

DDS- Planning & Zoning: Historic Review Application



Submission date: **25 May 2021, 10:53AM**
Receipt number: **243**

Property Information

Property Address
Street: **1 Union Place**
City: **Hartford**
State: **Connecticut**
Zip Code: **06103**

Zoning District: **DT-3**

Parcel ID: **223-328-021**

Property Owner: **Greater Hartford Transit District**

Property Owner's Address:
Street: **1 Union Place**
City: **Hartford**
State: **Connecticut**
Zip Code: **06103**

Phone: **860-380-2012**

Email: **ldrake@ghtd.org**

Applicant

Please check if "Applicant" is the same as "Property Owner"

Name of Applicant: **Katherine Wissink**

File Date: **05/25/2021**

Address:

Street: 480 Totten Pond Road

City: Waltham

State: Massachusetts

Zip Code: 02451

Phone:

17814243919

Email:

kswissink@sgh.com

Primary Point of Contact

Name:

Katherine Wissink

Phone:

781-424-3919

Email:

kswissink@sgh.com

Describe your application action(s) and provide as much detail as possible.

Review of reroofing work at the south addition (Roof LS2 in the construction documents); reroofing and repair work at other roofs (LS1, LS3, and CT1) were reviewed under a separate application. The work at LS2 includes removal of the existing copper roofing and installation of a new copper-colored PVC membrane roofing system. Note that the addition is not original to the construction of the building and was constructed in the 1980's. The replacement PVC roofing system will include the addition of roof insulation (which the roof currently lacks) without increasing the weight of the roofing system, and thus, does not require any structural upgrades to the roof deck or framing. This change in material has been reviewed by SHPO and found to be acceptable due to the fact that the south addition is not historic (SHPO review letter is attached).

Proposed work:

Repairs

Current materials being repaired/replaced:

Copper Roofing

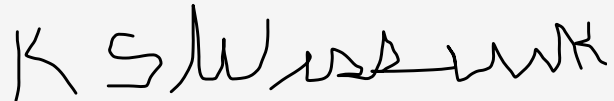
Materials/products being used in work:

PVC membrane roofing system (cover board, insulation, vapor retarder, and plywood), copper flashing

Please upload all supporting materials and photographs [Union Station Permit Set.pdf](#)
below. [Hartford Union Place 1 - Union Station Roof Repair DOT.pdf](#)

Signatures

Signature of Applicant:



[Link to signature](#)

Name of Applicant:

Katherine Wissink

Date:

5/25/2021

Signature of Property Owner:



[Link to signature](#)

Name of Property Owner:

Greater Hartford Transit District

Date:

05/25/2021



May 19, 2021

Ms. Katherine Wissink, P.E. LEED AP BD+C
Simpson Gumpertz & Heger
480 Totten Pond Road
Waltham, MA 02451

Subject: Hartford Union Station Roof Repairs, Revised
1 Union Place
Hartford, CT
ENV-21-0583

Dear Ms. Wissink:

The State Historic Preservation Office has reviewed the information submitted for the above-named property pursuant to the provisions of the Connecticut Environmental Policy Act.

As you are aware, Hartford Union Station, located at 1 Union Place, is individually listed on the National Register of Historic Places (NR# 75001932).

Your work plan consists of roof repair and replacement, including but not limited to:

- Repair and selective replacement in kind of clay tile roof on both the North Wing and South Wing (including new underlayment and flashing)
- (Alternate) Replacement in kind of existing asphalt shingle roof on both the Inactive Train Canopy and Bus Canopy
- (Alternate) Install new gutters and downleaders on both the Inactive Train Canopy and Bus Canopy
- Replace existing EPDM roofing on Center Wing with new PVC roofing system (including flashing)
- Remove and replace existing flat seam copper roof of South Addition with new PVC roofing system (including flashing)
- (Alternate) Remove and replace existing flat seam copper roof of South Addition with new copper roof system
- (Alternate) Replace existing EPDM roofing on Entrance Canopy with new PVC roofing system (including flashing)
- Installation of two scuppers in the parapet wall of the Center Wing – one at the north elevation, one at the south elevation.

In regards to the South Addition Roof, this office recommends that the alternative scope (replace existing, deteriorated copper roof with new copper roof system) be followed, rather than a PVC roofing system. However, as documentation submitted to this office indicates

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | ct.gov/historic-preservation

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Department of Economic and
Community Development

State Historic Preservation Office

that the addition was constructed c.1985, it is not considered a historic component of the property, and its replacement with a nonhistoric material would not adversely impact the integrity of the property as a whole.

As an individually-listed National Register property, Hartford Union Station retains a high degree of integrity. Care should be taken in completing the work described above. Based on the information provided to this office, the undertaking will constitute no adverse effects to historic resources. Should estimates of the work to be performed substantially change, SHPO should be contacted for additional consultation.

The State Historic Preservation Office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act. For further information please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or marena.wisniewski@ct.gov.

Sincerely,

A handwritten signature in black ink that reads "Jonathan Kinney". The signature is written in a cursive style with a large, sweeping flourish at the end.

Jonathan Kinney
Deputy State Historic Preservation Officer

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | ct.gov/historic-preservation

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UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT

1 UNION PLACE
HARTFORD, CT

GHTD PROJECT NO. 02-021
SGH PROJECT NO. 191971.00

PERMIT SET
3 MAY 2021

OWNER:

Greater Hartford Transit District
1 Union Place
Hartford, CT 06103

Contact: Ms. LaShaunda Drake
E-mail: LDrake@GHTD.org

ENGINEER, DESIGNER OF RECORD:

Simpson Gumpertz & Heger, Inc.
480 Totten Pond Dr.
Waltham, MA 02451

Contact:

Ms. Katherine Wissink, P.E. (Project Manager)
Tel. No.: 781-907-9329
Cell No.: 781-424-3919
E-mail: KSWissink@sgh.com

Mr. Matthew Bronski, P.E. (Principal)

Tel. No.: 781-907-9264
Cell No.: 781-424-3946
E-mail: MBBronski@sgh.com

DRAWING CONTENTS:

- R-0.0 COVER SHEET
- R-0.1 SITE PLAN
- R-1.0 OVERALL ROOF PLAN
- R-1.1 CLAY TILE ROOF PLANS: SOUTH WING
- R-1.2 CLAY TILE ROOF PLANS: NORTH WING
- R-1.3 ASPHALT SHINGLE ROOF PLANS ADD ALT. #AS1
- R-1.4 ASPHALT SHINGLE ROOF PLANS ADD ALT. #AS3
- R-1.5 LOW SLOPE ROOF PLANS AT CENTER WING
- R-1.6 LOW SLOPE ROOF PLAN AT SOUTH ADDITION
- ASB-1 ACM ASPHALT SHINGLE ROOF PLAN
- R-2.0 CLAY TILE ROOFING DETAILS
- R-2.1 CLAY TILE ROOFING DETAILS
- R-2.2 CLAY TILE ROOFING DETAILS
- R-3.0 ASPHALT SHINGLES ROOFING DETAILS ADD ALT. #AS1 AND #AS3
- R-3.1 ASPHALT SHINGLES ROOFING DETAILS ADD ALT. #AS1 AND #AS3
- R-4.0 PVC ROOFING DETAILS
- R-4.1 PVC ROOFING DETAILS
- R-5.0 COPPER ROOFING DETAILS ADD ALT. #LS2
- R-6.0 TYPICAL DETAILS

LEGEND:

- (E) = EXISTING (ITEMS NOT SPECIFICALLY DESIGNATED AS EXISTING ARE PROPOSED)
- GHTD = GREATER HARTFORD TRANSIT DISTRICT
- S.S. = STAINLESS STEEL
- N.T.S. = NOT TO SCALE
- P.T. = Pressure Treated
- TYP. = TYPICAL
- SIM. = SIMILAR

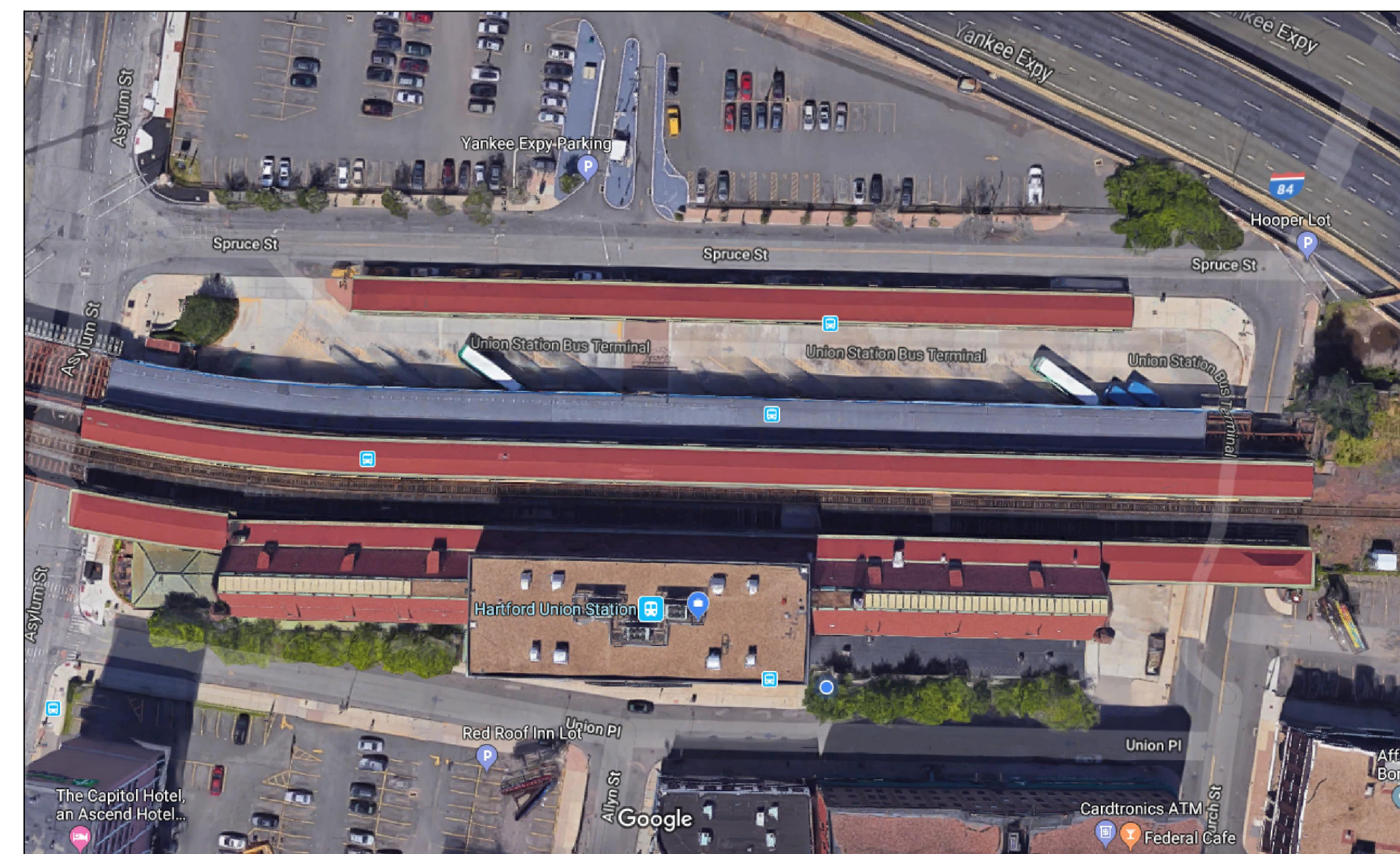


PHOTO : AERIAL VIEW



LOCUS PLAN

SIMPSON GUMPERTZ & HEGER
Engineering of Structures
and Building Enclosures

Simpson Gumpertz & Heger Inc.
480 Totten Pond Road
Waltham, Massachusetts 02451
main: 781.907.9000 fax: 781.907.9009
www.sgh.com

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Washington, DC



GHTD PROJECT NO. 02-021

Consultant

No.	Date	Description	By

PERMIT SET

**UNION STATION
TRANSPORTATION
CENTER
ROOFING REPAIR/
REPLACEMENT
1 UNION PLACE,
HARTFORD, CT**

Project



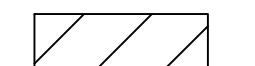
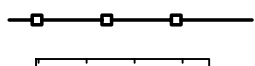
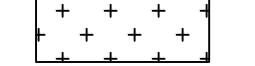

COVER SHEET

Drawing Title

Project No. 191971.00	Checked JCD/KSW	Date 05/03/2021
Drawn RML	Approved MBB	Scale AS NOTED
Seal		Drawing No. R-0.0

SITE USAGE AND LOGISTICS

1. Provide construction fence as shown and as additionally required to fully cordon off areas when work is occurring. Maintain minimum 4' width of public sidewalk.
2. Coordinate lay down areas and location of site fencing with GHDT and provide shop drawings confirming locations prior to start of construction.
3. Protect all existing landscaping from damage. Provide protection around all trees.
4. Maintain access/egress from all building entrances at all times throughout the project. Provide overhead protection when work is occurring above.
5. Sidewalk to remain open to pedestrians throughout construction.
6. Maintain vehicular drive lanes and parking spaces throughout construction. Coordinate any temporary closures with GHDT.
7. Limited Contractor laydown areas available. Possible Contractor laydown sites as noted on the site plan below.
8. Assume no Contractor parking provided by owner.
9. Businesses within the building will remain open throughout construction. Access to and from the building must be unobstructed at all times. Proposed laydown area is at grade, beneath platform.
10. Proposed laydown area is on-grade beneath the Bus Canopy Roof (not on the Canopy Roof).
11. Proposed location of storage trailer beneath tracks.
12. Proposed location of storage trailer beneath tracks.
13. Contractor not permitted on inactive platform to perform base bid work.

LEGEND	
	(E) BUILDING ROOF OVERHANG, CANOPY OUTLINE, OR OTHER AREA OUT OF SCOPE
	(E) BUILDING ENTRANCE OR EMERGENCY EGRESS TO REMAIN OPEN AND UNOBSTRUCTED - PROVIDE OVERHEAD PROTECTION WHEN WORK IS OCCURRING ABOVE
	PROPOSED CONTRACTOR LAYDOWN AREA
	PROPOSED CONTRACTOR CONSTRUCTION FENCING
	PROPOSED CONTRACTOR STORAGE TRAILER
	PROPOSED CONTRACTOR DUMPSTER

SIMPSON GUMPERTZ & HEGER
 Engineering of Structures and Building Enclosures

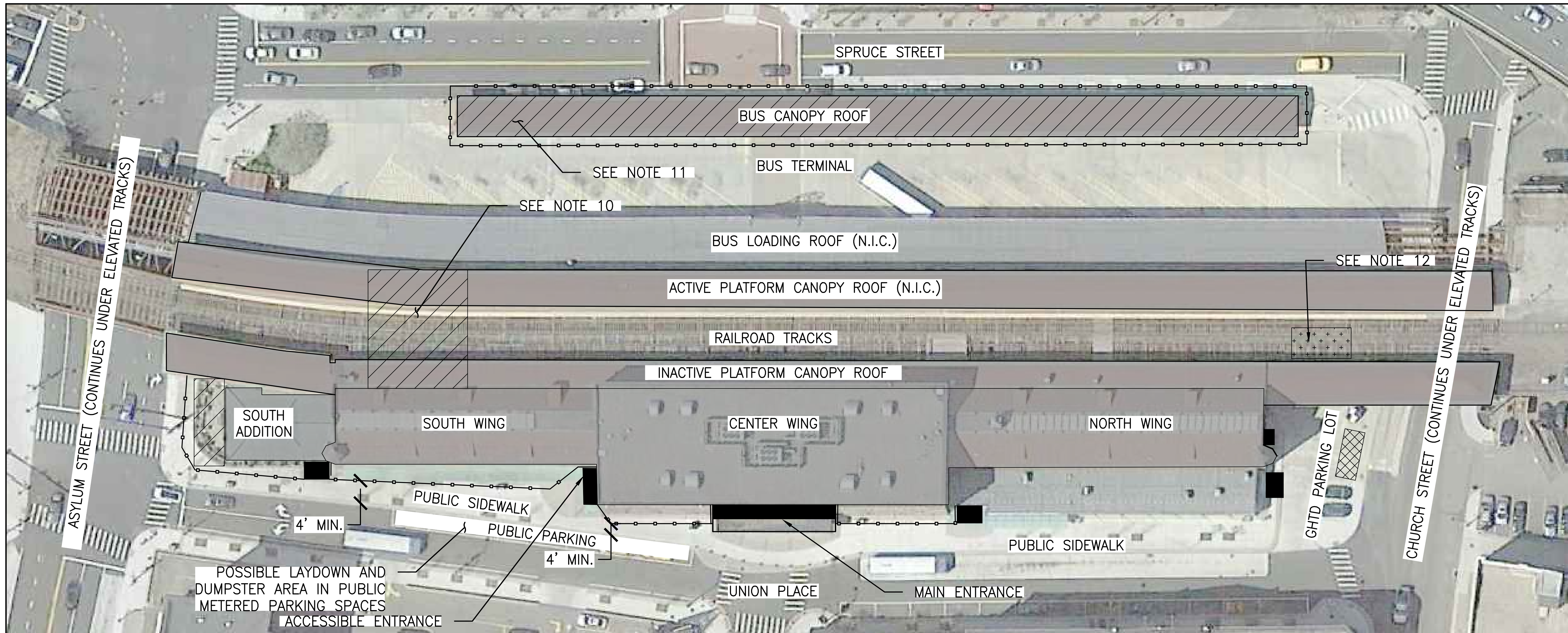
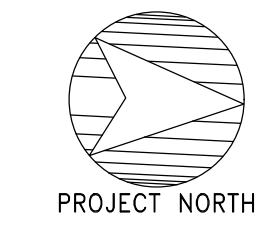
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Greater Hartford Transit District

GHTD PROJECT NO. 02-021

Consultant



PERMIT SET

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
 1 UNION PLACE, HARTFORD, CT

SITE PLAN

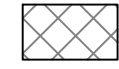

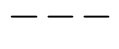
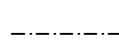
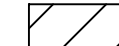


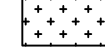

Drawing Title

1 SITE PLAN

SCALE: NTS

Project No. 191971.00	Checked JCD/KSW	Date 05/03/2021
Drawn RML	Approved MBB	Scale AS NOTED
Seal		Drawing No. R-0.1

LEGEND

-  AREA OF WORK, SEE DETAIL 1/R-2.0 FOR ROOFING SYSTEM AND 2/R-2.0 FOR TRANSITION BETWEEN NEW AND EXISTING ROOFING SYSTEMS
-  (E) VENT PENETRATION, SEE DETAIL 5/R-2.0
-  (E) SNOW FENCE TO REMAIN
-  REMOVE AND REINSTALL (E) SNOW FENCE, SEE DETAIL 8/R-2.1
-  (E) RISING MASONRY WALL
-  (E) DOWNLEADER, TO REMAIN
-  (E) EXPANSION JOINT IN COPPER GUTTER
-  (E) SNOW CLEATS, PROVIDE NEW AT AREAS OF NEW CLAY TILE ROOFING, SEE DETAIL 7/R-2.1
-  ROOF WORK NOT DESCRIBED ON THIS SHEET, REFER TO OTHER SHEETS AS INDICATED FOR SCOPE OF WORK.

NOTE: SURVEY THE EXISTING CLAY TILE ROOFING TO REMAIN TO IDENTIFY ALL CRACKED, CHIPPED, LOOSE, OR MISSING CLAY ROOF TILE. REMOVE AND REPLACE ALL ROOF TILE THAT ARE LOOSE OR MISSING, OR ROOF TILE WITH CRACKS GREATER THAN 2 IN. LONG OR CHIPS GREATER THAN 4 SQ. IN. REFER TO DETAIL 3/R-2.0 FOR INDIVIDUAL CLAY ROOF TILE REPLACEMENT.

SUMMARY SCOPE OF WORK - CLAY TILE ROOFING

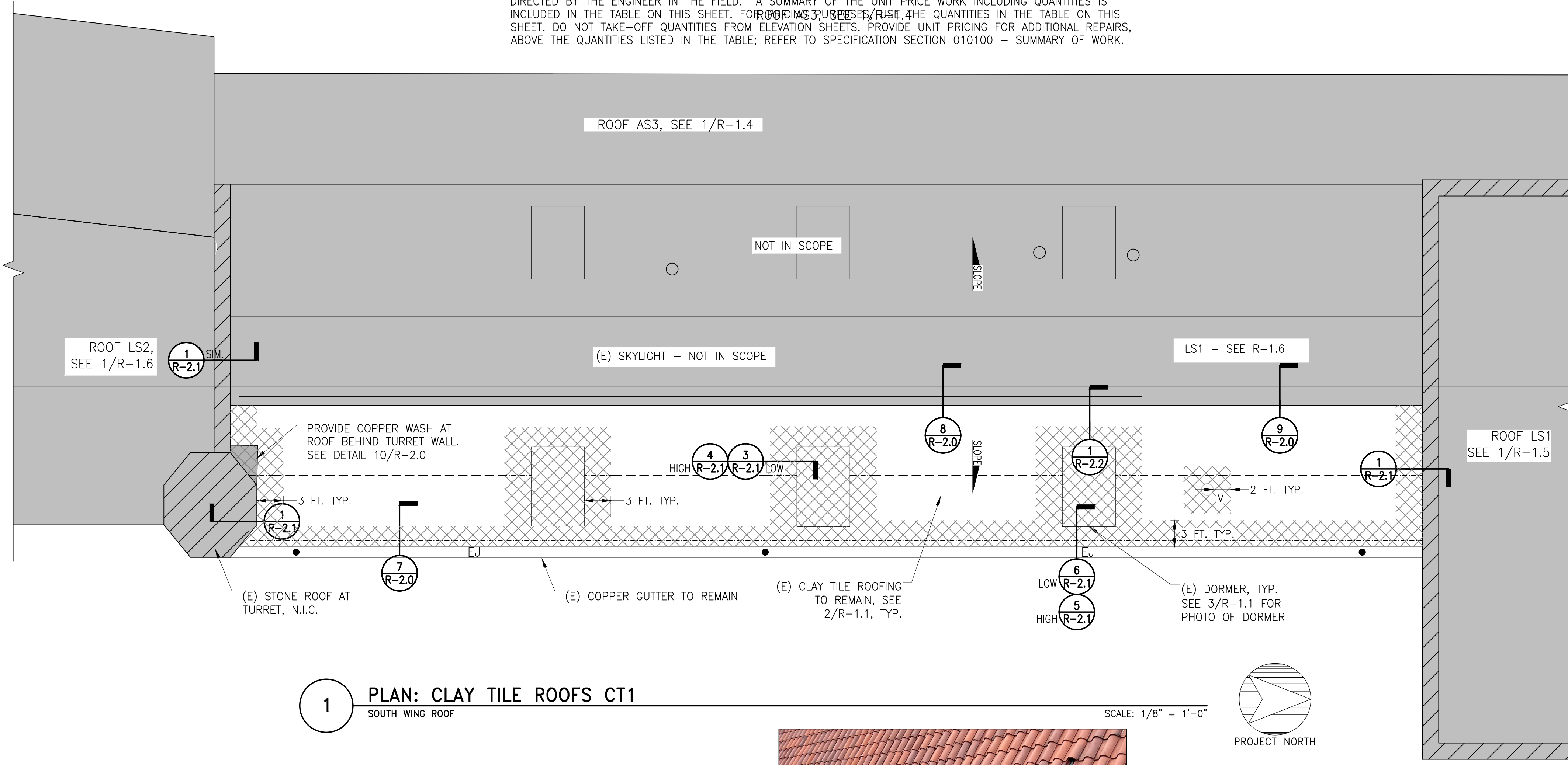
NOTE: THIS SUMMARY SCOPE OF WORK IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR, AS AN OVERVIEW INTRODUCTION TO THE SCOPE OF WORK INCLUDED IN THE DRAWINGS AND SPECIFICATIONS, WHICH SUPERSEDE THIS OVERVIEW SUMMARY, REVIEW THE DRAWINGS AND SPECIFICATIONS THOROUGHLY FOR THE FULL SCOPE OF WORK.

BASE BID

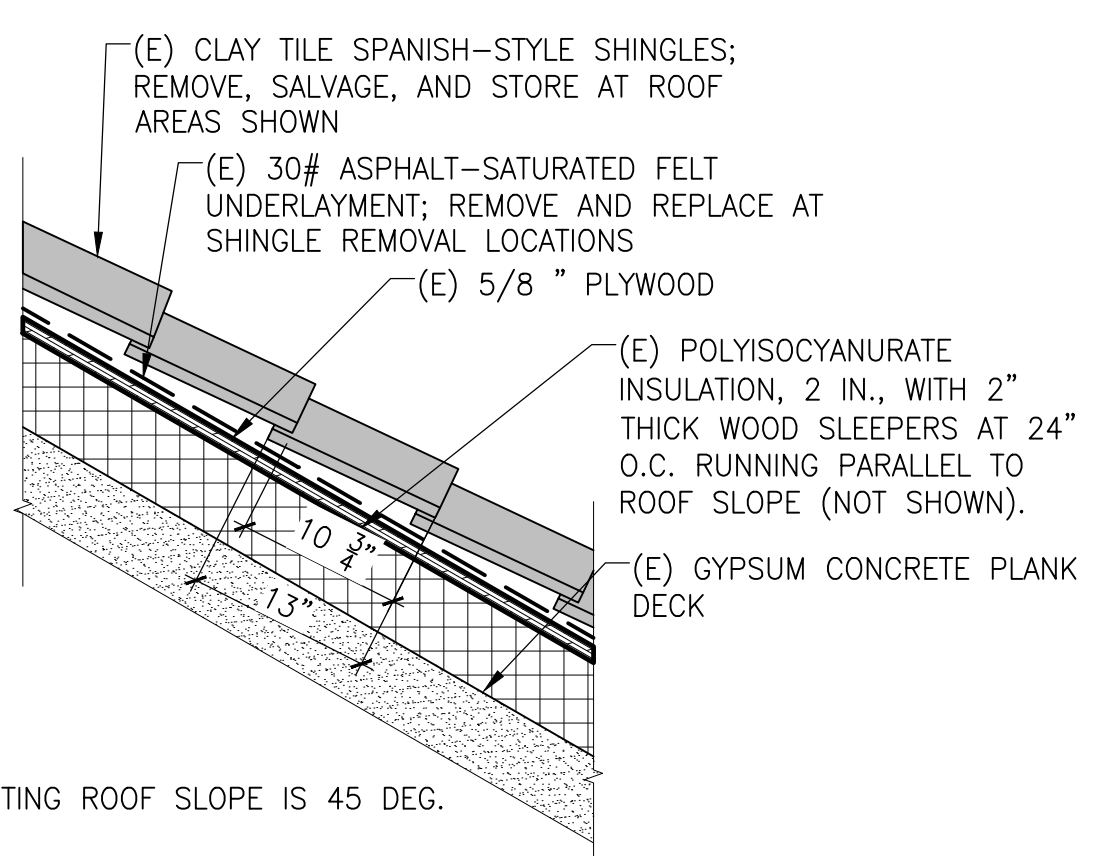
- A. ROOF CT1: STEEP-SLOPED ROOFS AT NORTH AND SOUTH WINGS
1. REMOVE THE EXISTING CLAY TILE ROOFING AT THE LOCATIONS SHOWN ON THE DRAWINGS, INCLUDING AT THE PERIMETER OF THE ROOF, AT AND AROUND THE ROOF DORMERS, AND AT ROOF PENETRATIONS. REMOVE EXISTING ROOFING DOWN TO PLYWOOD ROOF SHEATHING (TO REMAIN). REMOVE THE CLAY ROOF TILES, FELT UNDERLAYMENT, AND METAL FLASHINGS. SALVAGE THE EXISTING, UNDAMAGED, CLAY ROOF TILES FOR REINSTALLATION.
 2. REMOVE AND REPLACE INDIVIDUAL EXISTING DAMAGED ROOF TILE AT AREAS OF CLAY TILE ROOFING TO REMAIN.
 3. PROVIDE NEW SELF-ADHERED MEMBRANE UNDERLAYMENT AT THE PERIMETER OF THE ROOF, AT AND AROUND DORMERS, AND AT ROOF PENETRATIONS, AS SHOWN ON THE DRAWINGS. PROVIDE NEW FELT PROTECTION LAYER OVER SELF-ADHERED MEMBRANE. INTEGRATE SELF-ADHERED MEMBRANE UNDERLAYMENT WITH EXISTING FELT UNDERLAYMENT TO REMAIN.
 4. PROVIDE NEW COPPER FLASHING AT THE CLAY TILE ROOFING INCLUDING: COPPER CLADDING AT DORMER SIDE WALLS, STEP FLASHING AT RISING WALLS (AT DORMERS AND RAKES), RIDGE FLASHING, PIPE PENETRATION FLASHING, FLASHING AT DORMER ROOFS, AND EAVE FLASHING. INTEGRATE METAL FLASHING WITH THE NEW SELF-ADHERED MEMBRANE UNDERLAYMENT.
 5. REINSTALL EXISTING CLAY ROOF TILES, REPLACE DAMAGED ROOF TILES IN-KIND.
 6. REMOVE AND REINSTALL THE EXISTING SNOW FENCE AT THE SOUTH WING EAST ELEVATION. RE-USE EXISTING BASE PLATES AND PROVIDE NEW RAILS.
 7. PROVIDE NEW SNOW CLEATS AT THE NORTH WING EAST ELEVATION, AND AT THE WEST ELEVATION OF THE NORTH AND SOUTH WINGS.
- B. ON A UNIT PRICE BASIS, UNDERTAKE LOCALIZED ROOFING REPAIRS AT EACH ROOFING LOCATION, WHERE DIRECTED BY THE ENGINEER IN THE FIELD. A SUMMARY OF THE UNIT PRICE WORK INCLUDING QUANTITIES IS INCLUDED IN THE TABLE ON THIS SHEET. FOR PRICING PURPOSES, USE THE QUANTITIES IN THE TABLE ON THIS SHEET. DO NOT TAKE-OFF QUANTITIES FROM ELEVATION SHEETS. PROVIDE UNIT PRICING FOR ADDITIONAL REPAIRS, ABOVE THE QUANTITIES LISTED IN THE TABLE; REFER TO SPECIFICATION SECTION 010100 - SUMMARY OF WORK.

