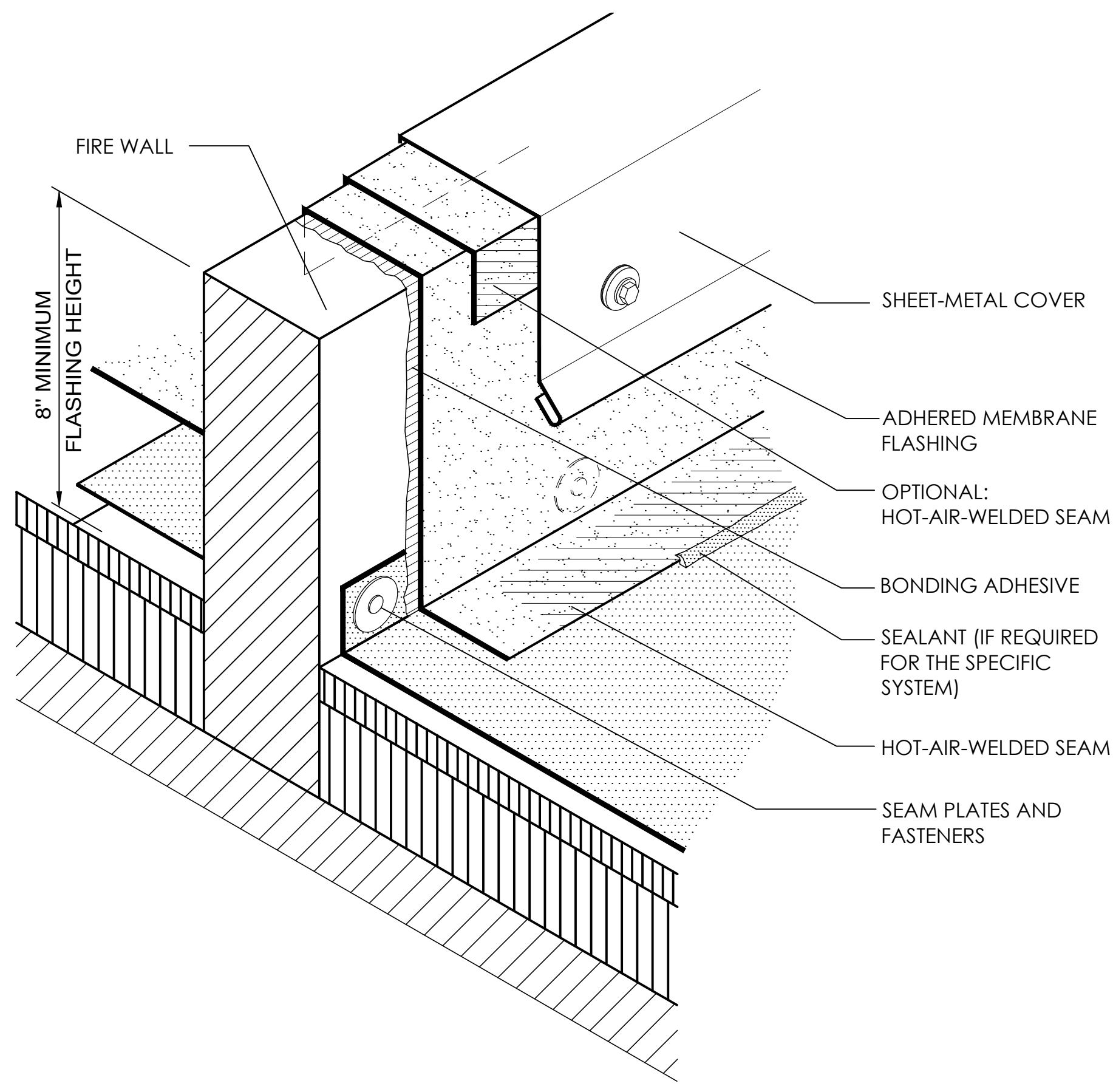
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7
SP-2

BASE FLASHING WITH SURFACE-MOUNTED COUNTERFLASHING



8
SP-2

BASE FLASHING AT FIRE WALL

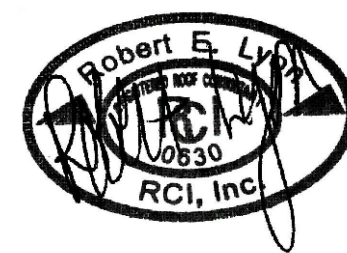
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