UNIT PRICE QUANTITIES FOR CLAY TILE ROOFING TO BE INCLUDED IN THE BASE BID (TOTAL FOR ALL CLAY TILE ROOF AREAS)

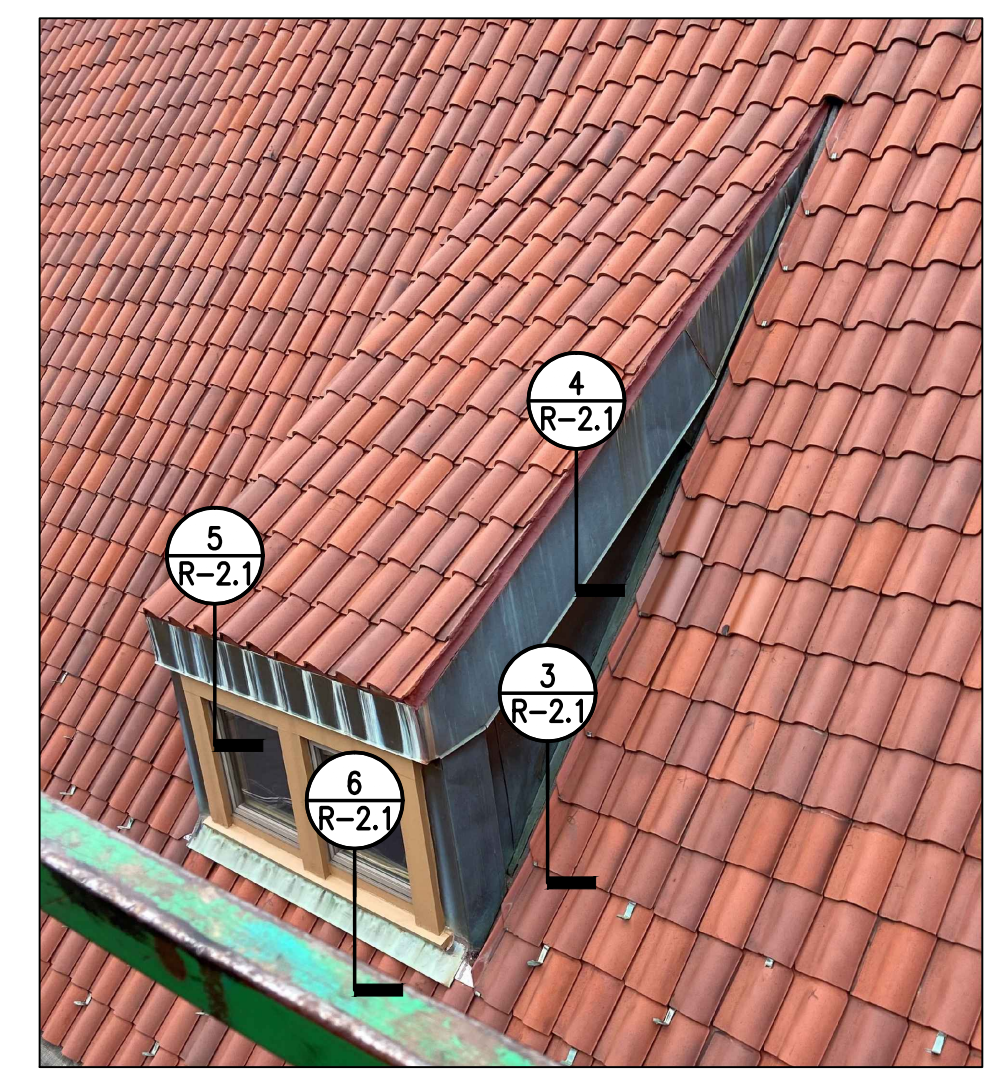
ITEM	QUANTITY	UNIT
REMOVE AND REPLACE DETERIORATED PLYWOOD ROOF SHEATHING AND ROOF INSULATION	80	SF
REPLACE INDIVIDUAL LOOSE, MISSING, OR DAMAGED CLAY ROOF TILES IN THE FIELD OF THE ROOF (NOT INCLUDING ROOF TILES DAMAGED FROM REMOVAL)	60	EA
REPAIR CRACKED SOLDER JOINTS IN THE EXISTING COPPER GUTTERS TO REMAIN BY REMOVING THE EXISTING SOLDER AND RESOLDERING	10	LF
REPAIR HOLES IN THE EXISTING COPPER GUTTERS TO REMAIN BY SOLDERING A COPPER PATCH OVER THE EXISTING HOLE OR TEAR	5	EA



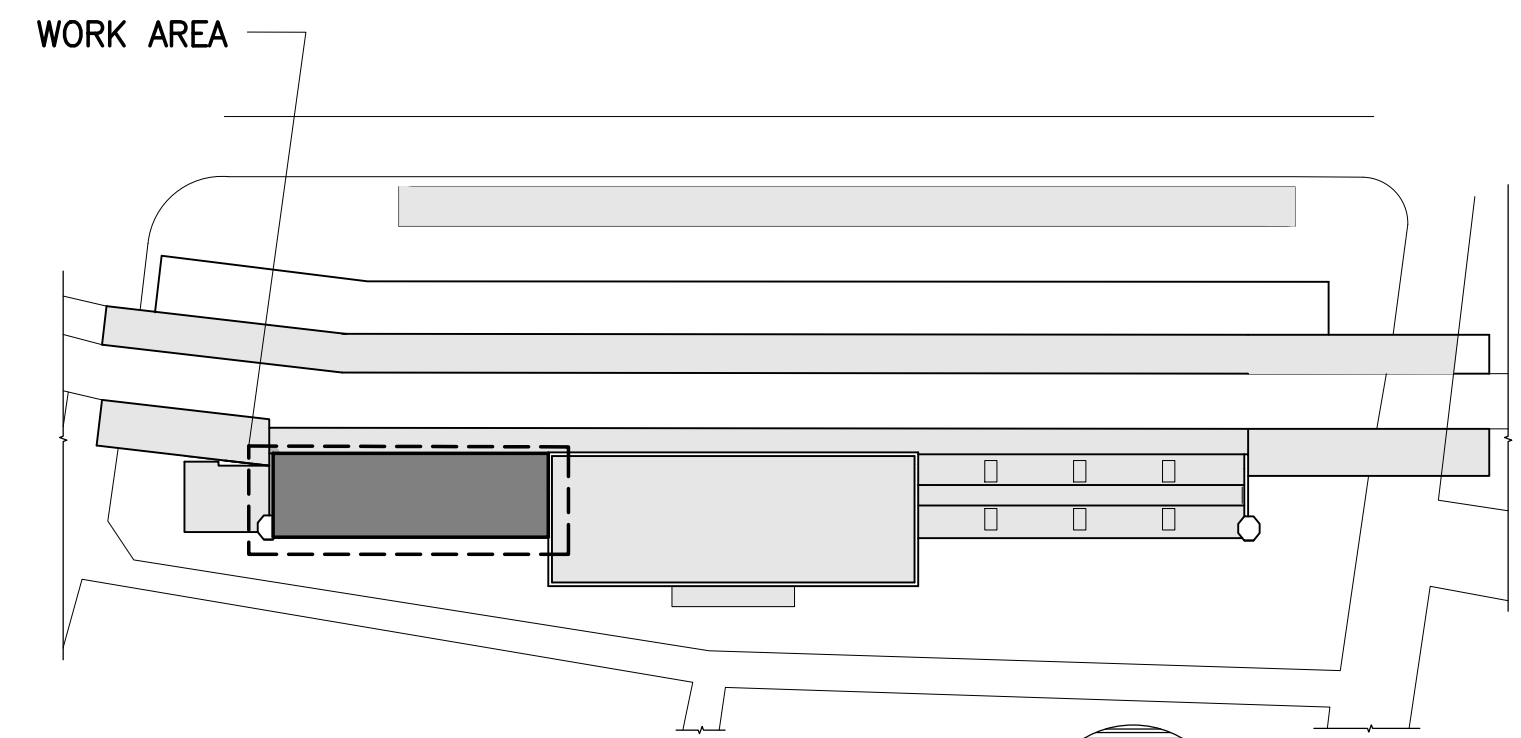
1 PLAN: CLAY TILE ROOFS CT1 SOUTH WING ROOF SCALE: 1/8" = 1'-0"



2 EXISTING ROOFING SYSTEM N.T.S.



3 PHOTO OF (E) DORMER N.T.S.



KEY PLAN

SIMPSON GUMPERTZ & HEGER
Engineering of Structures and Building Enclosures

Simpson Gumpertz & Heger Inc.
480 Totten Pond Road
Waltham, Massachusetts 02451
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Greater Hartford Transit District

GHTD PROJECT NO. 02-021

Consultant

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
1 UNION PLACE, HARTFORD, CT

CLAY TILE ROOF PLANS: SOUTH WING

Project No. 191971.00	Checked JCD/KSW	Date 05/03/2021
Drawn RML	Approved MBB	Scale AS NOTED

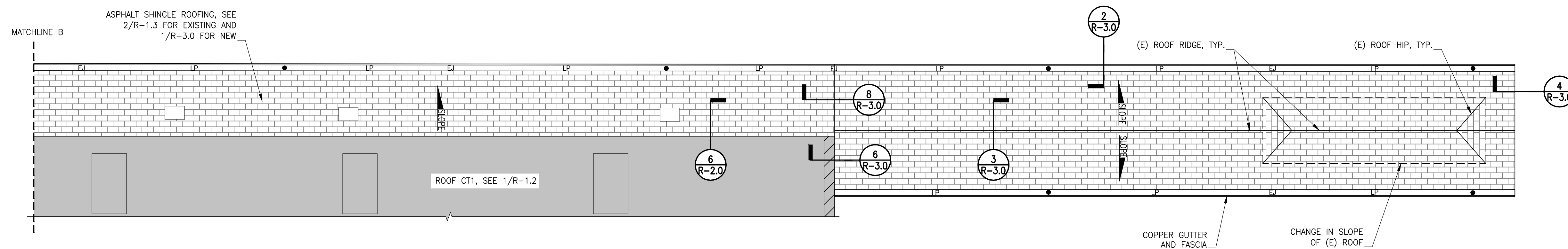
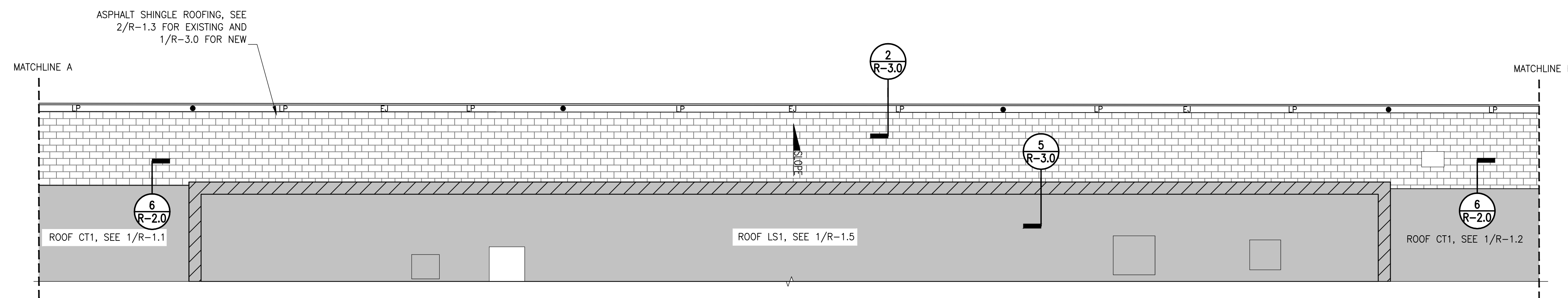
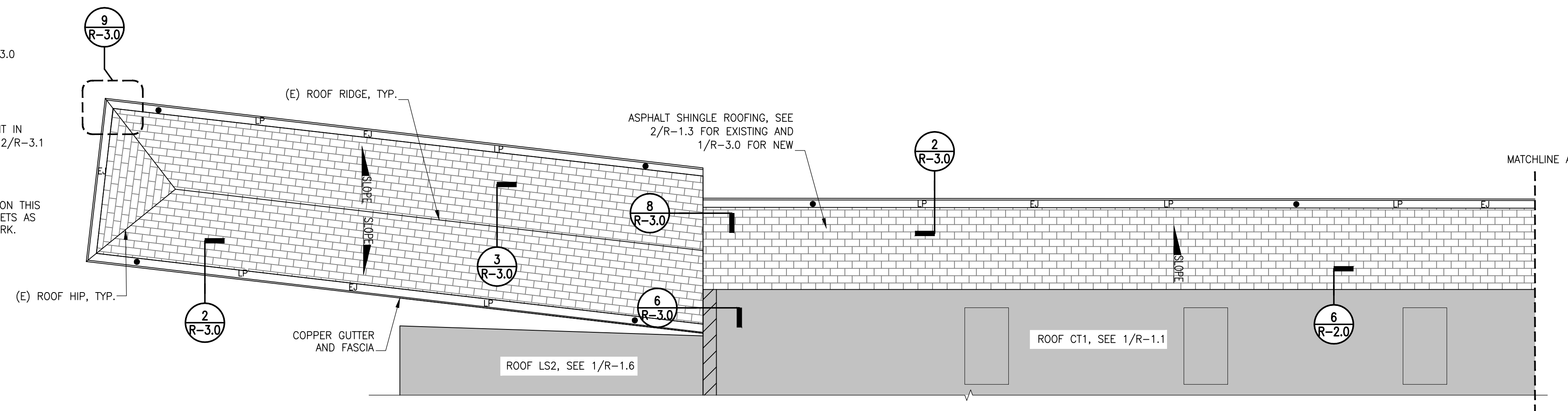
Seal

Drawing No.
R1.1

LEGEND

- (E) DOWNLEADER, TO REMAIN
- (E) DUCT, SEE DETAIL 10/R-3.0
- EJ EXPANSION JOINT IN COPPER GUTTER, SEE DETAIL 1/R-3.1
- LP LOW-PROFILE EXPANTION JOINT IN COPPER GUTTER, SEE DETAIL 2/R-3.1
- ▨ (E) RISING MASONRY WALL
- ROOF WORK NOT DESCRIBED ON THIS SHEET. REFER TO OTHER SHEETS AS INDICATED FOR SCOPE OF WORK.

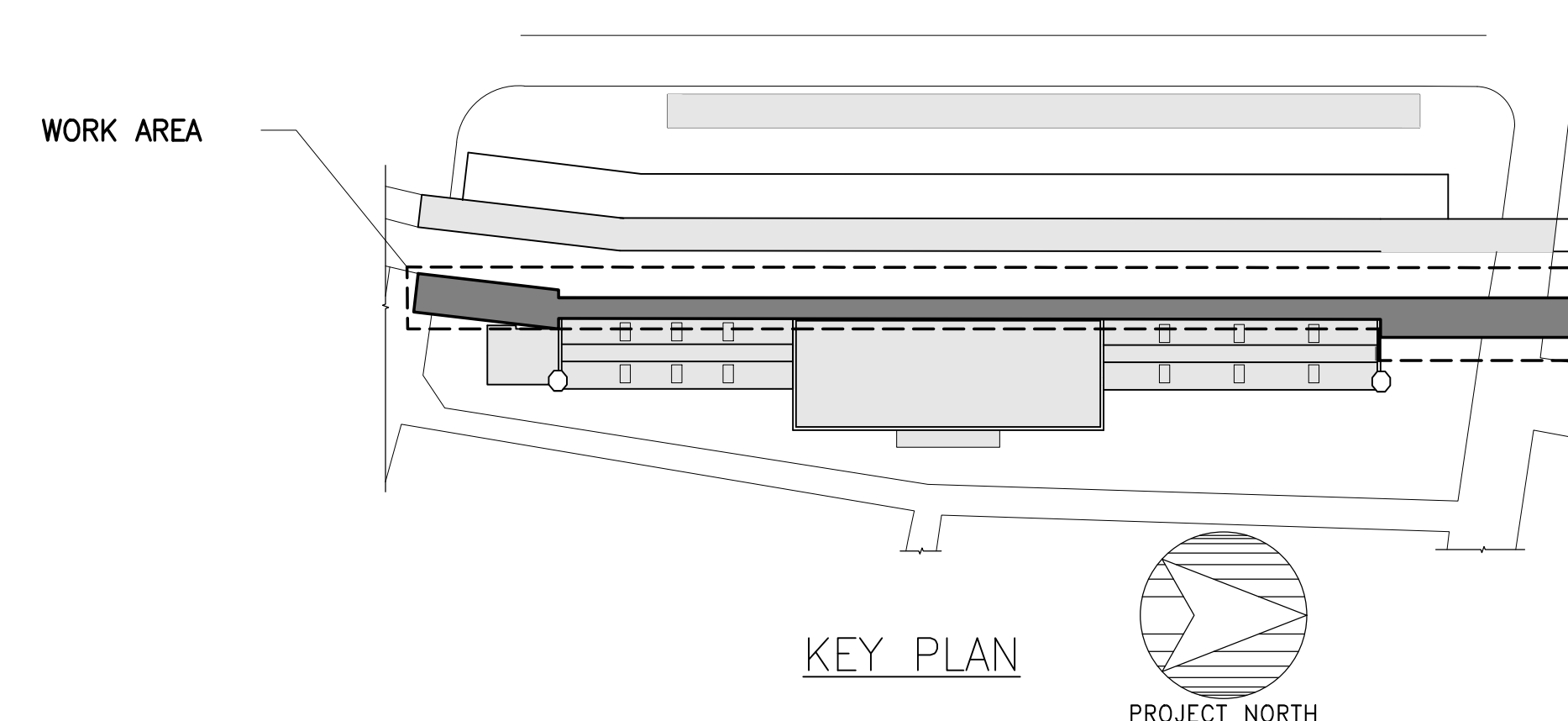
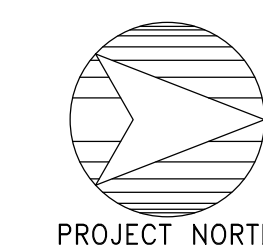
NOTE: SEE R-1.3 FOR SUMMARY SCOPE OF WORK



NOTE: REMOVE AND REPLACE (E) BIRD NETTING AT THE UNDERSIDE OF THE ENTIRE CANOPY ROOF

1 PLAN: ASPHALT SHINGLE ROOF – ADD ALTERNATE AS3
INACTIVE PLATFORM CANOPY ROOF

SCALE: 3/32" = 1'-0"



PERMIT SET

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
1 UNION PLACE, HARTFORD, CT

ASPHALT SHINGLE ROOF PLANS ADD ALTERNATE #AS3

Project No. 191971.00	Checked JCD/KSW	Date 05/03/2021
Drawn RML	Approved MBB	Scale AS NOTED
Drawing No.		

Seal

R-1.4

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
 1 UNION PLACE, HARTFORD, CT

LOW SLOPE ROOF PLAN AT SOUTH ADDITION

Project No. 191971.00	Checked JCD/KSW	Date 05/03/2021
Drawn RML	Approved MBB	Scale AS NOTED

Drawing Title
 Drawing No.
R-1.6

SUMMARY SCOPE OF WORK - PVC ROOFING

NOTE: THIS OVERVIEW SUMMARY SCOPE OF WORK IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR, AS AN OVERVIEW INTRODUCTION TO THE SCOPE OF WORK INCLUDED IN THE DRAWINGS AND SPECIFICATIONS, WHICH SUPERSEDE THIS OVERVIEW SUMMARY, REVIEW THE DRAWINGS AND SPECIFICATIONS THOROUGHLY FOR THE FULL SCOPE OF WORK.

- BASE BID**
- ROOF LS2: LOW-SLOPE ROOF AT SOUTH ADDITION
 - REMOVE THE EXISTING FLAT-SEAM COPPER ROOFING INCLUDING COPPER ROOFING AND FLASHING, AND FELT UNDERLAYMENT, DOWN TO THE EXISTING WOOD DECK BOARDS (TO REMAIN).
 - PROVIDE NEW PVC MEMBRANE ROOFING SYSTEM CONSISTING OF (FROM BOTTOM TO TOP): PLYWOOD ROOF SHEATHING FASTENED TO THE EXISTING WOOD ROOF DECK, ADHERED VAPOR RETARDER MEMBRANE, INSULATION, COVER BOARD FASTENED TO THE PLYWOOD SHEATHING, PVC ROOFING MEMBRANE ADHERED WITH HEAT-WELDED SEAMS. PROVIDE PVC FLASHING MEMBRANE AT ROOF PENETRATIONS. PROVIDE CUSTOM-COLOR PVC MEMBRANE.
 - PROVIDE PLYWOOD AND WOOD BLOCKING ASSOCIATED WITH REPLACEMENT ROOFING SYSTEM, AT LOCATIONS SHOWN ON THE DRAWINGS AND WHERE REQUIRED BY THE ROOFING SYSTEM MANUFACTURER.
 - PROVIDE ROOF WALKWAY PADS AT LOCATIONS INDICATED ON THE DRAWINGS.
 - PROVIDE COPPER FLASHINGS AT ROOF PENETRATIONS, EAVES, AND AT RISING WALLS.
 - REMOVE EXISTING COPPER GUTTER AND PROVIDE NEW COPPER GUTTER WITH NEW ZINC-TIN COATED COPPER DOWNLEADERS.
- B.** ON A UNIT PRICE BASIS, UNDERTAKE OF LOCALIZED ROOFING REPAIRS AT EACH ROOFING LOCATION, WHERE DIRECTED BY THE ENGINEER IN THE FIELD. A SUMMARY OF THE UNIT PRICE WORK INCLUDING QUANTITIES IS INCLUDED IN THE TABLE ON THIS SHEET. FOR PRICING PURPOSES, USE THE QUANTITIES IN THE TABLE ON THIS SHEET. DO NOT TAKE-OFF QUANTITIES FROM ELEVATION SHEETS. PROVIDE UNIT PRICING FOR ADDITIONAL REPAIRS, ABOVE THE QUANTITIES LISTED IN THE TABLE; REFER TO SPECIFICATION SECTION 010100 - SUMMARY OF WORK.

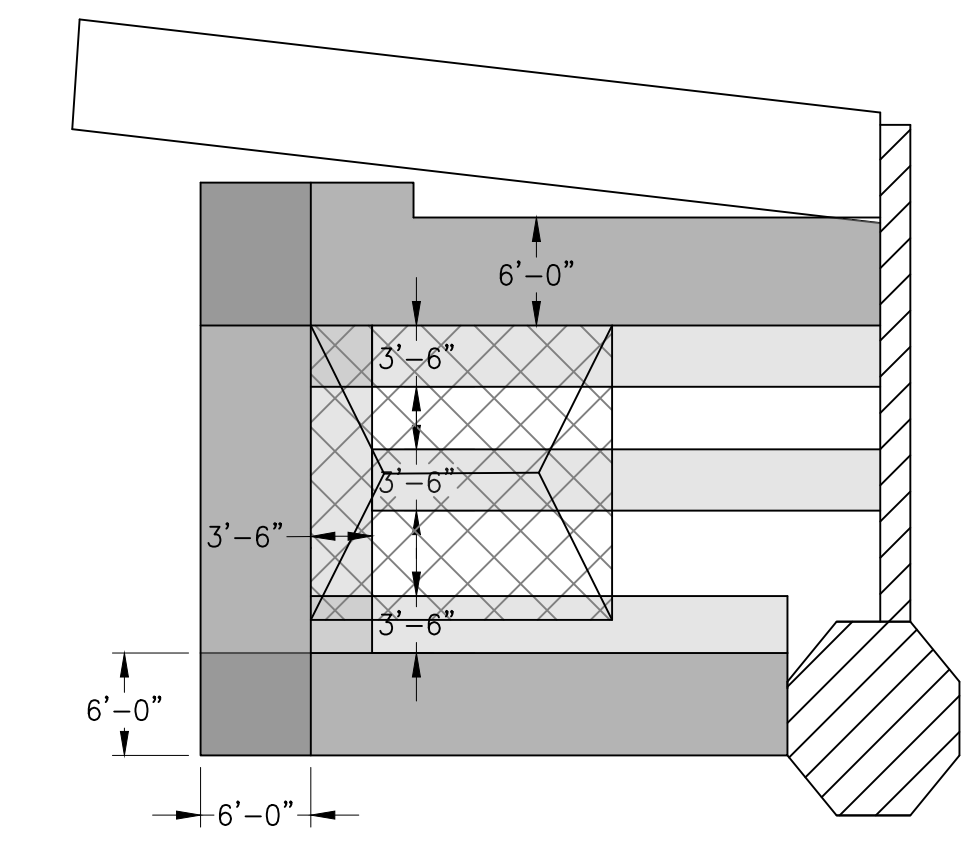
UNIT PRICE QUANTITIES FOR PVC ROOFING TO BE INCLUDED IN THE BASE BID TOTAL FOR LS2

ITEM	QUANTITY	UNIT
ROOF LS2: REMOVE AND REPLACE DETERIORATED WOOD ROOF BOARDS	20	SF

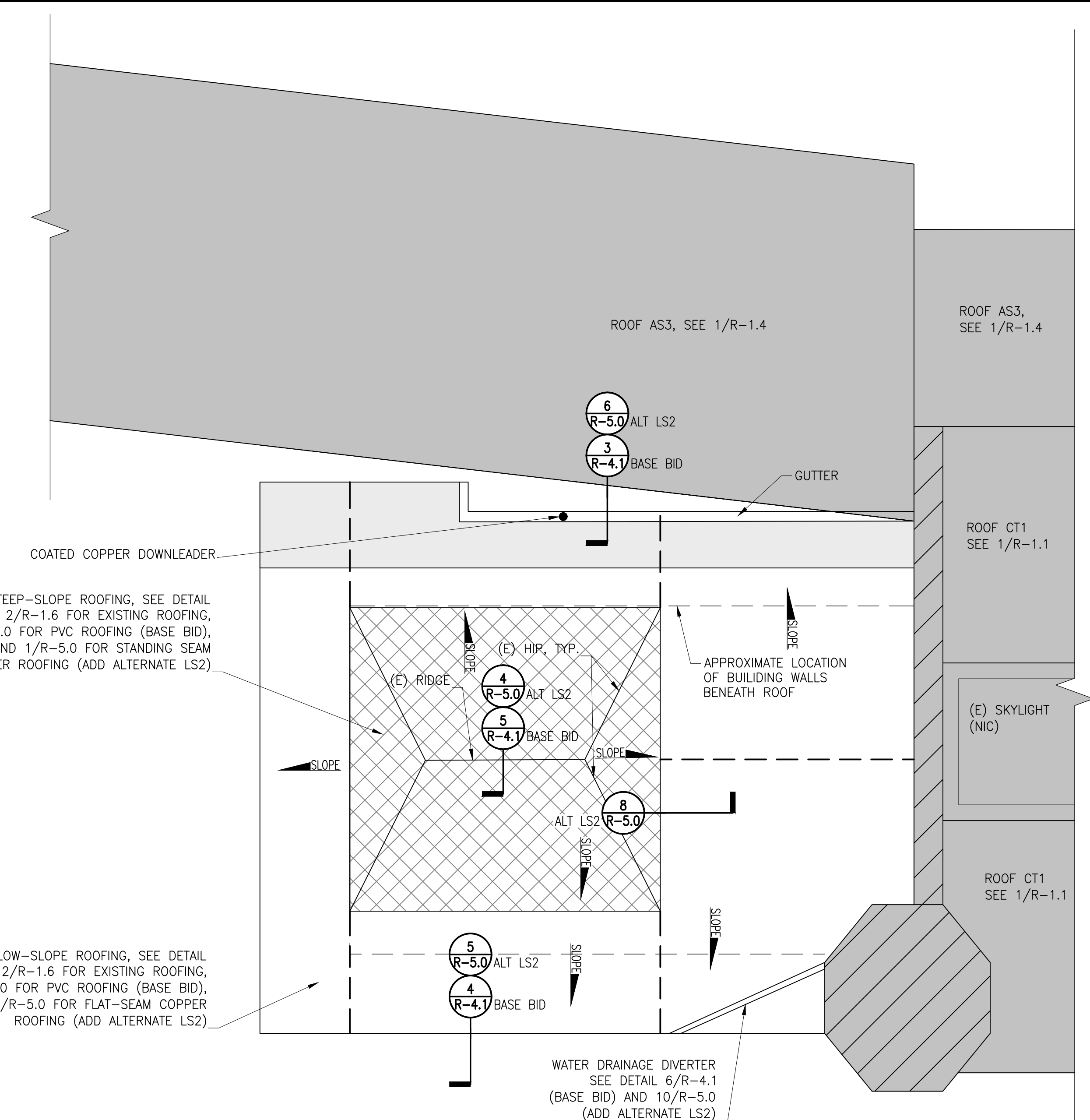
- ADD ALTERNATE**
- ADD ALTERNATE #LS2: IN LIEU OF NEW PVC ROOFING, PROVIDE NEW COPPER ROOFING CONSISTING OF (FROM BOTTOM TO TOP): PLYWOOD SHEATHING, SELF-ADHERED HIGH TEMPERATURE MEMBRANE UNDERLAYMENT, ROSIN PAPER SLIP SHEET, AND COPPER ROOFING AS FOLLOWS:
 - AT LOW-SLOPE AREAS OF THE ROOF PROVIDE FLAT-SEAM COPPER ROOF PANELS WITH FULLY SOLDERED JOINTS EXCEPT AT EXPANSION JOINTS DESIGNED TO ACCOMMODATE THERMAL MOVEMENT.
 - AT STEEP-SLOPE AREAS OF THE ROOF PROVIDE STANDING-SEAM COPPER ROOF PANELS.

- LEGEND**
- (E) MASONRY RISING WALL, SEE DETAIL 2/R-4.1 BASE BID AND DETAIL 7/R-5.0 ADD ALT. #LS2
 - STEEP-SLOPE AREA OF THE ROOF, SEE DETAIL 2/R-4.0 BASE BID AND DETAIL 1/R-5.0 ADD ALT. #LS2
 - ADD ALTERNATE #LS2: EXPANSION JOINT IN FLAT-SEAM COPPER ROOFING. SEE DETAIL 9/R-5.0
 - ROOF WORK NOT DESCRIBED ON THIS SHEET, REFER TO OTHER SHEETS AS INDICATED FOR SCOPE OF WORK
 - WALKWAY PADS - BASE BID ONLY

- LEGEND**
- ZONE 3 OH: OVERHANG CORNER UPLIFT ZONE
 - ZONE 2 OH: OVERHANG PERIMETER UPLIFT ZONE
 - ZONE 3: CORNER UPLIFT ZONE
 - ZONE 2: PERIMETER UPLIFT ZONE
 - ZONE 1: FIELD UPLIFT ZONE

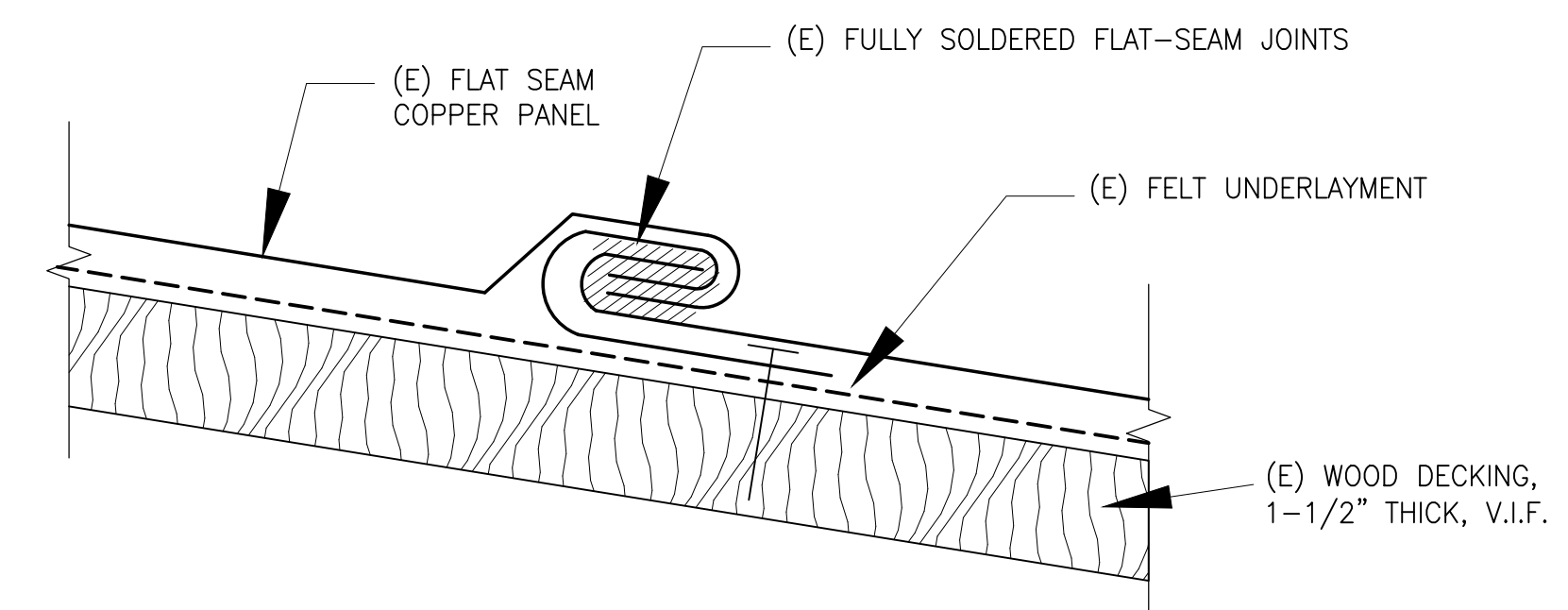


NOTE: REFER TO THE SPECIFICATIONS FOR WIND UPLIFT PRESSURES.
3 PLAN: WIND UPLIFT ZONES N.T.S.

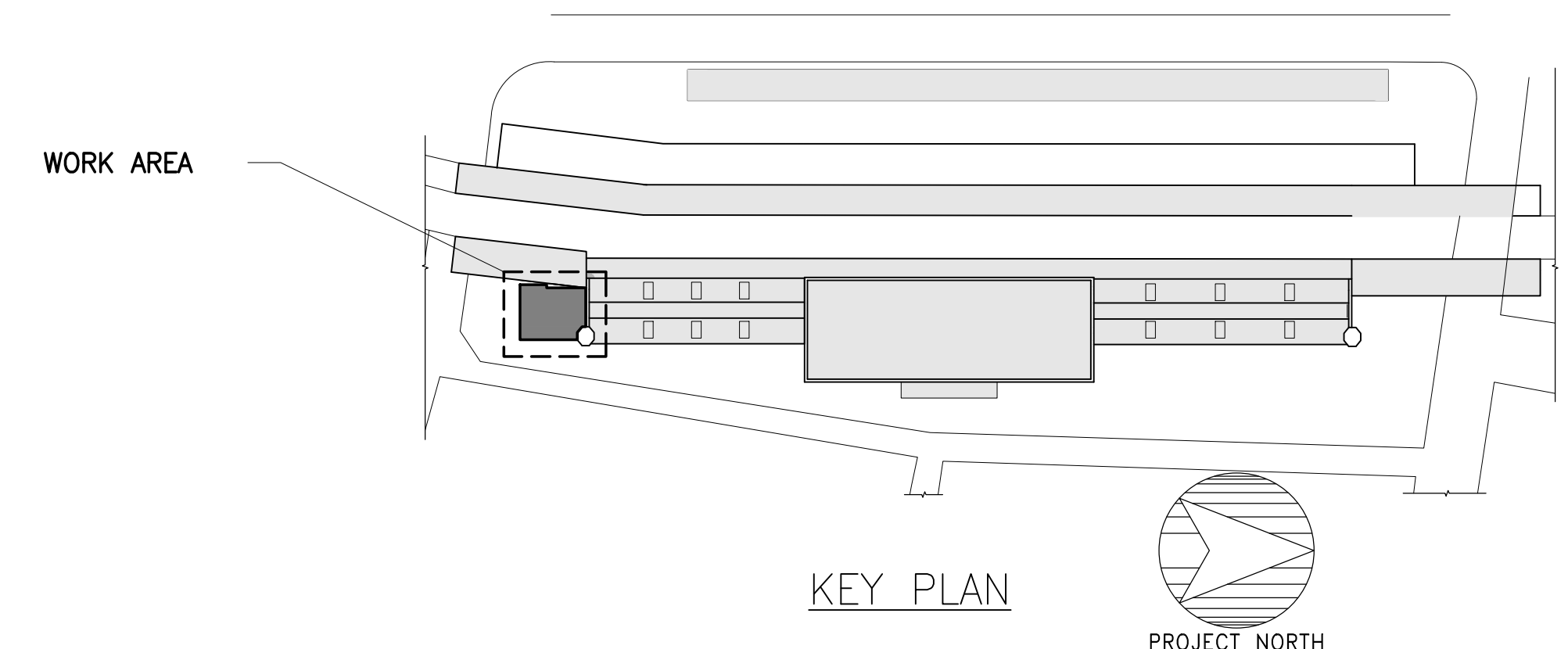


1 PLAN: LOW-SLOPE ROOF LS2
 SOUTH ADDITION

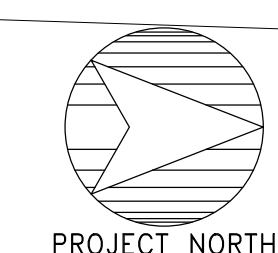
SCALE: 3/16" = 1'-0"



2 SECTION: (E) ROOFING SYSTEM AT ROOF LS2 N.T.S.



KEY PLAN



PERMIT SET

PERMIT SET

No.	Date	Description	By

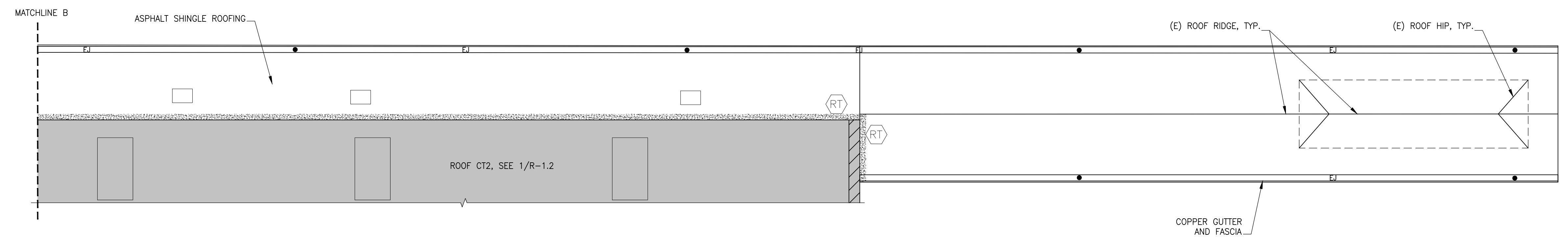
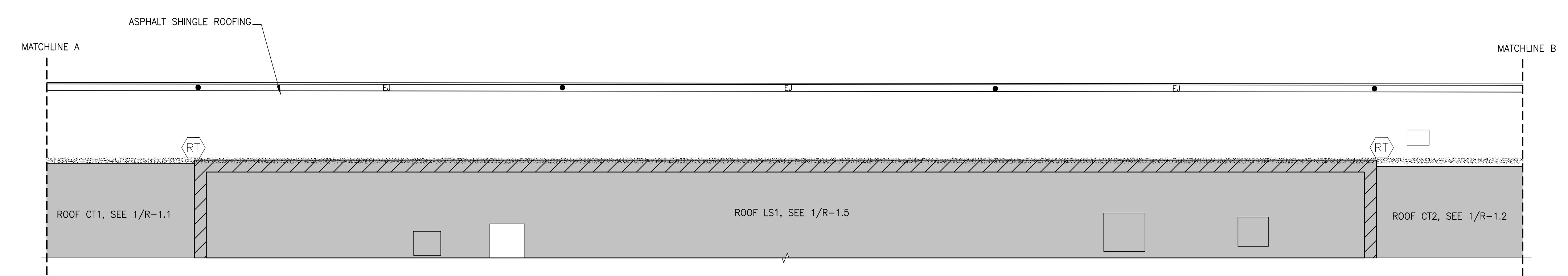
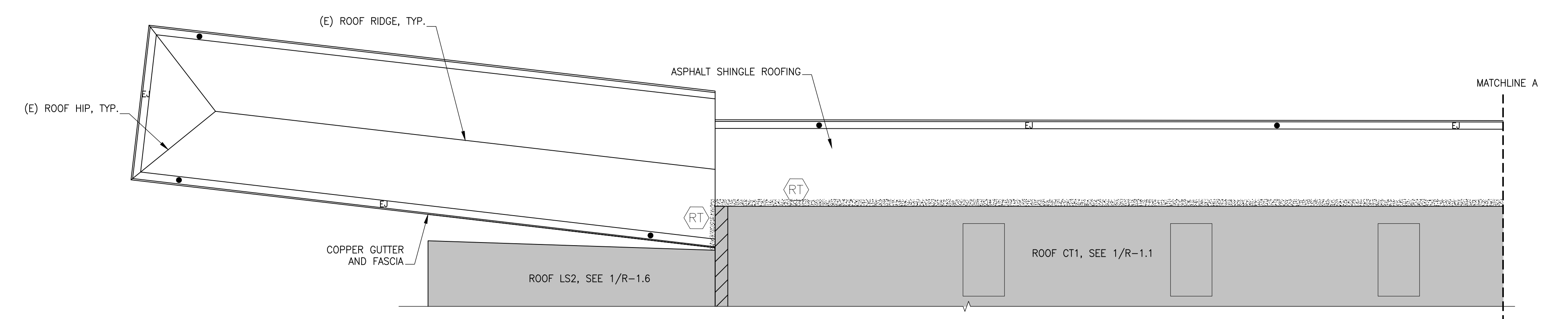
**UNION STATION TRANSPORTATION CENTER
 ROOFING REPAIR/
 REPLACEMENT
 1 UNION PLACE,
 HARTFORD, CT**

Project

ACM ASPHALT SHINGLE ROOF PLAN

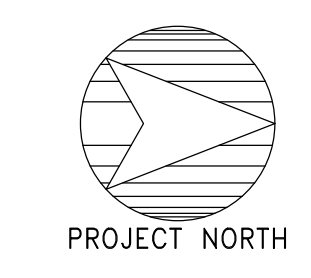
Drawing Title

Project No. 191971.00	Checked SSJ	Date 05/03/2021
Drawn	Approved SSJ	Scale AS NOTED
Seal		Drawing No. ASB-1



1 PLAN: ASPHALT SHINGLE ROOF – ADD ALTERNATE AS3
 INACTIVE PLATFORM CANOPY ROOF

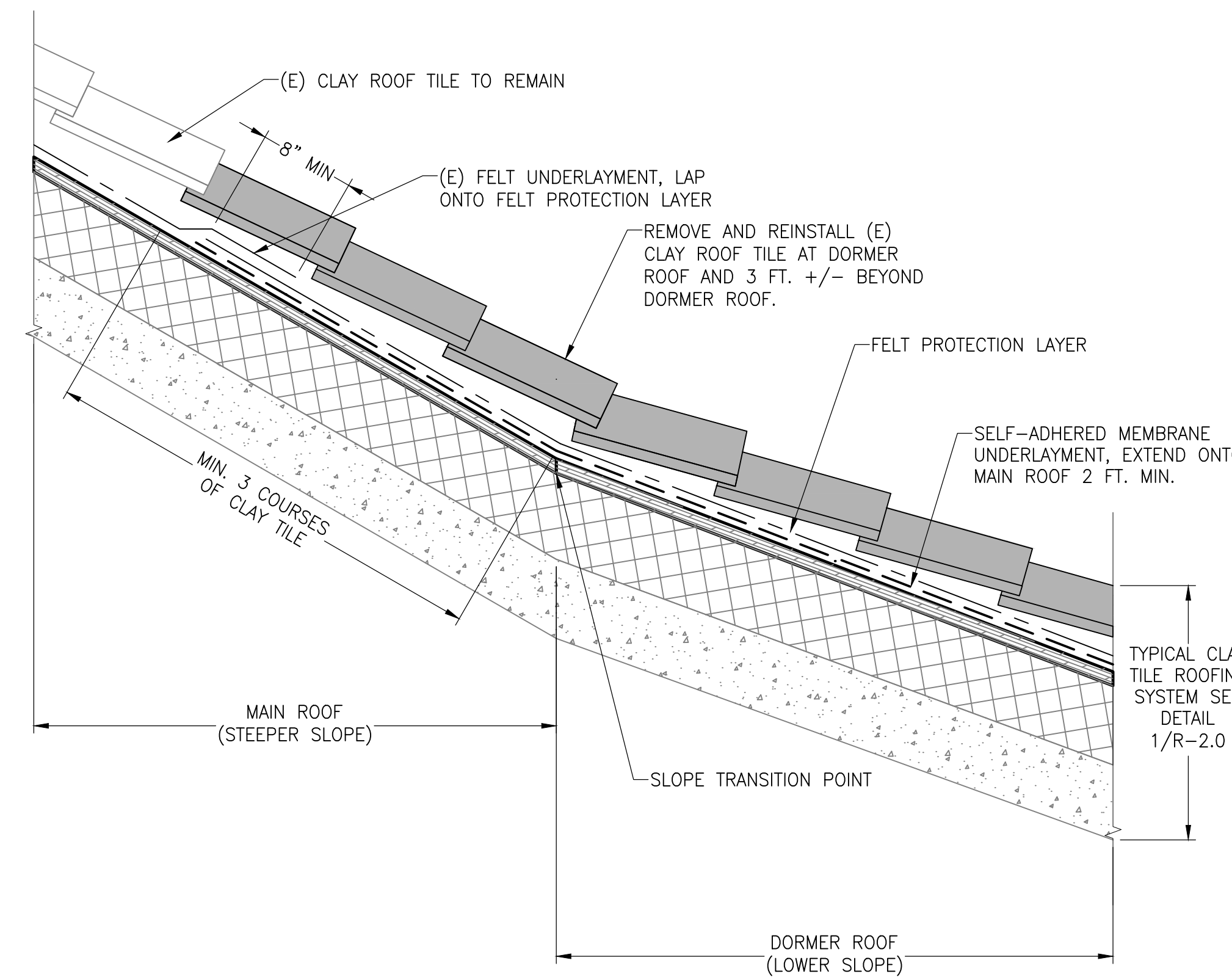
SCALE: 3/32" = 1'-0"



HAZMAT NOTES

- COORDINATE ALL HAZMAT WORK WITH DEMO WORK INCLUDED ON OTHER CONTRACT DRAWINGS AND THE PROJECT SPECIFICATIONS.
- ESTABLISH ENGINEERING CONTROLS PRIOR TO ANY REMOVAL, DEMOLITION OR ABATEMENT ACTIVITIES THAT MAY DISTURB ACM.
- VERIFY IN FIELD ALL ASBESTOS MATERIAL THAT WILL BE DISTURBED AND VERIFY LOCATIONS.

GENERAL LEGEND	
XX#	ROOF NAME
•	(E) DOWNLEADER
□	(E) DUCT. SEE DETAIL 10/R-3.0
(N)	(N) DOWNLEADER
EJ	EXPANSION JOINT IN COPPER GUTTER. SEE DETAIL X/RXX
▨	(E) RISING MASONRY WALL
HAZMAT LEGEND	
▨	ACM BLACK ROOFING MASTIC/TAR (ROOF PERIMETER)
⬡	ACM BLACK MASTIC/TAR ON STONE



1 SECTION: SLOPE TRANSITION AT TOP OF DORMER
N.T.S

PERMIT SET

No.	Date	Description	By

UNION STATION
TRANSPORTATION
CENTER
ROOFING REPAIR/
REPLACEMENT
1 UNION PLACE,
HARTFORD, CT

CLAY TILE ROOFING
DETAILS

Project No. 191971.00	Checked JCD	Date 05/03/2021
Drawn RML	Approved MBB	Scale AS NOTED
Drawing No.		

R-2.2

No.	Date	Description	By

**UNION STATION
 TRANSPORTATION
 CENTER
 ROOFING REPAIR/
 REPLACEMENT**
 1 UNION PLACE,
 HARTFORD, CT

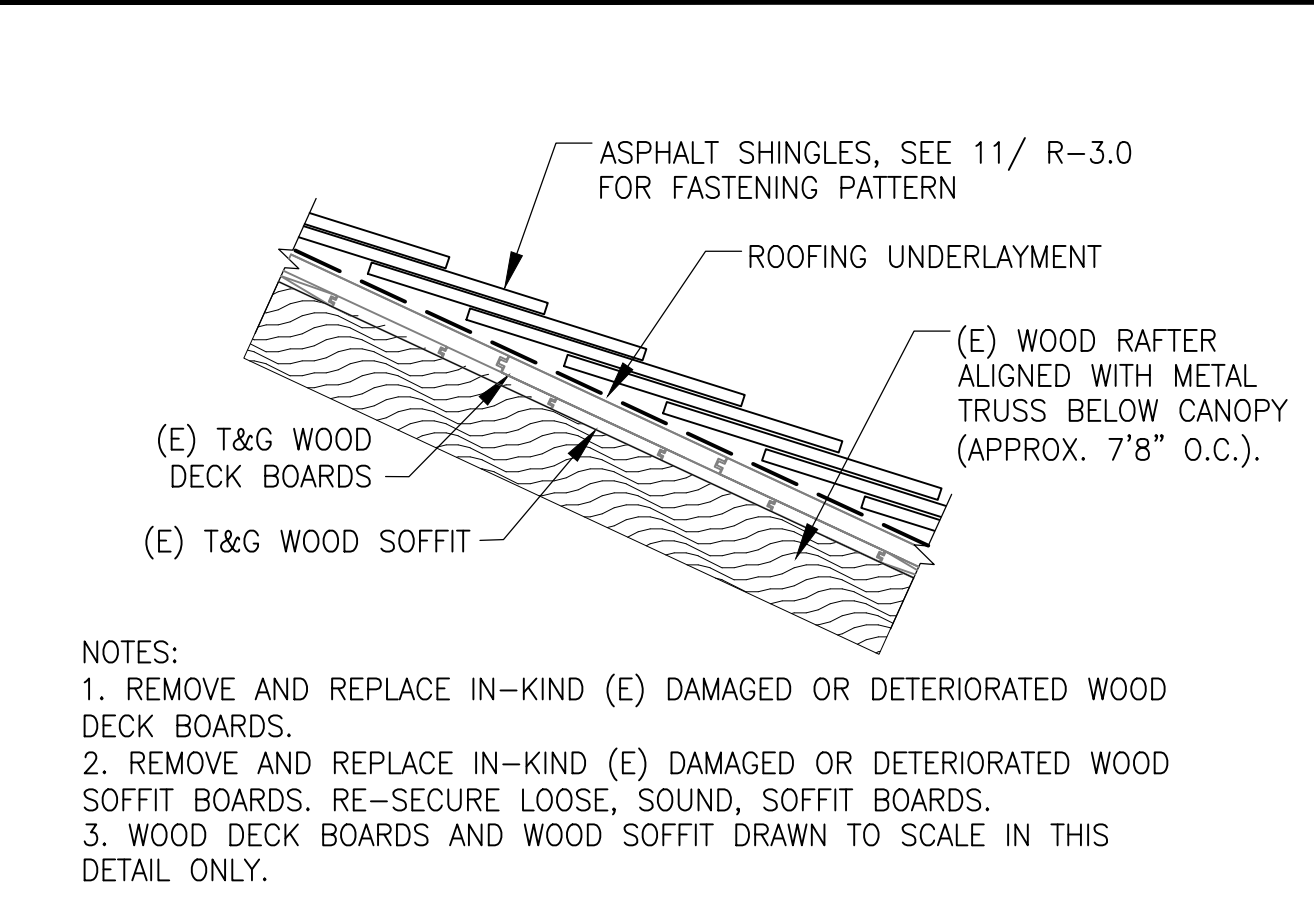
**ASPHALT SHINGLES
 ROOFING DETAILS
 ADD ALTERNATE #AS1
 AND #AS3**

Project No. 191971.00	Checked RML	Date 05/03/2021
Drawn SKW	Approved MBB	Scale AS NOTED

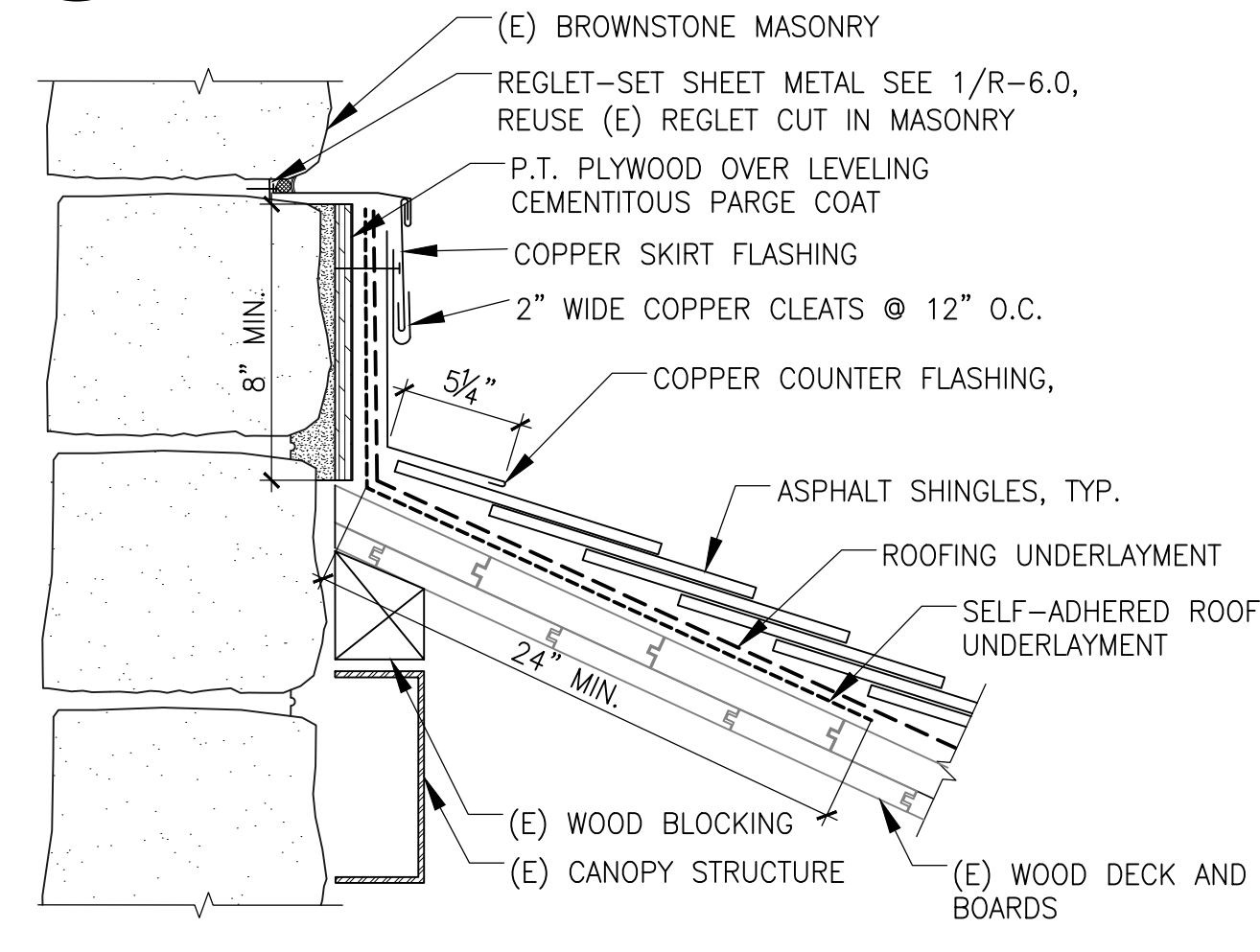
Drawing Title

Seal

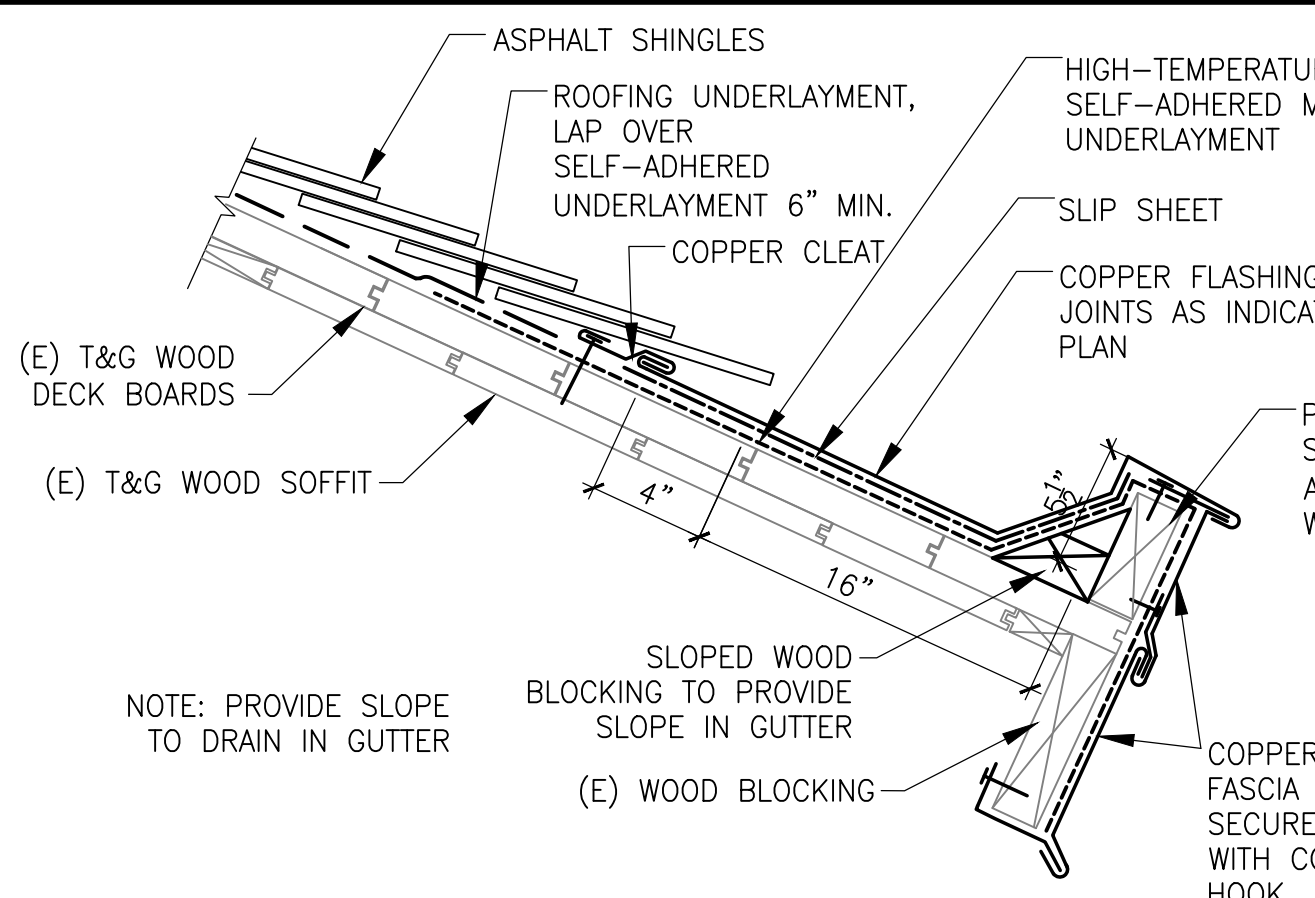
Drawing No.
R-3.0



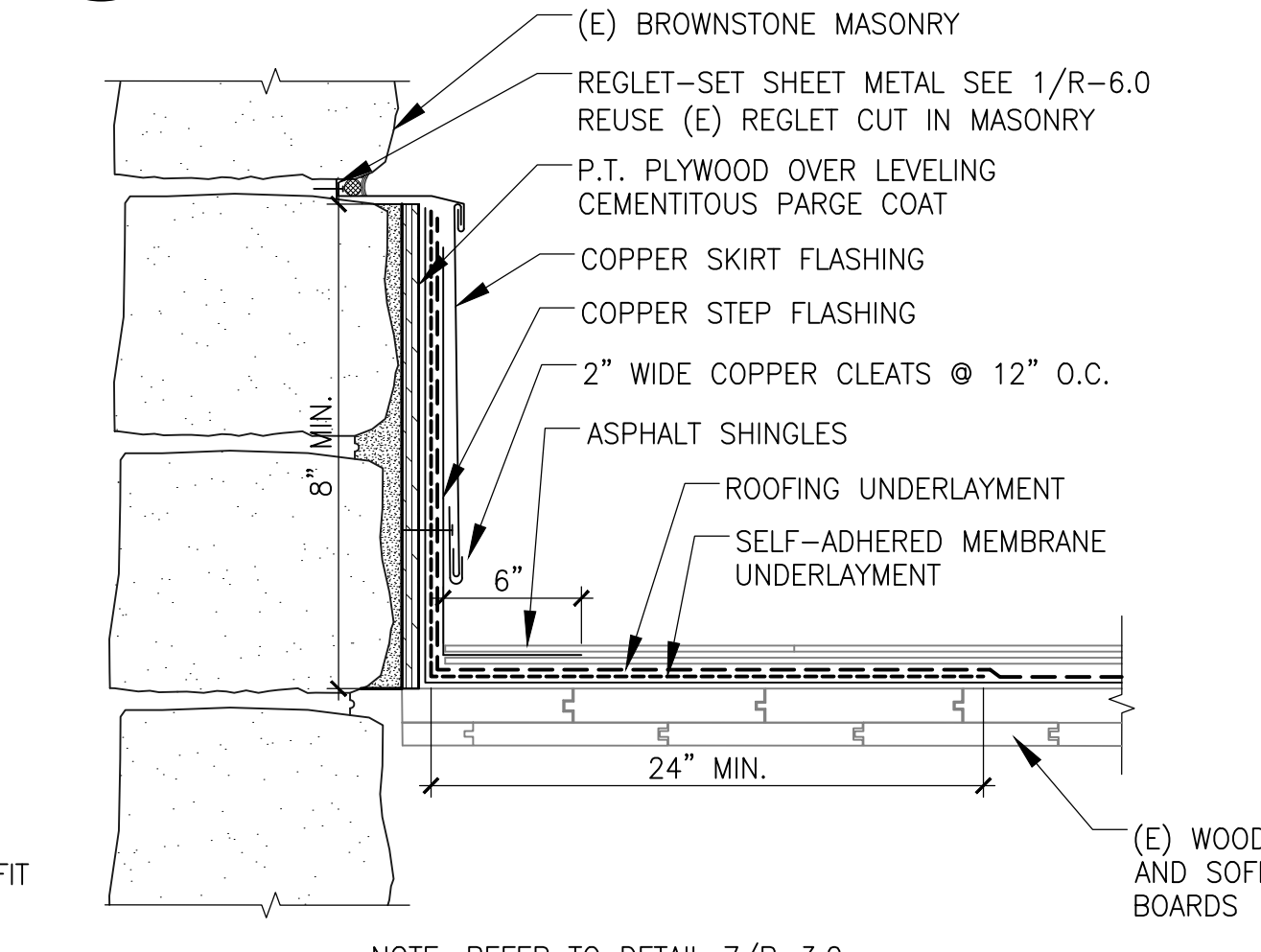
1 SECTION: NEW ASPHALT SHINGLE ROOFING SYSTEM AT FIELD OF ROOF
 ADD ALTERNATE AS1 & AS3 N.T.S.



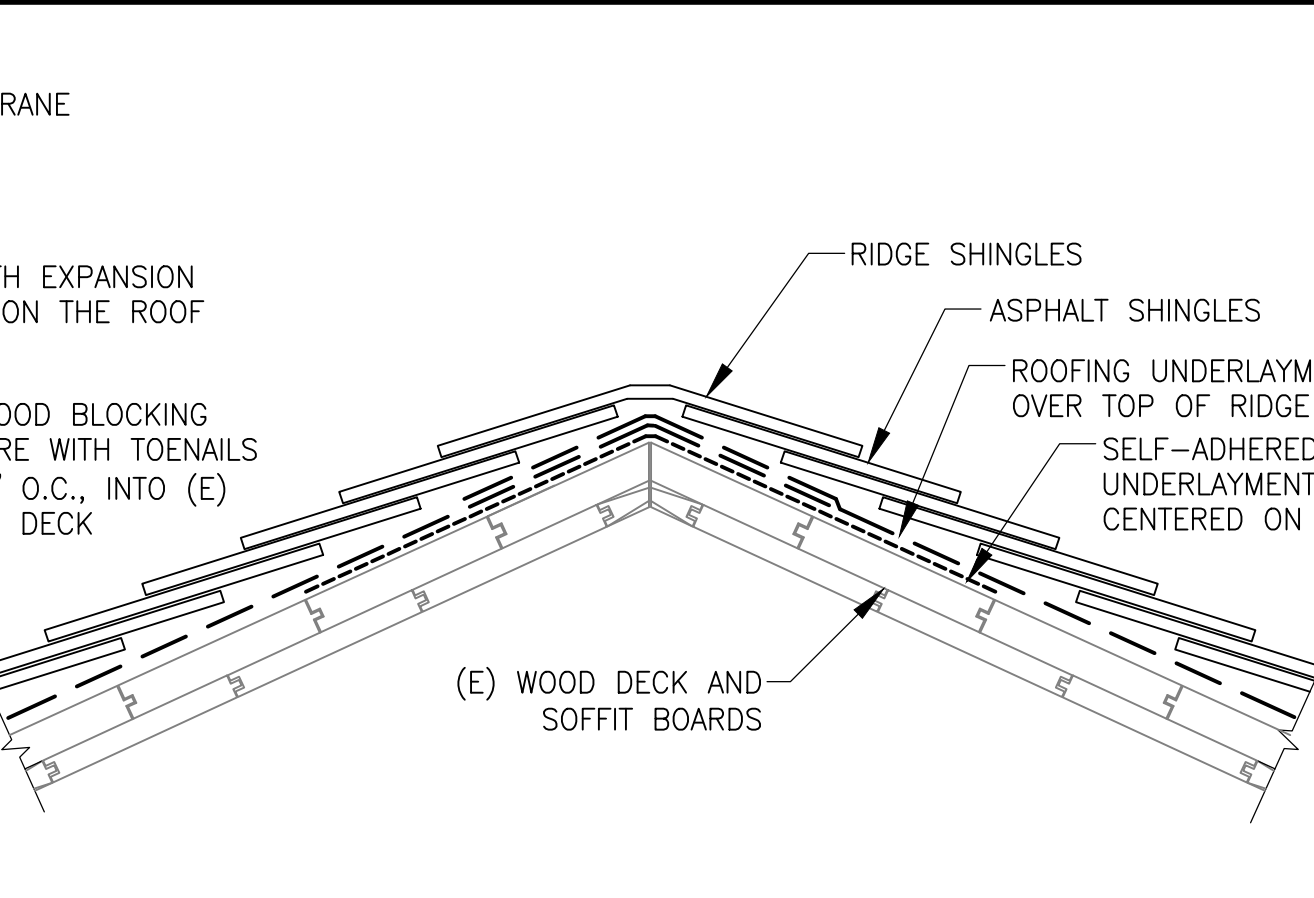
5 SECTION: DETAIL AT RISING WALL
 ADD ALTERNATE AS3 N.T.S.



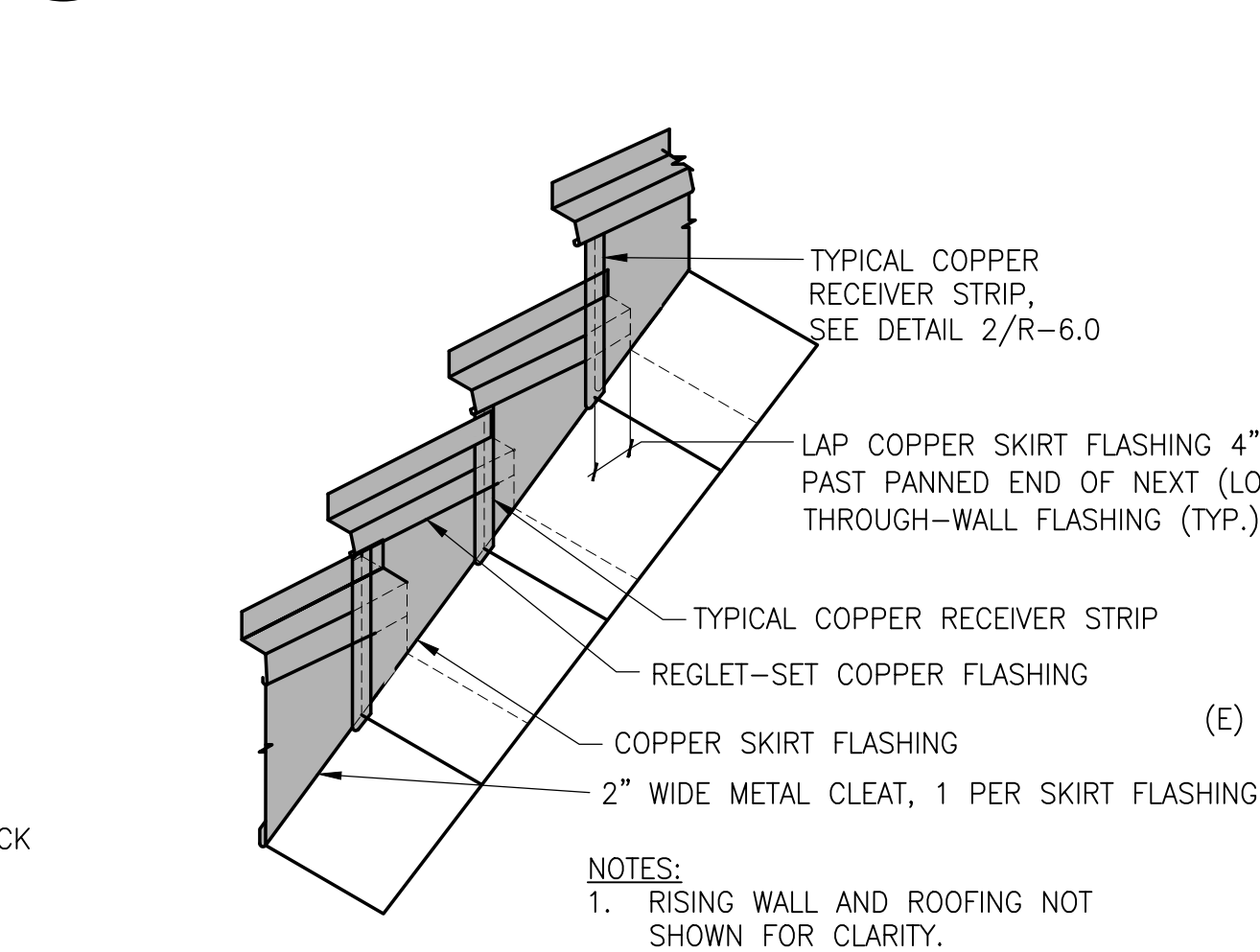
2 SECTION: FLASHING AT EAVE
 ADD ALTERNATE AS1 & AS3 N.T.S.



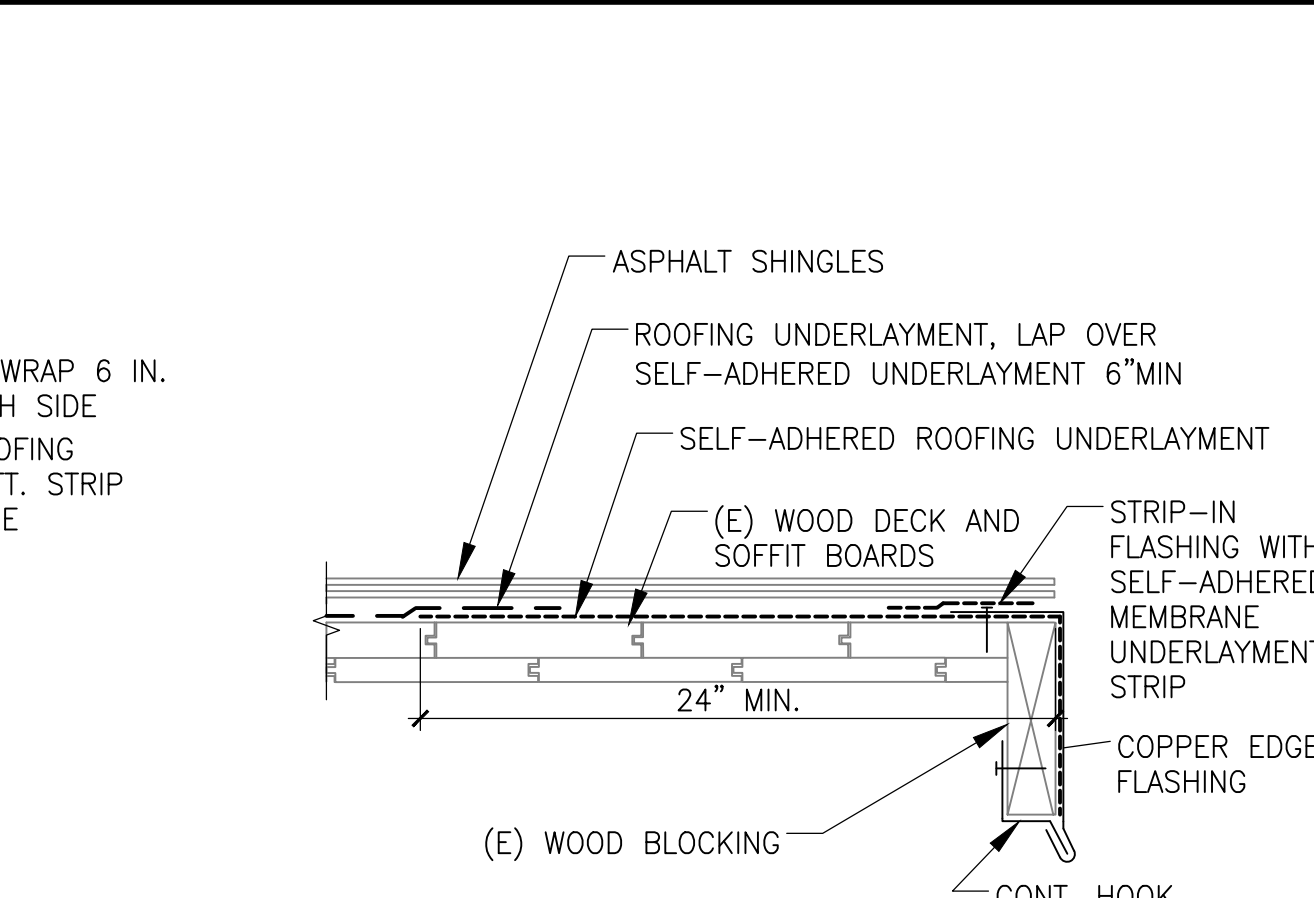
6 SECTION: CONFINED RAKE AT RISING WALL
 ADD ALTERNATE AS3 N.T.S.



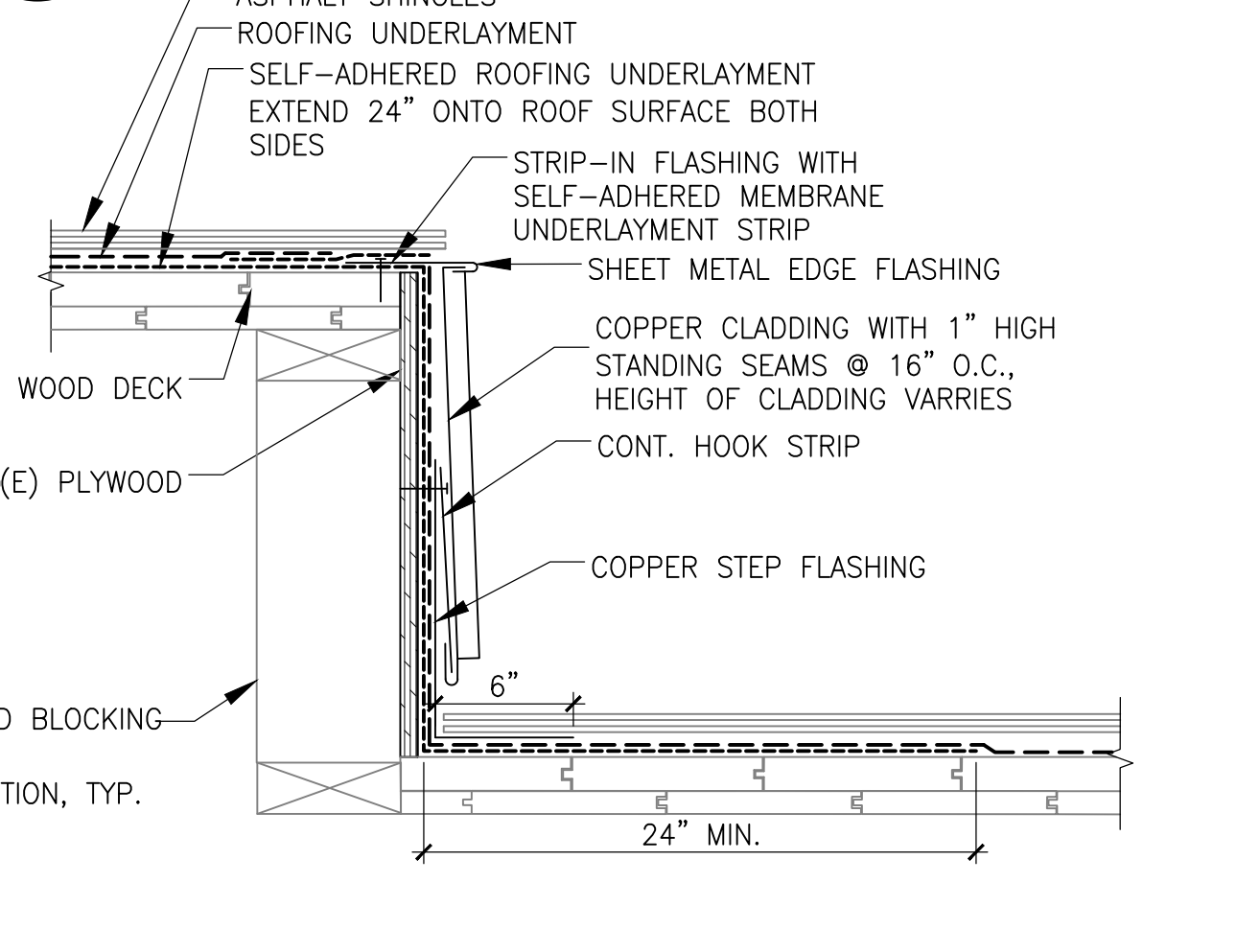
3 SECTION: DETAIL AT RIDGE
 ADD ALTERNATE AS1 & AS3 N.T.S.



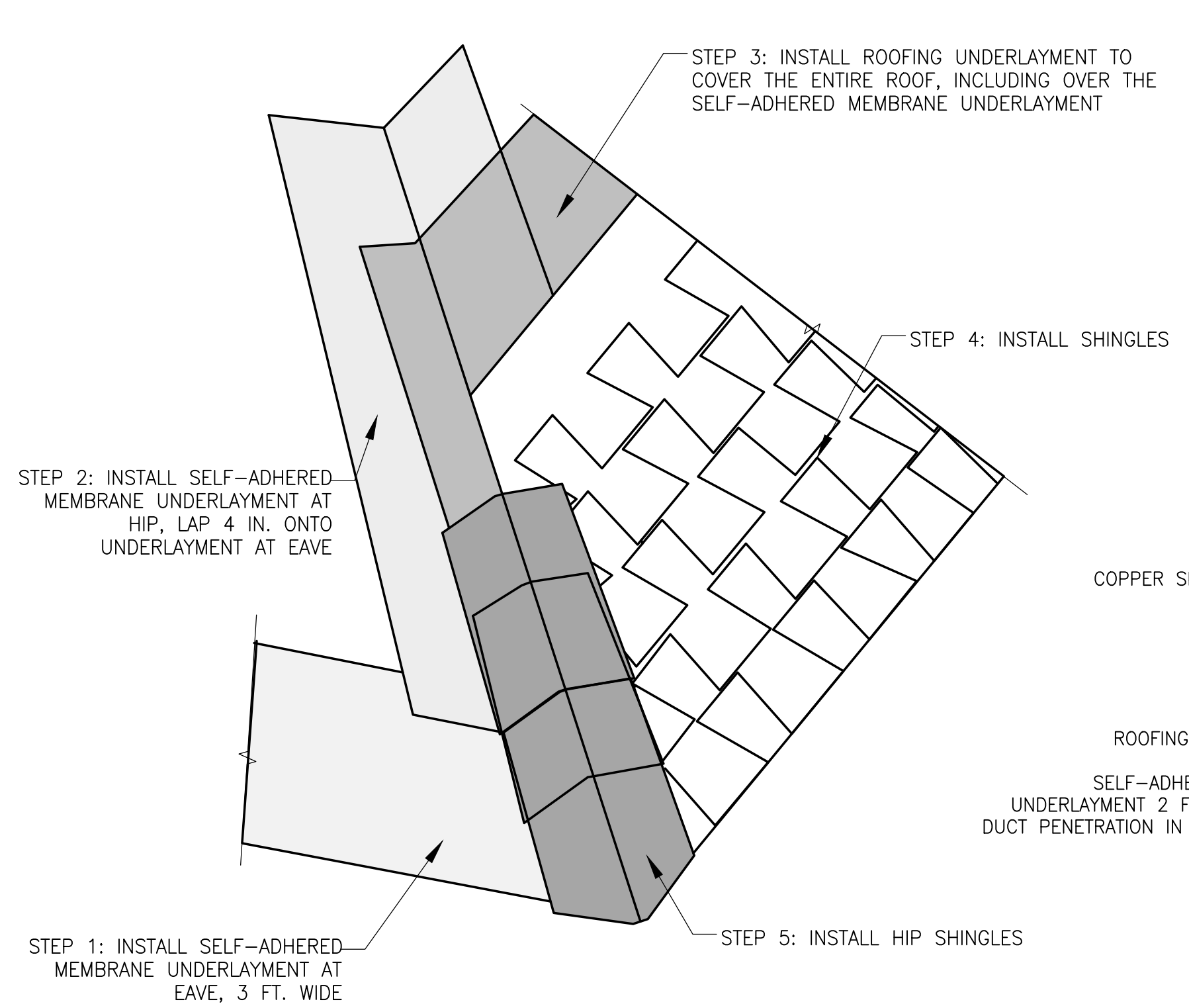
7 ISOMETRIC: STEP FLASHING AT RISING WALL
 ADD ALTERNATE AS3 N.T.S.



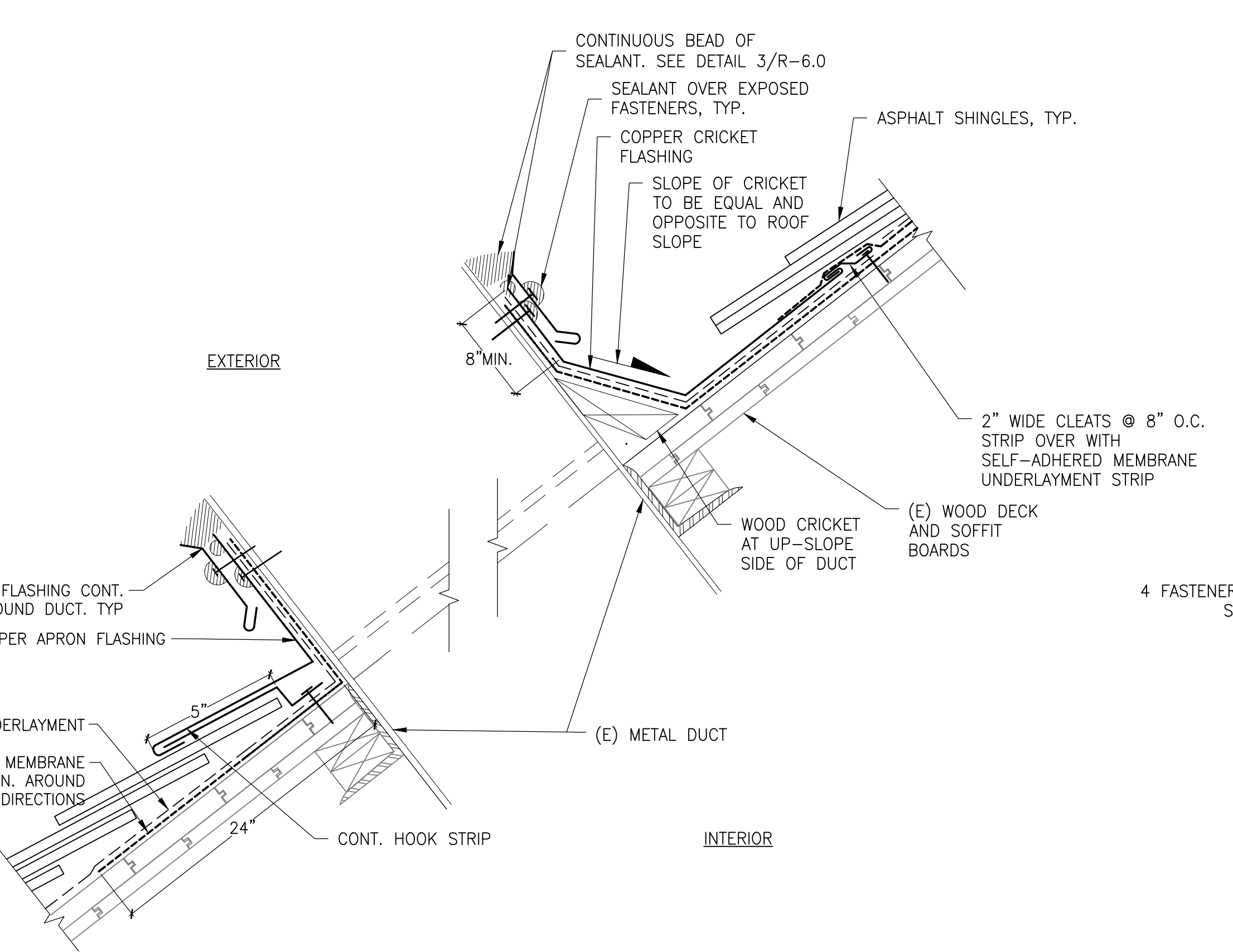
4 SECTION: DETAIL AT RAKE
 ADD ALTERNATE AS1 & AS3 N.T.S.



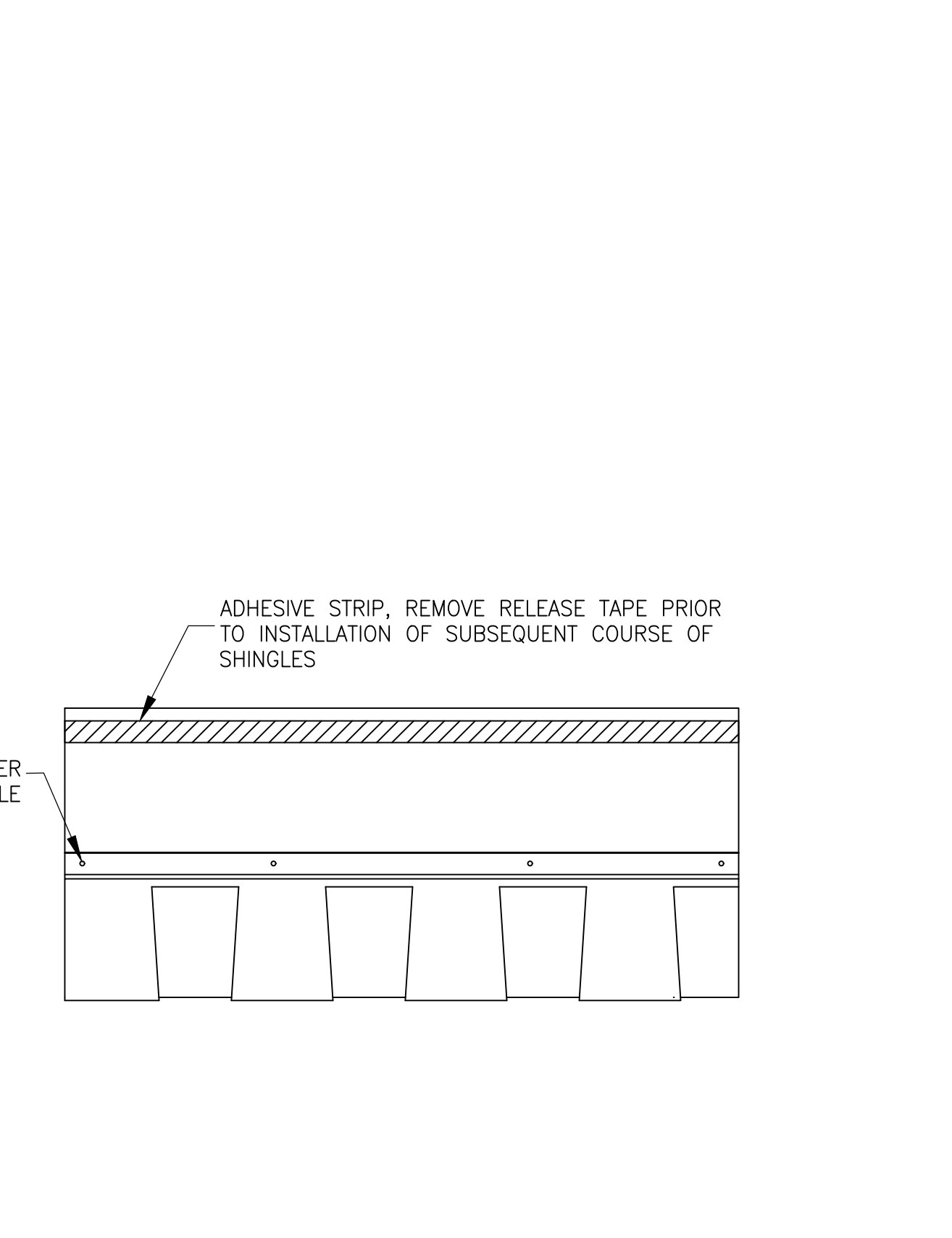
8 SECTION: DETAIL AT STEP IN ROOF
 ADD ALTERNATE AS3 N.T.S.



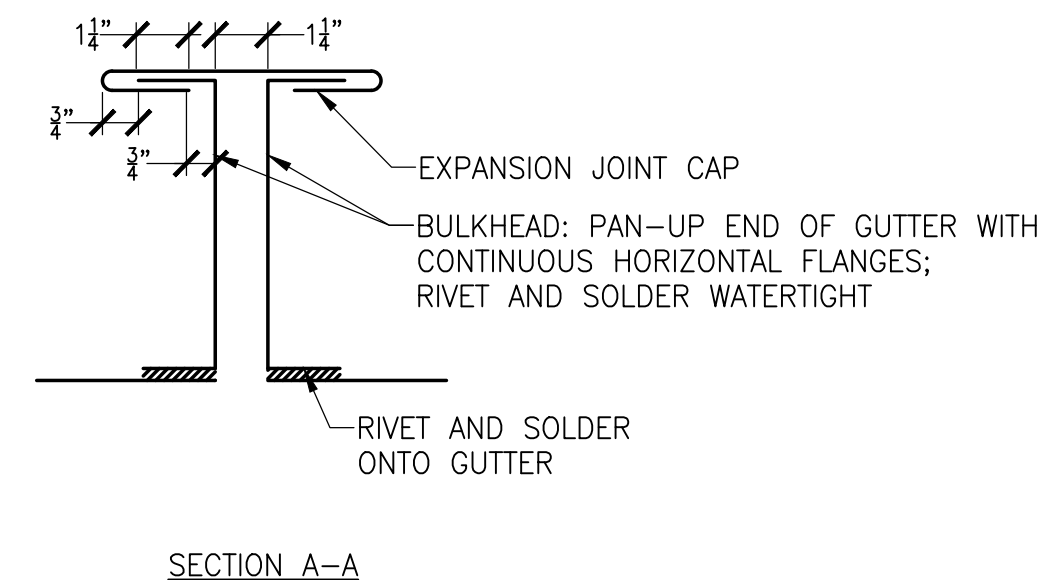
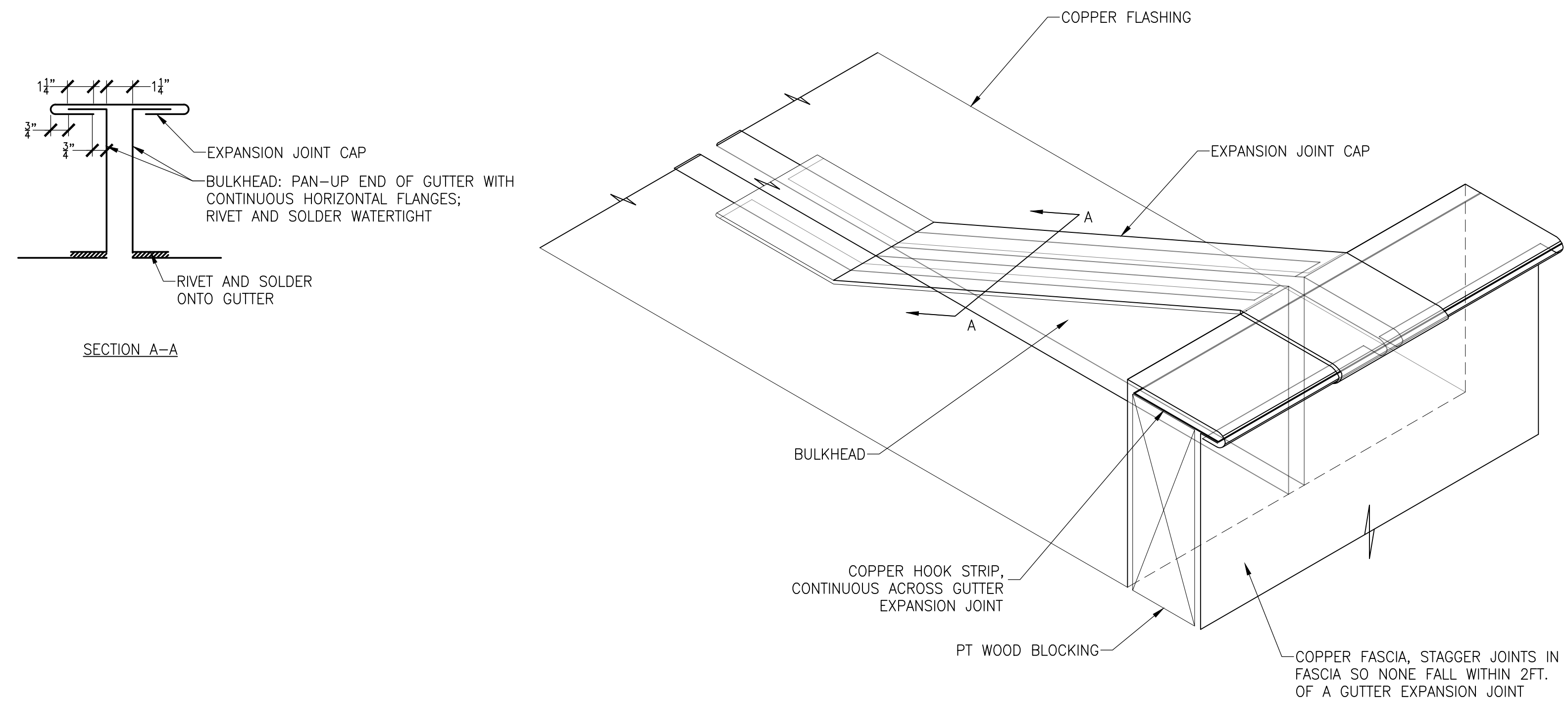
9 ISOMETRIC: STEP-BY-STEP INSTALLATION DETAIL AT HIP
 ADD ALTERNATE AS3 N.T.S.



10 SECTION: FLASHING AT DUCT PENETRATION
 ADD ALTERNATE AS3 N.T.S.



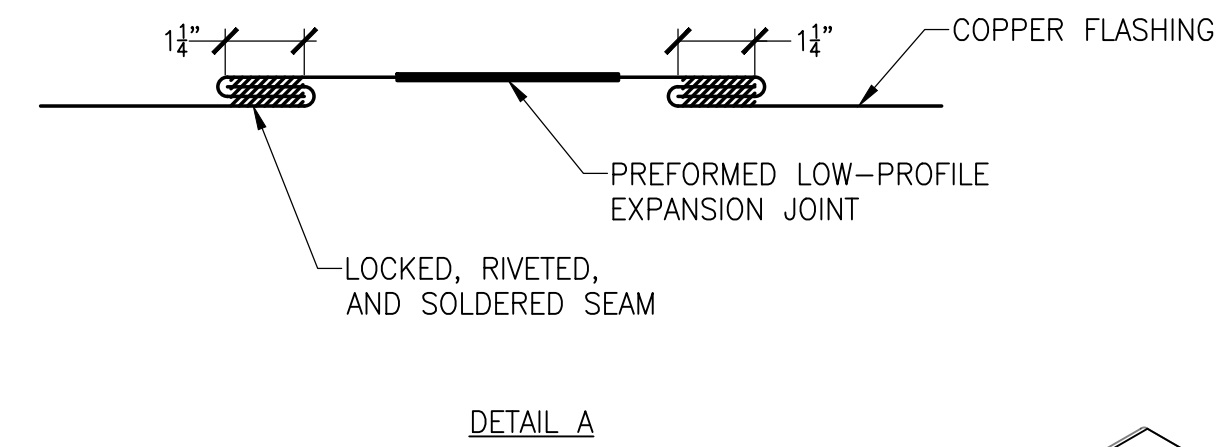
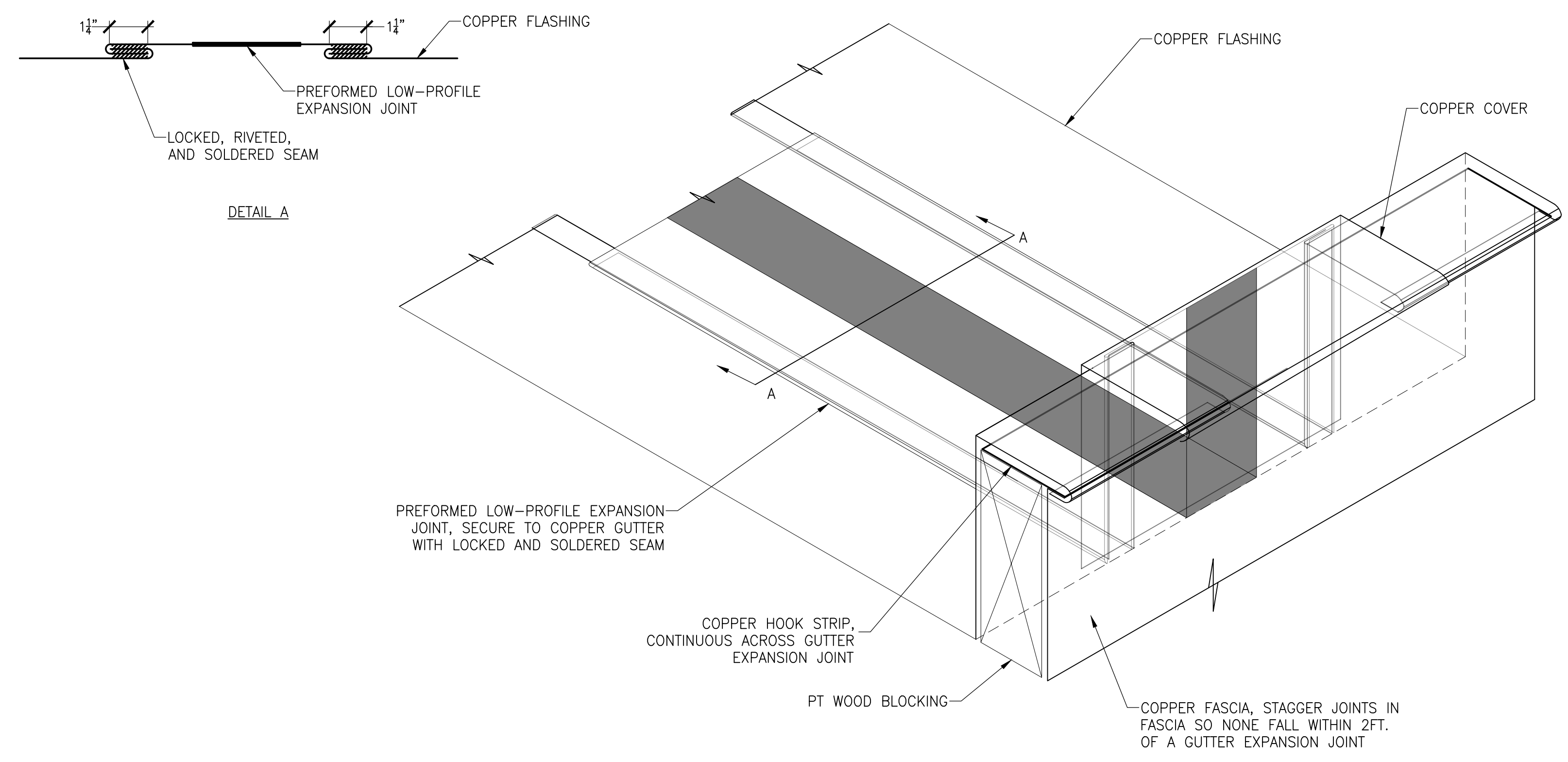
11 PLAN: TYPICAL FASTENING PATTERNS FOR SHINGLES
 ADD ALTERNATE AS1 & AS3 N.T.S.



1 ISOMETRIC: GUTTER BULKHEAD EXPANSION JOINT

NOTE: GUTTER PROFILES VARY FROM THAT SHOWN, BULKHEAD EXPANSION JOINT SIMILAR.

N.T.S.



2 ISOMETRIC: GUTTER LOW-PROFILE EXPANSION JOINT

NOTE: GUTTER PROFILES VARY FROM THAT SHOWN, EXPANSION JOINT SIMILAR.

N.T.S.

SIMPSON GUMPERTZ & HEGER
 Engineering of Structures
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Simpson Gumpertz & Heger Inc.
 480 Totten Pond Road
 Waltham, Massachusetts 02451
 main: 781.907.9000 fax: 781.907.9009
 www.sgh.com

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GHTD PROJECT NO. 02-021

Consultant

No.	Date	Description	By

**UNION STATION
 TRANSPORTATION
 CENTER
 ROOFING REPAIR/
 REPLACEMENT**
 1 UNION PLACE,
 HARTFORD, CT

Project

**ASPHALT SHINGLES
 ROOFING DETAILS
 ADD ALTERNATE #A1
 AND #A3**

Drawing Title

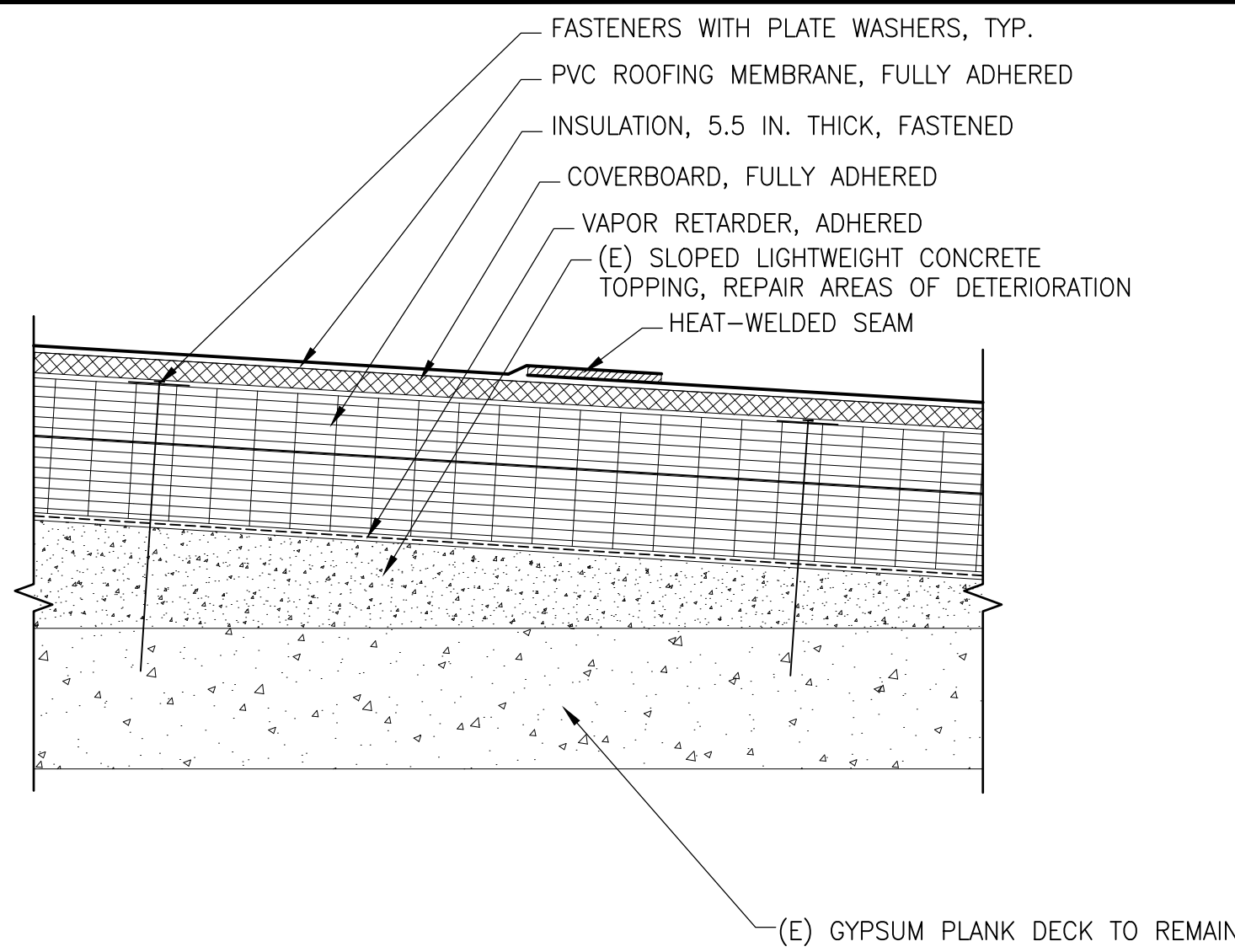
Project No. 191971.00	Checked RML	Date 05/03/2021
Drawn SKW	Approved MBB	Scale AS NOTED

Seal

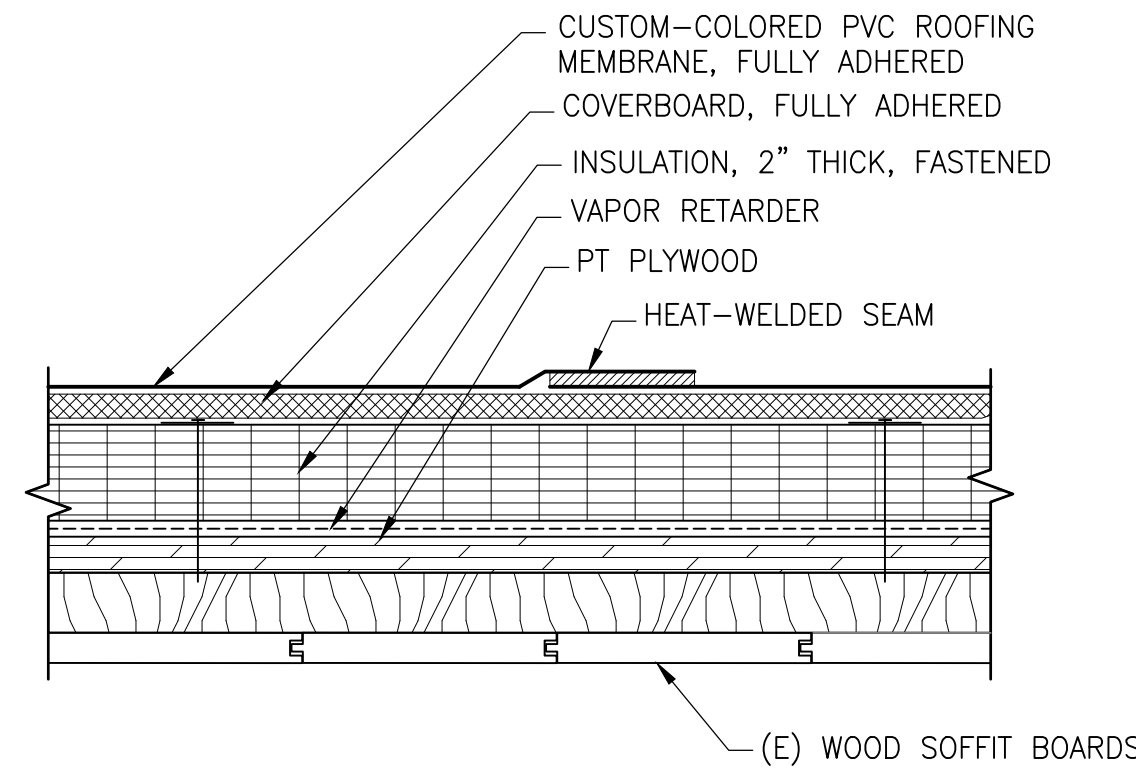
Drawing No.

R-3.1

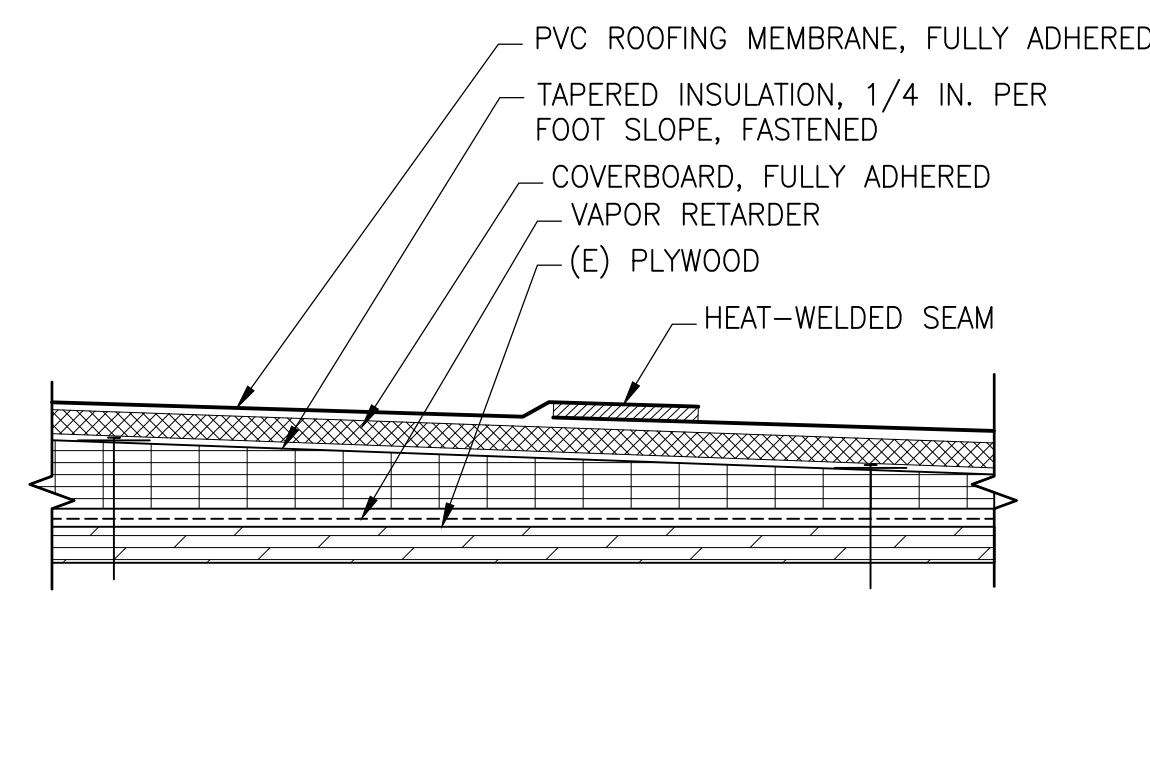
PERMIT SET



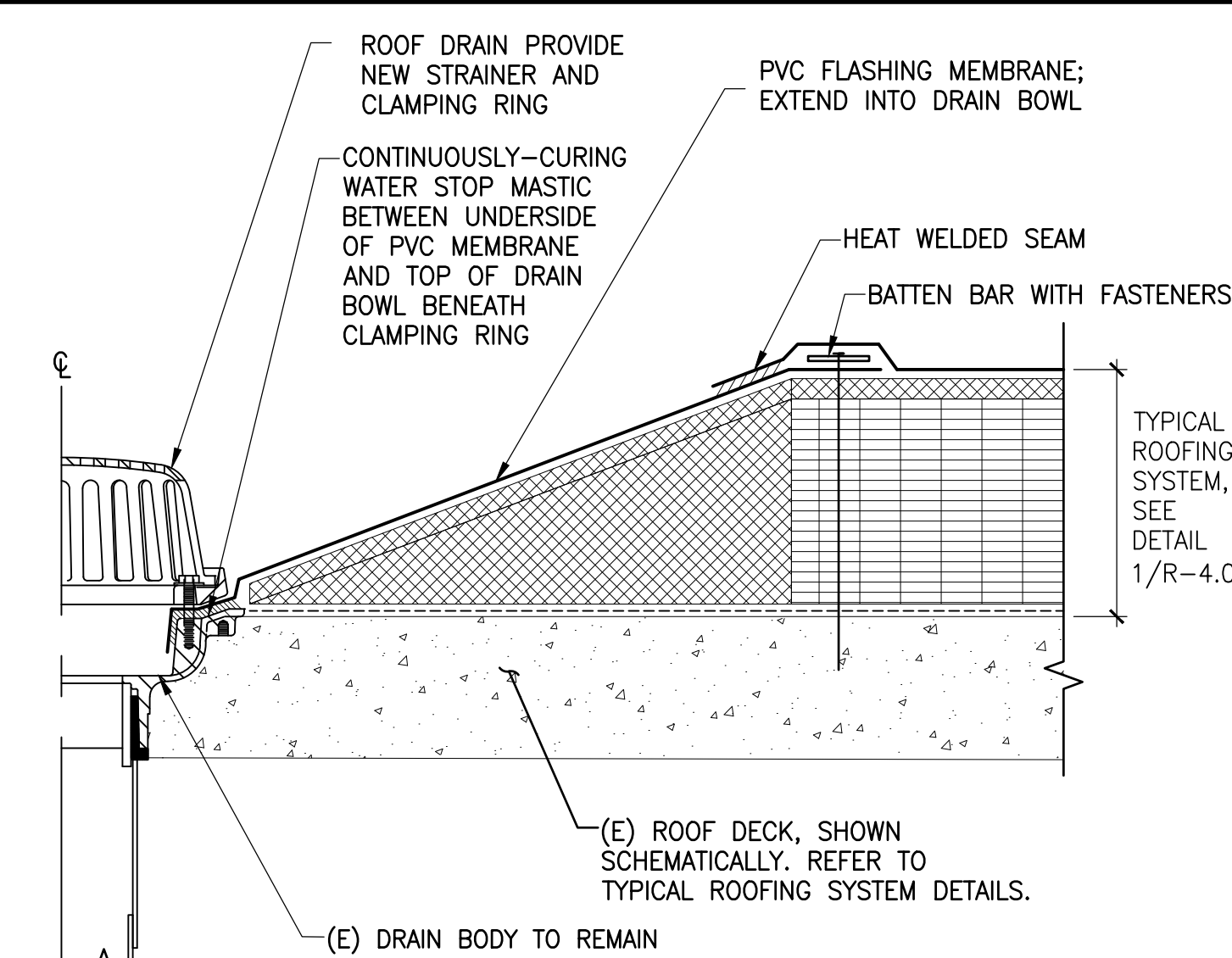
1 SECTION: TYPICAL PVC ROOFING SYSTEM AT ROOF LS1 N.T.S.



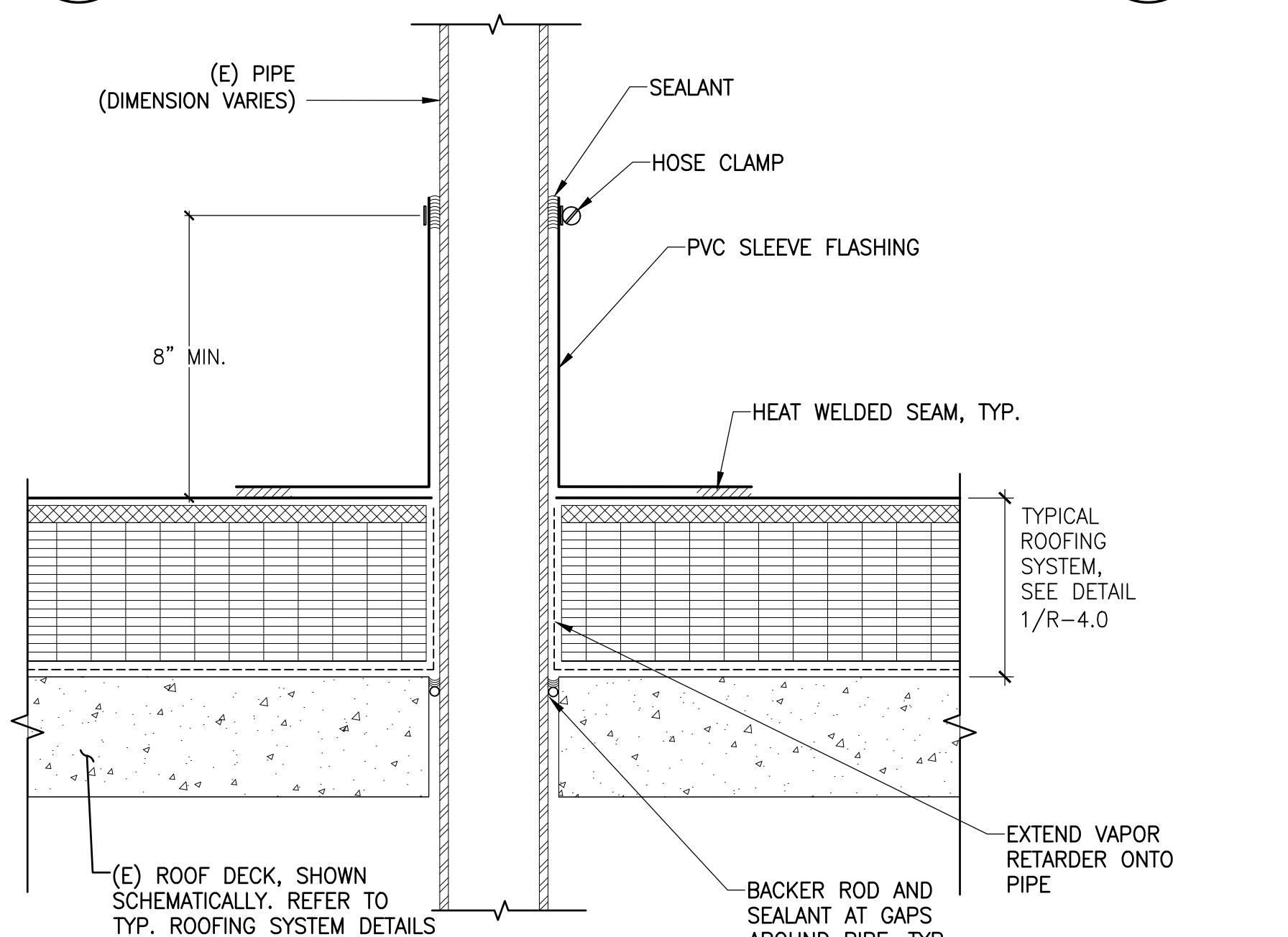
2 SECTION: TYPICAL PVC ROOFING SYSTEM AT ROOF LS2 N.T.S.



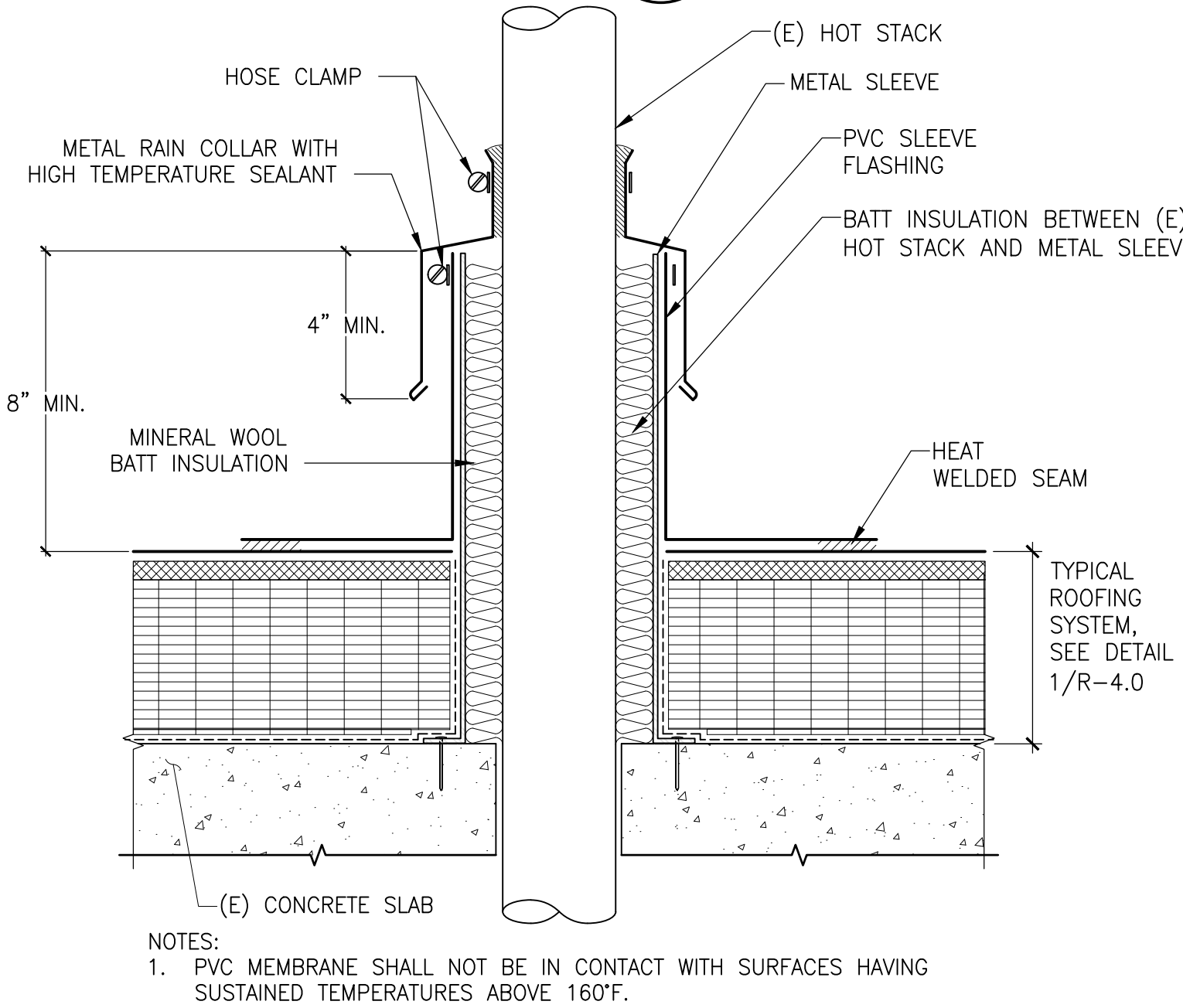
3 SECTION: TYPICAL PVC ROOFING SYSTEM AT ROOF LS3 ADD ALTERNATE LS3 N.T.S.



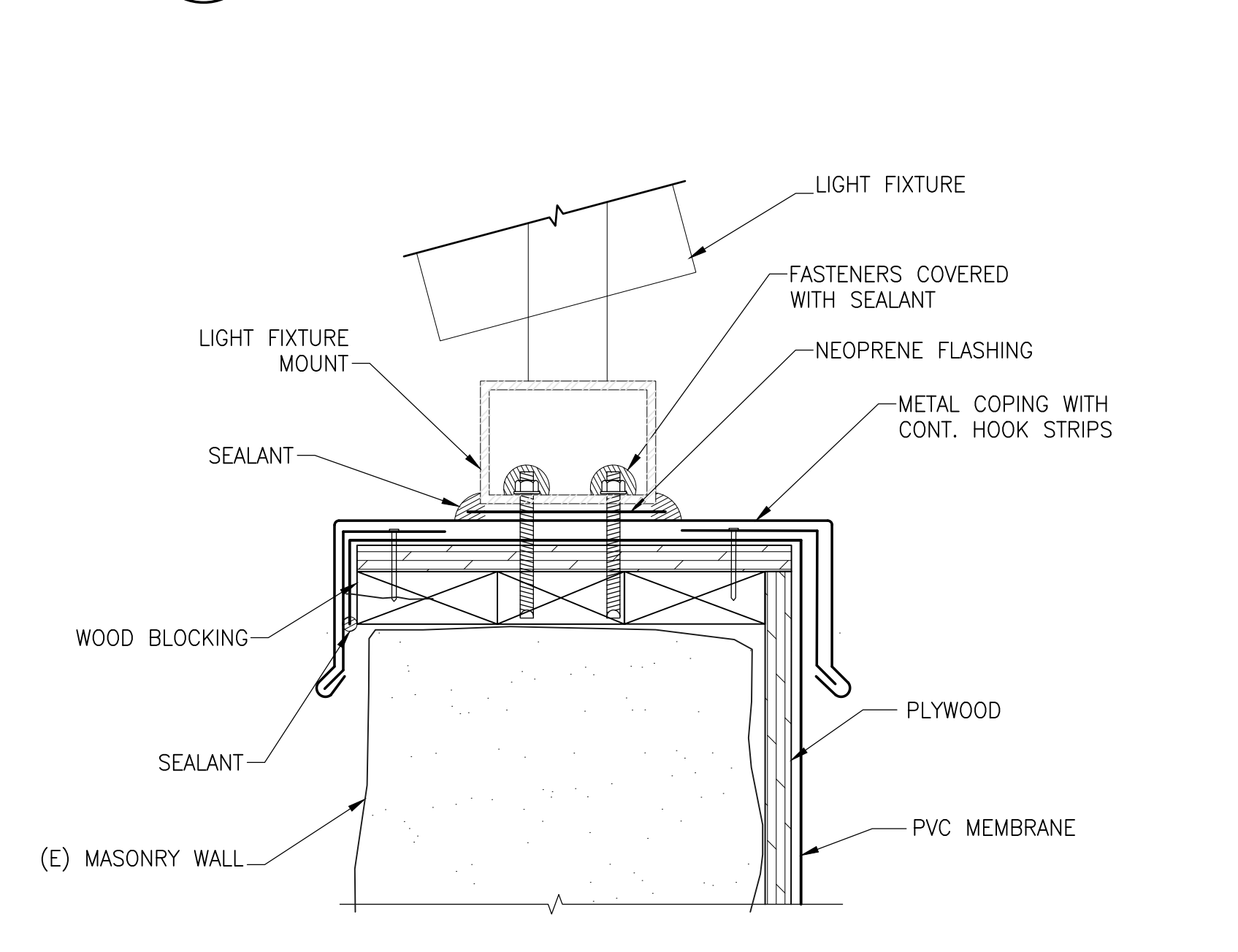
4 SECTION: TYPICAL ROOF DRAIN N.T.S.



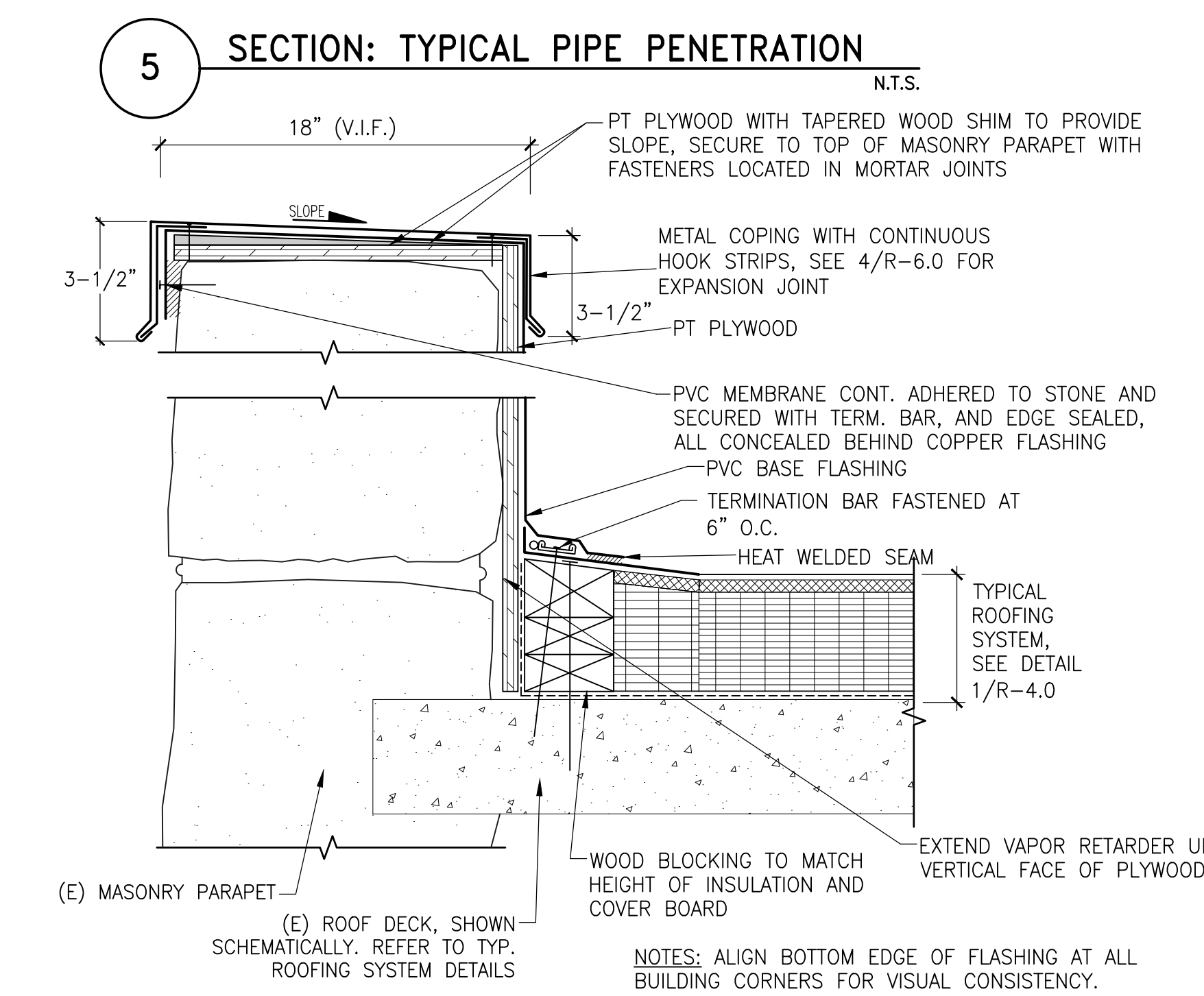
5 SECTION: TYPICAL PIPE PENETRATION N.T.S.



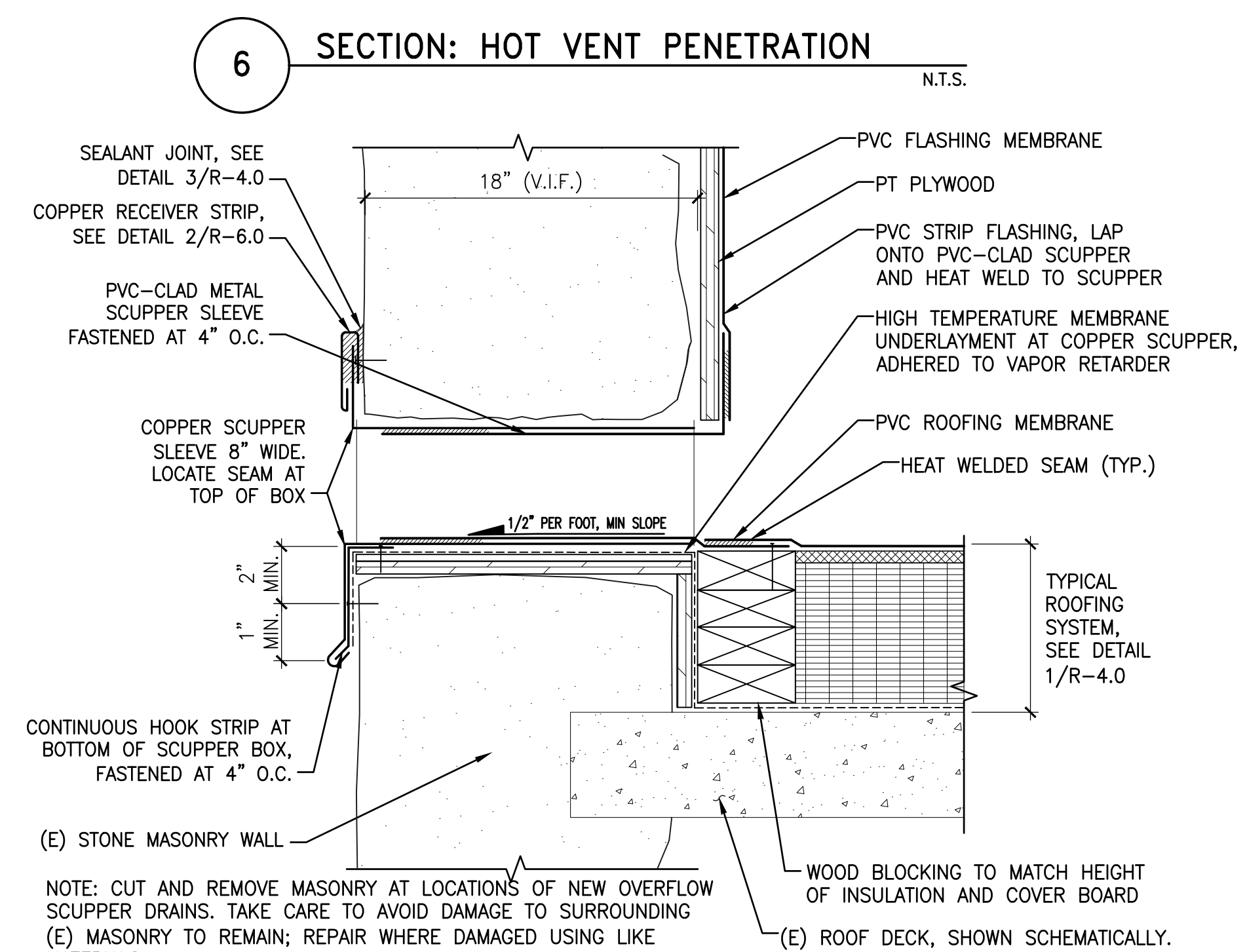
6 SECTION: HOT VENT PENETRATION N.T.S.



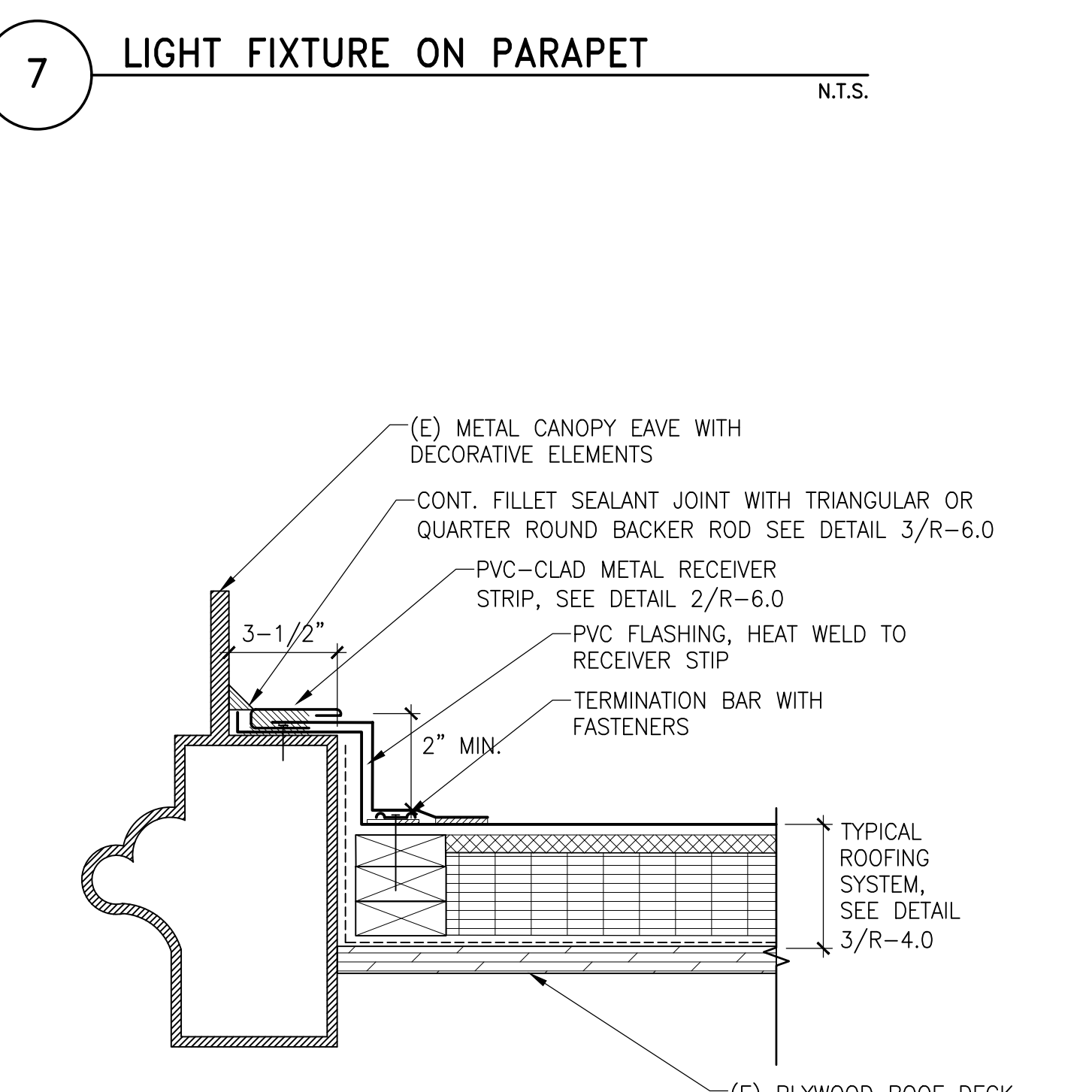
7 LIGHT FIXTURE ON PARAPET N.T.S.



8 SECTION: TYPICAL PARAPET N.T.S.



9 SECTION: TYPICAL THROUGH-WALL SCUPPER N.T.S.



10 SECTION: EAVE AT ROOF LS3 ADD ALTERNATE LS3 N.T.S.

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GHTD PROJECT NO. 02-021

Consultant

PERMIT SET

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
1 UNION PLACE, HARTFORD, CT

Project

PVC ROOFING DETAILS

Drawing Title

Project No. 191971.00	Checked RML	Date 05/03/2021
Drawn SKW	Approved MBB	Scale AS NOTED

Drawing No.

R-4.0

Seal

PERMIT SET

No.	Date	Description	By

**UNION STATION TRANSPORTATION CENTER
ROOFING REPAIR/
REPLACEMENT
1 UNION PLACE,
HARTFORD, CT**

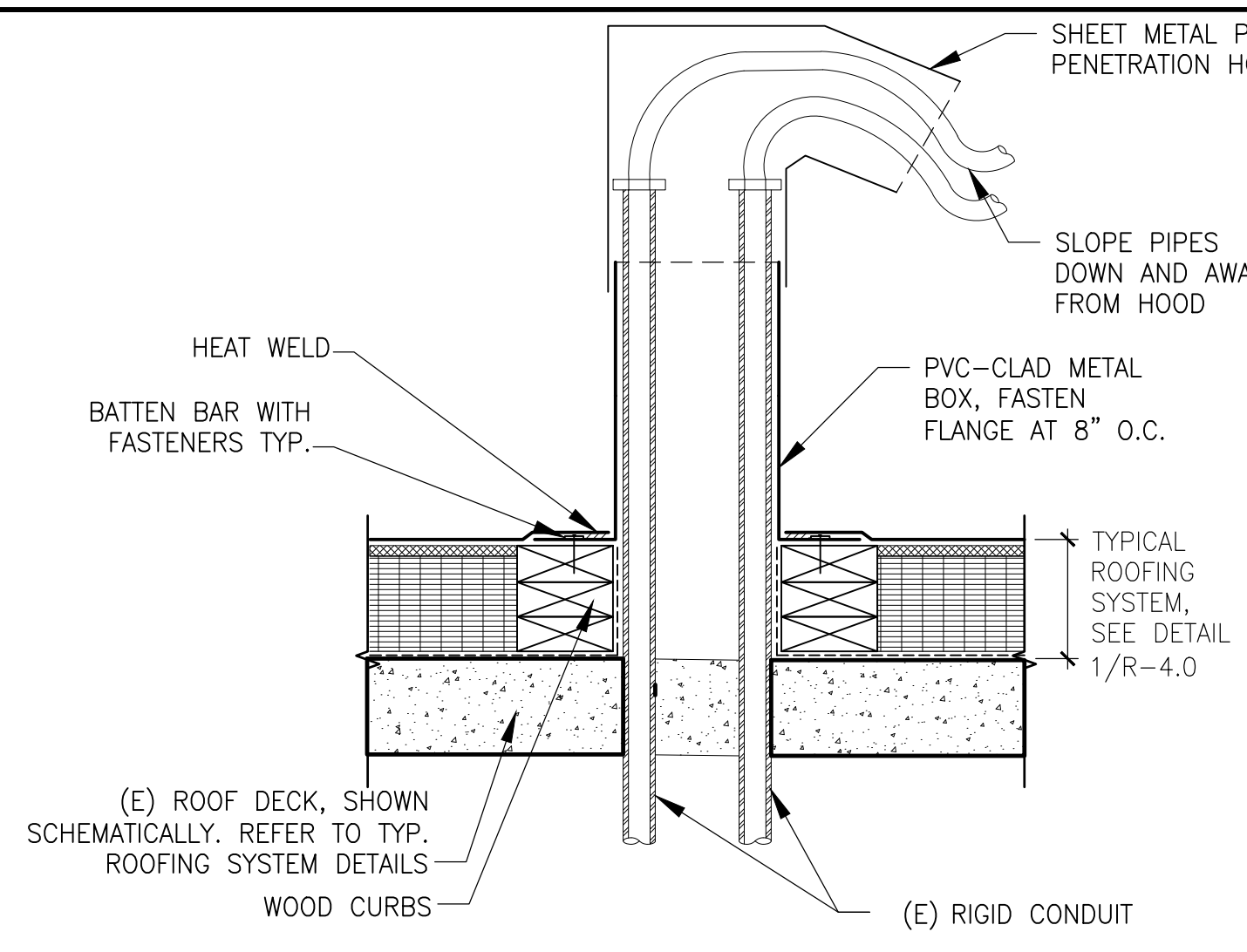
**PVC ROOFING
DETAILS**

Drawing Title

Project No. 191971.00	Checked RML	Date 05/03/2021
Drawn SKW	Approved MBB	Scale AS NOTED

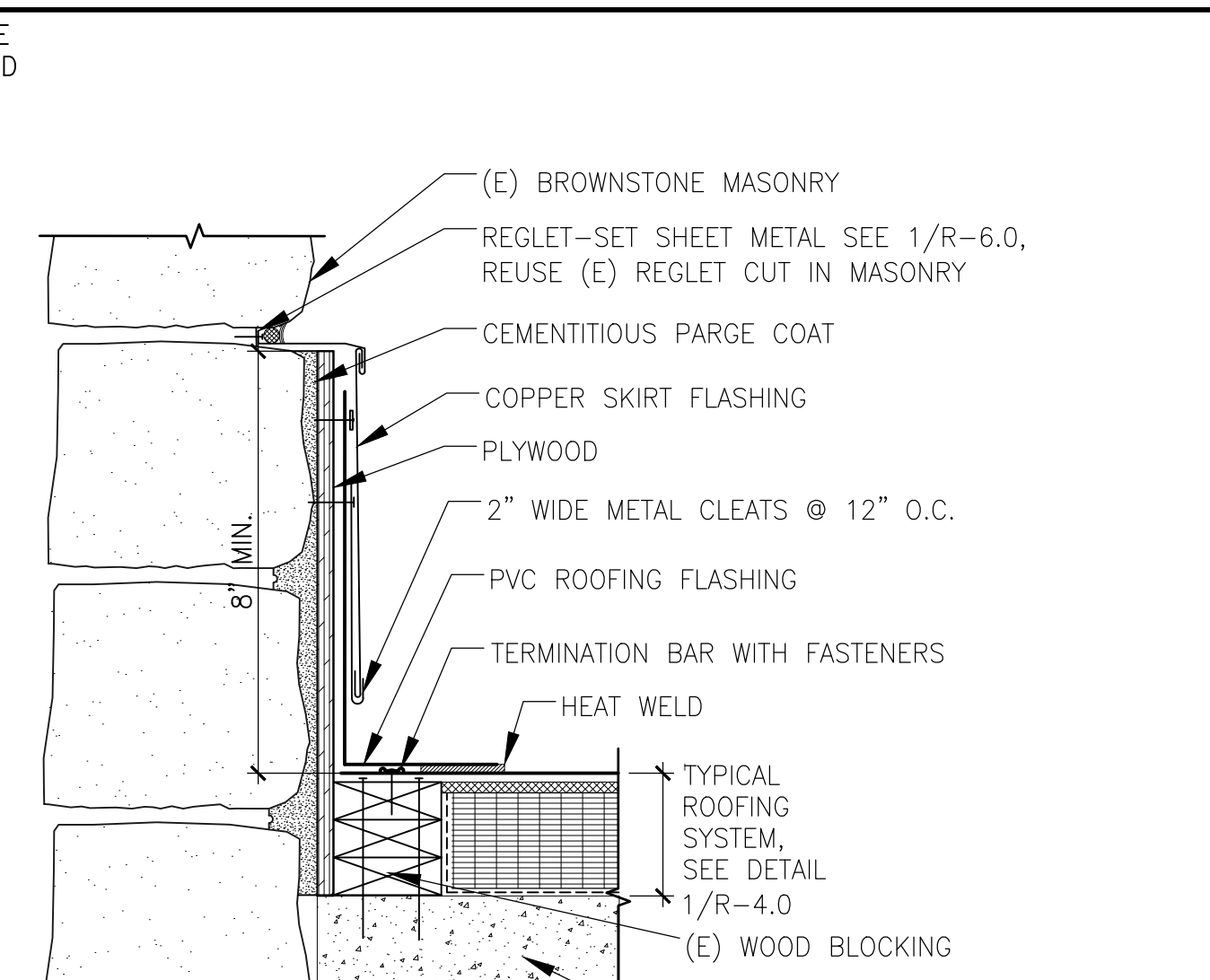
Drawing No.

R-4.1



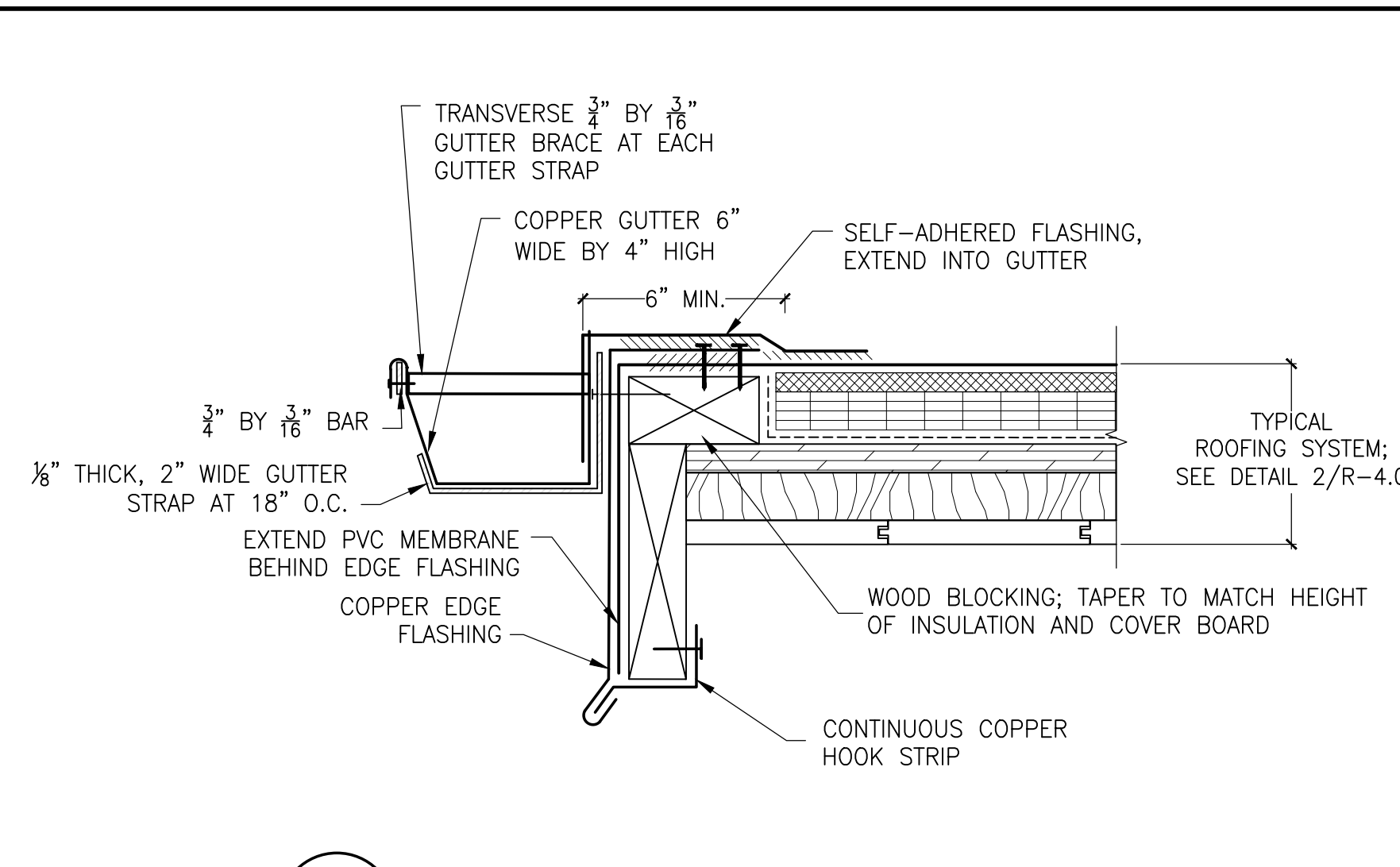
1 SECTION: MULTIPLE PENETRATIONS N.T.S.

NOTE: DISCONNECT AND RECONNECT (E) CONDUITS AS NEEDED TO PROVIDE RIGID CONDUIT AT ROOFING PENETRATION

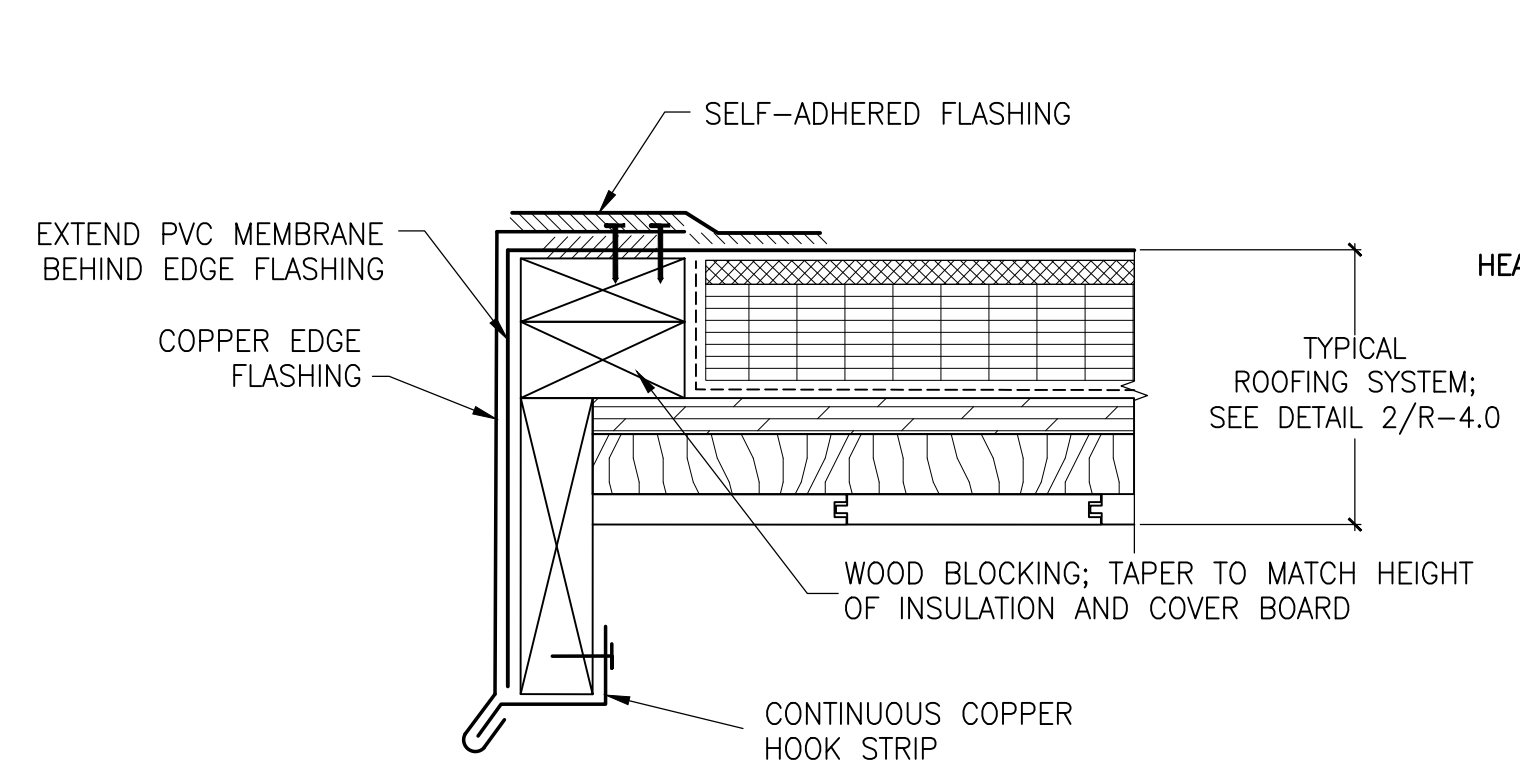


2 SECTION: PVC TRANSITION AT RISING WALL N.T.S.

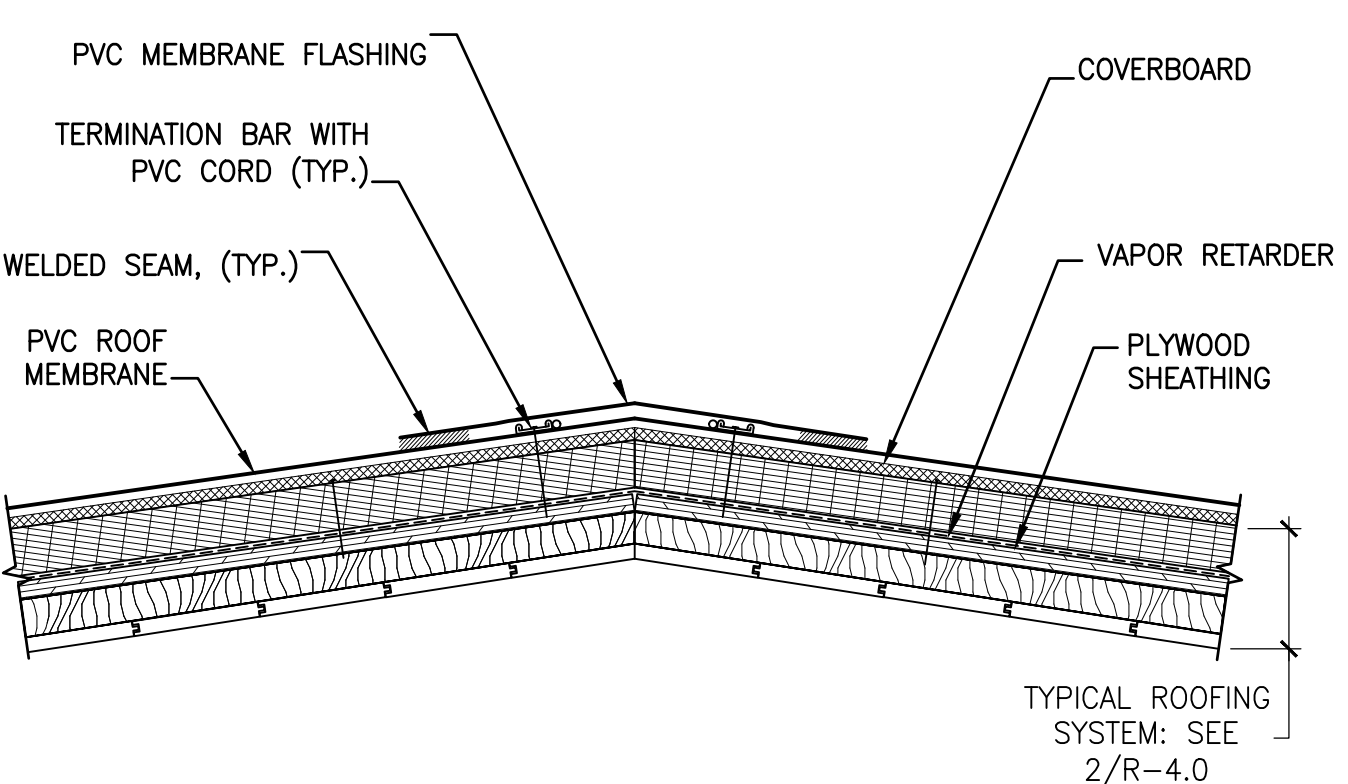
NOTE: DISCONNECT AND RECONNECT (E) CONDUITS AS NEEDED TO PROVIDE RIGID CONDUIT AT ROOFING PENETRATION



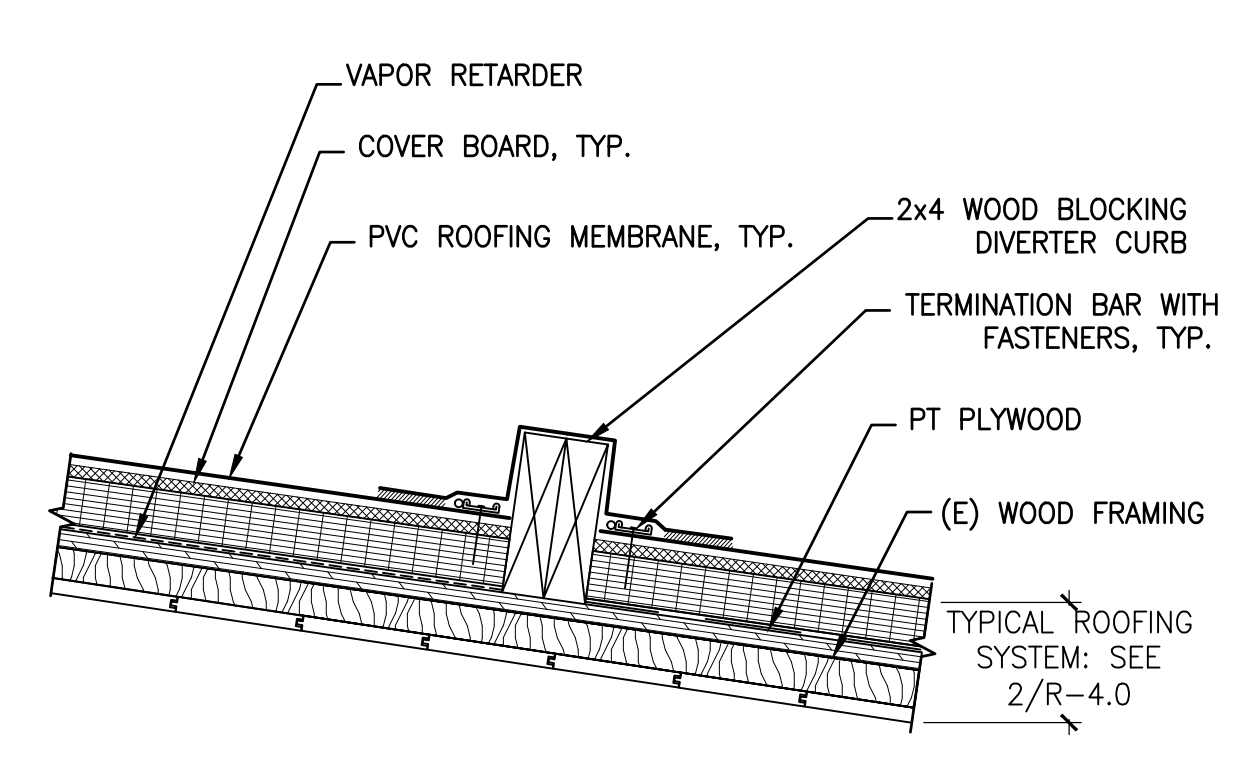
3 SECTION: ROOFING EAVE WITH GUTTER N.T.S.



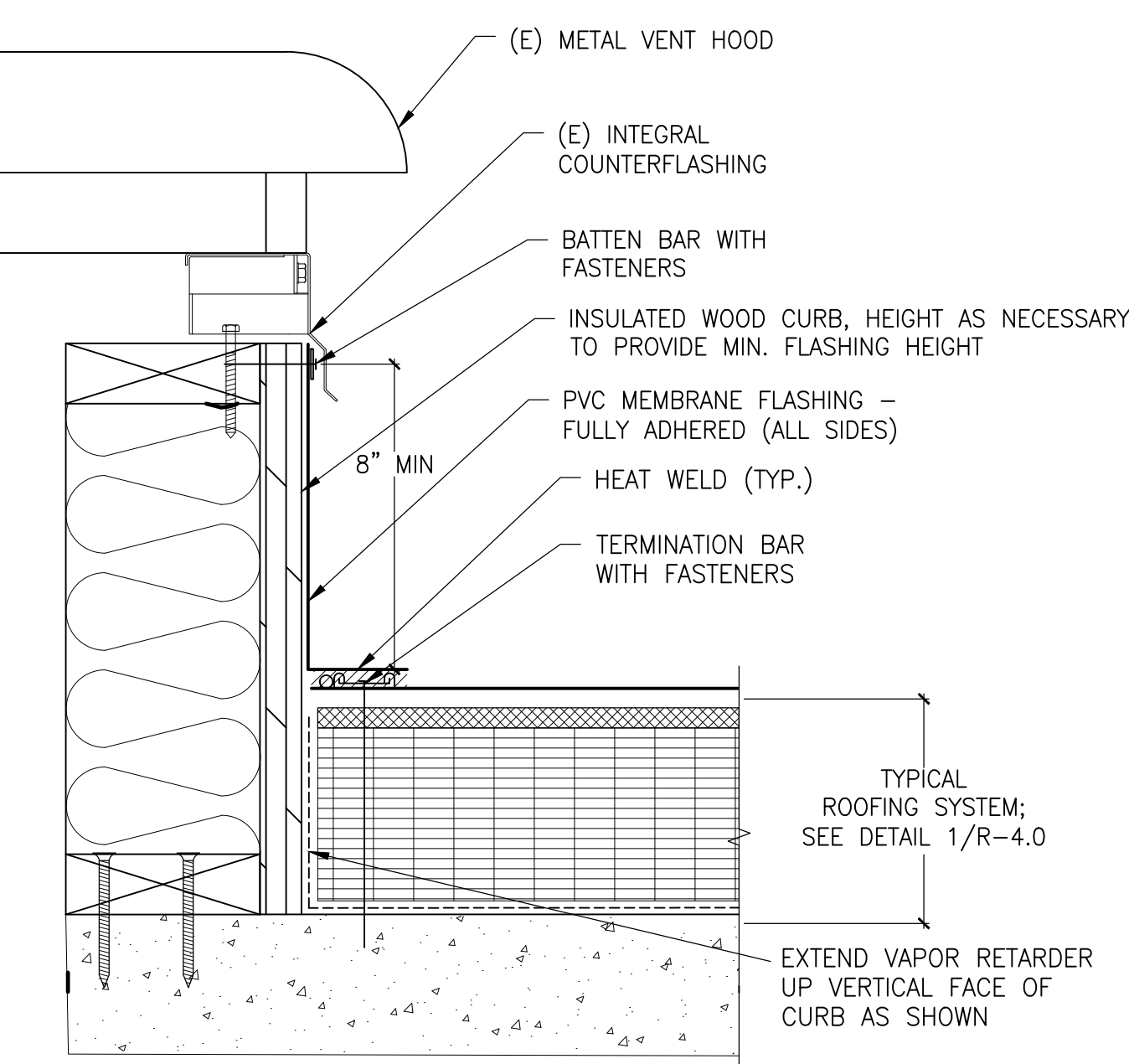
4 SECTION: ROOF EAVE N.T.S.



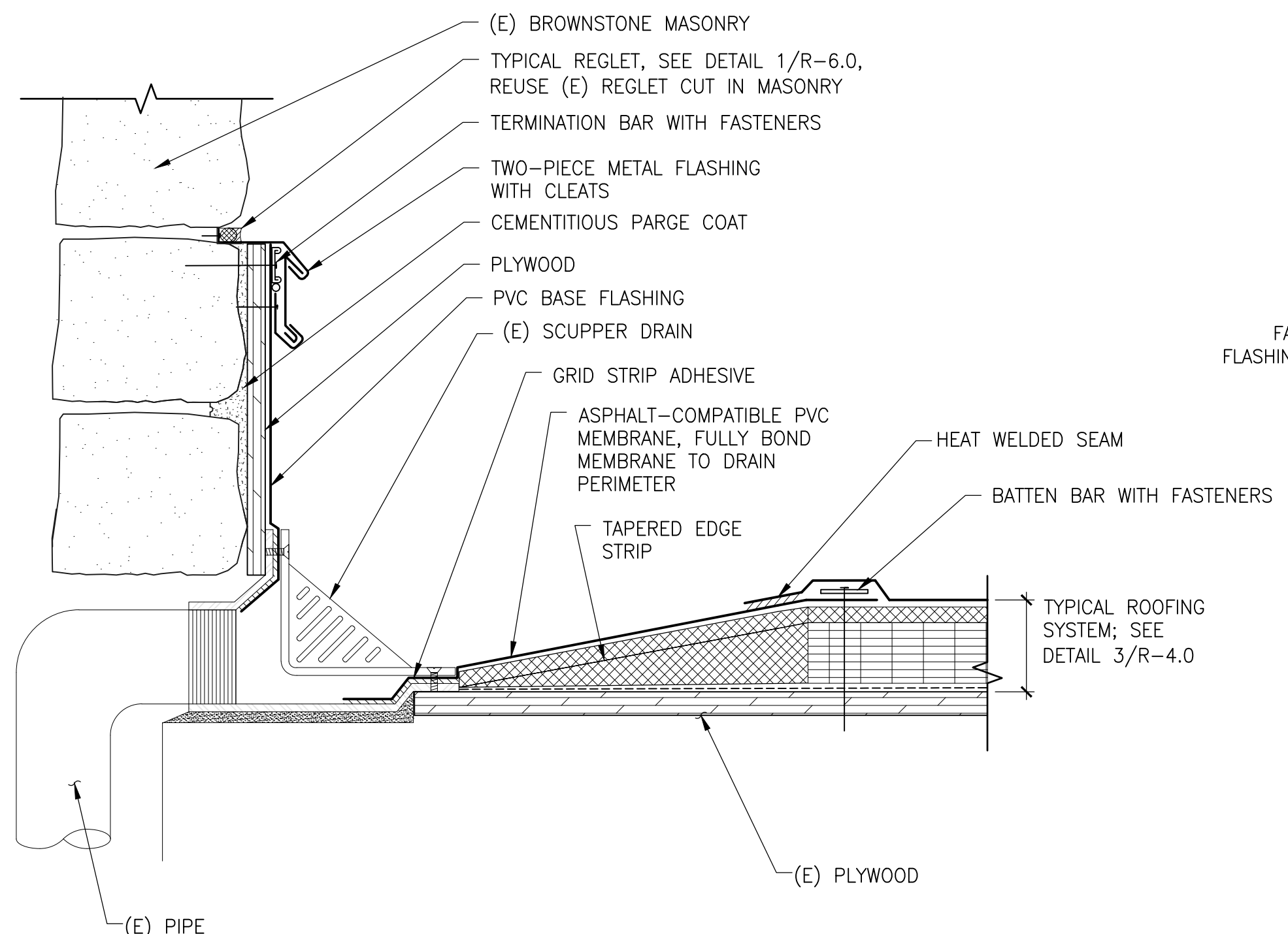
5 SECTION: RIDGE AT STEEP-SLOPE ROOF N.T.S.



6 SECTION: RAIN DIVERTER CURB N.T.S.

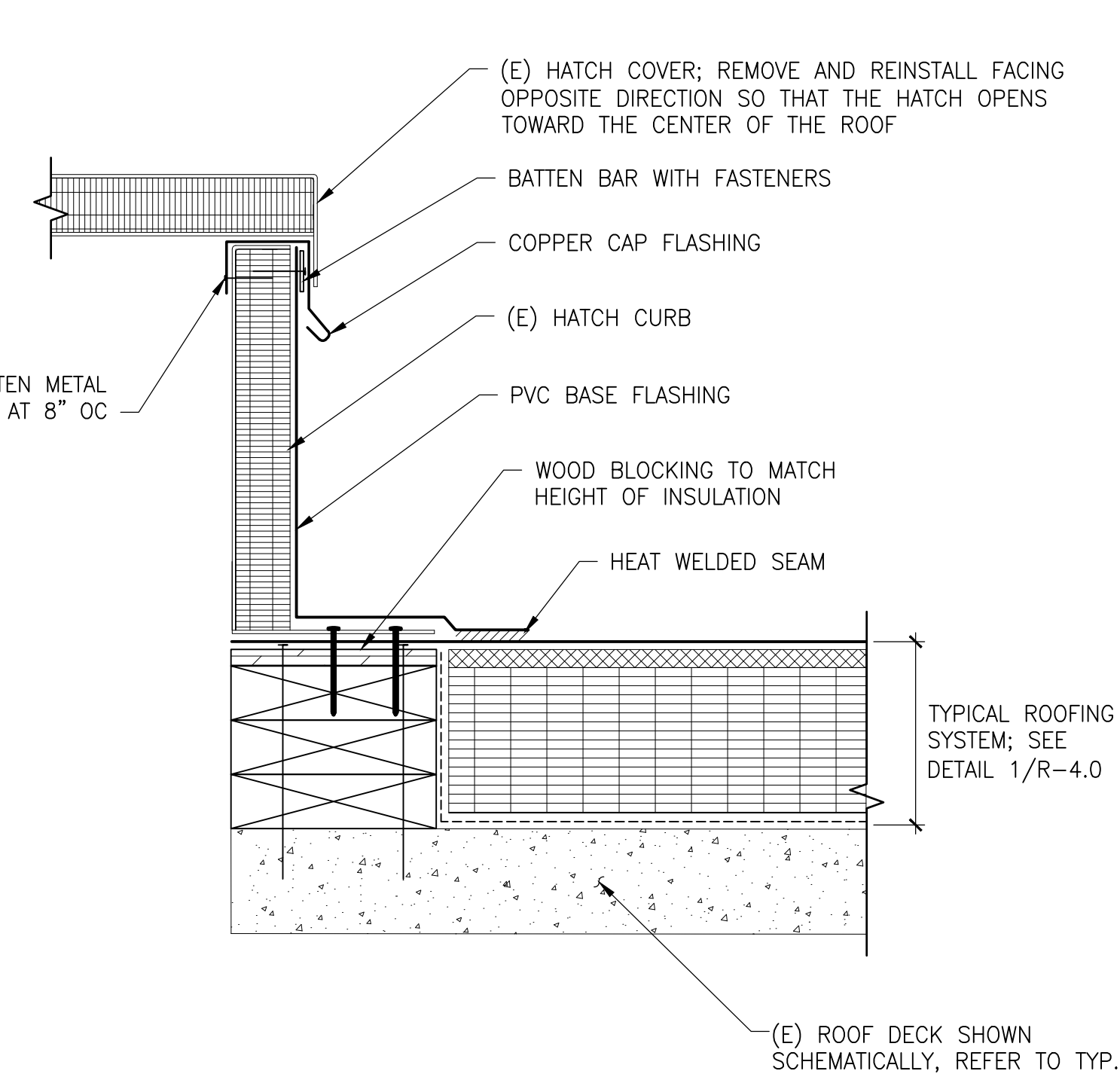


7 SECTION: FLASHING AT FAN N.T.S.

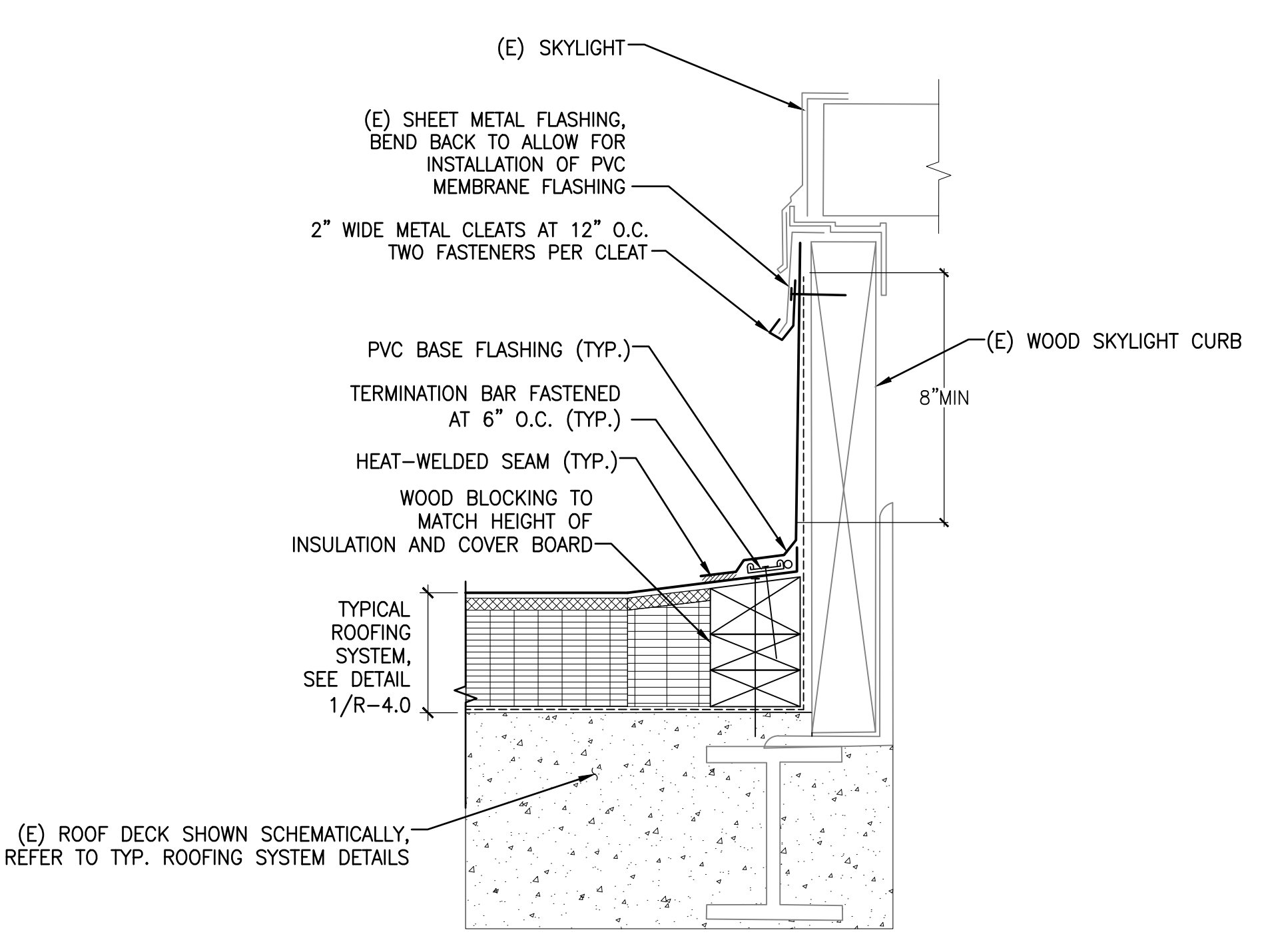


8 SECTION: ROOFING AT WALL DRAIN N.T.S.

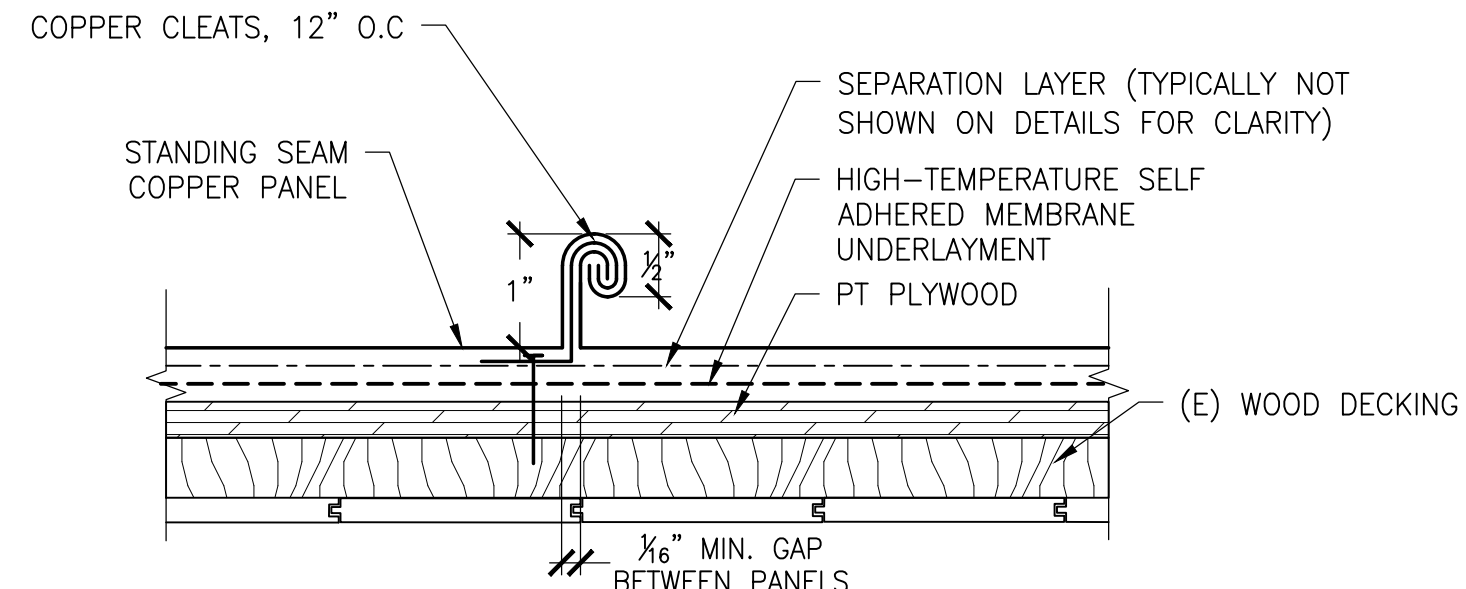
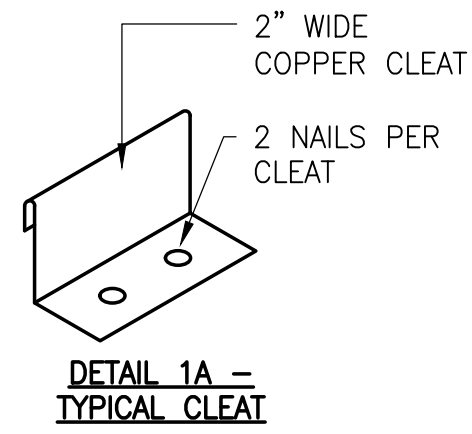
ADD ALTERNATE L53



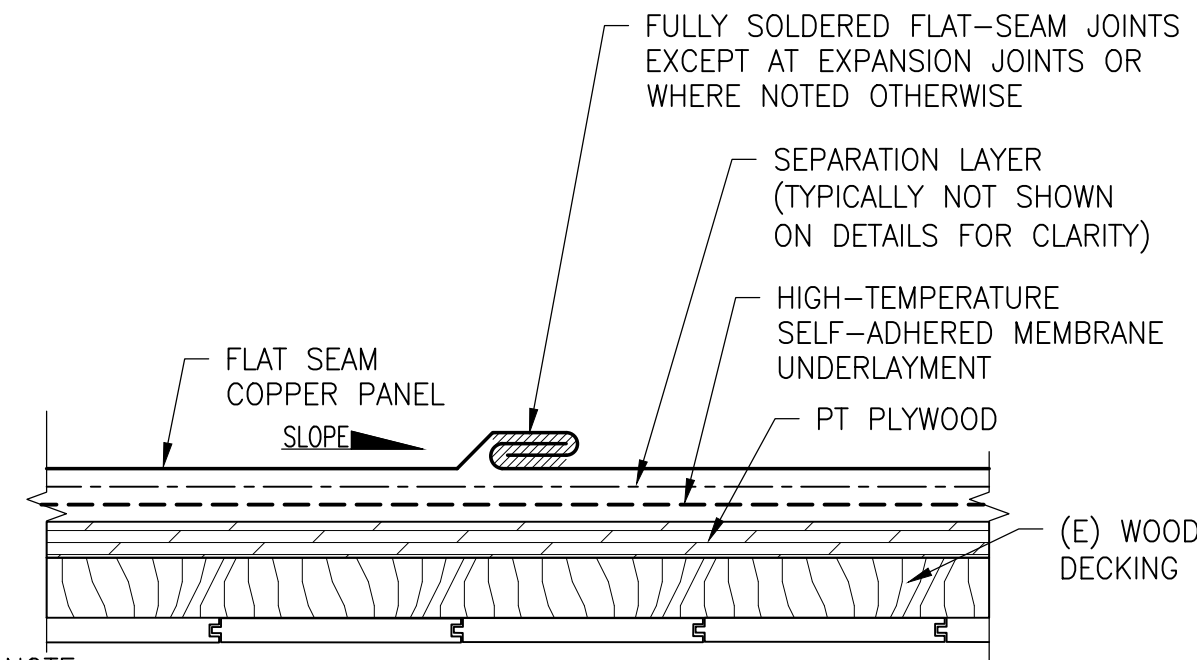
9 SECTION: ROOFING AT ROOF HATCH N.T.S.



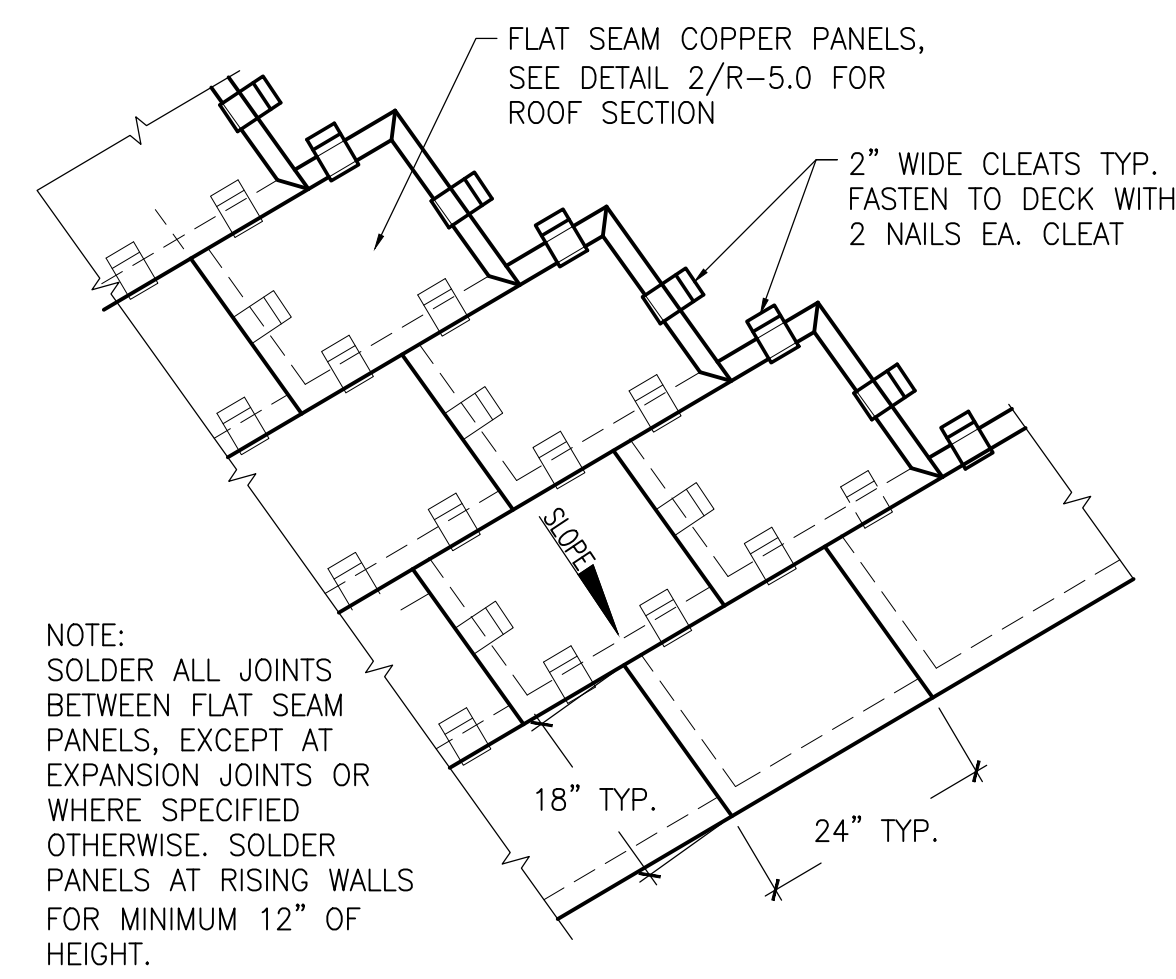
10 SECTION: ROOFING AT BASE OF SKYLIGHT N.T.S.



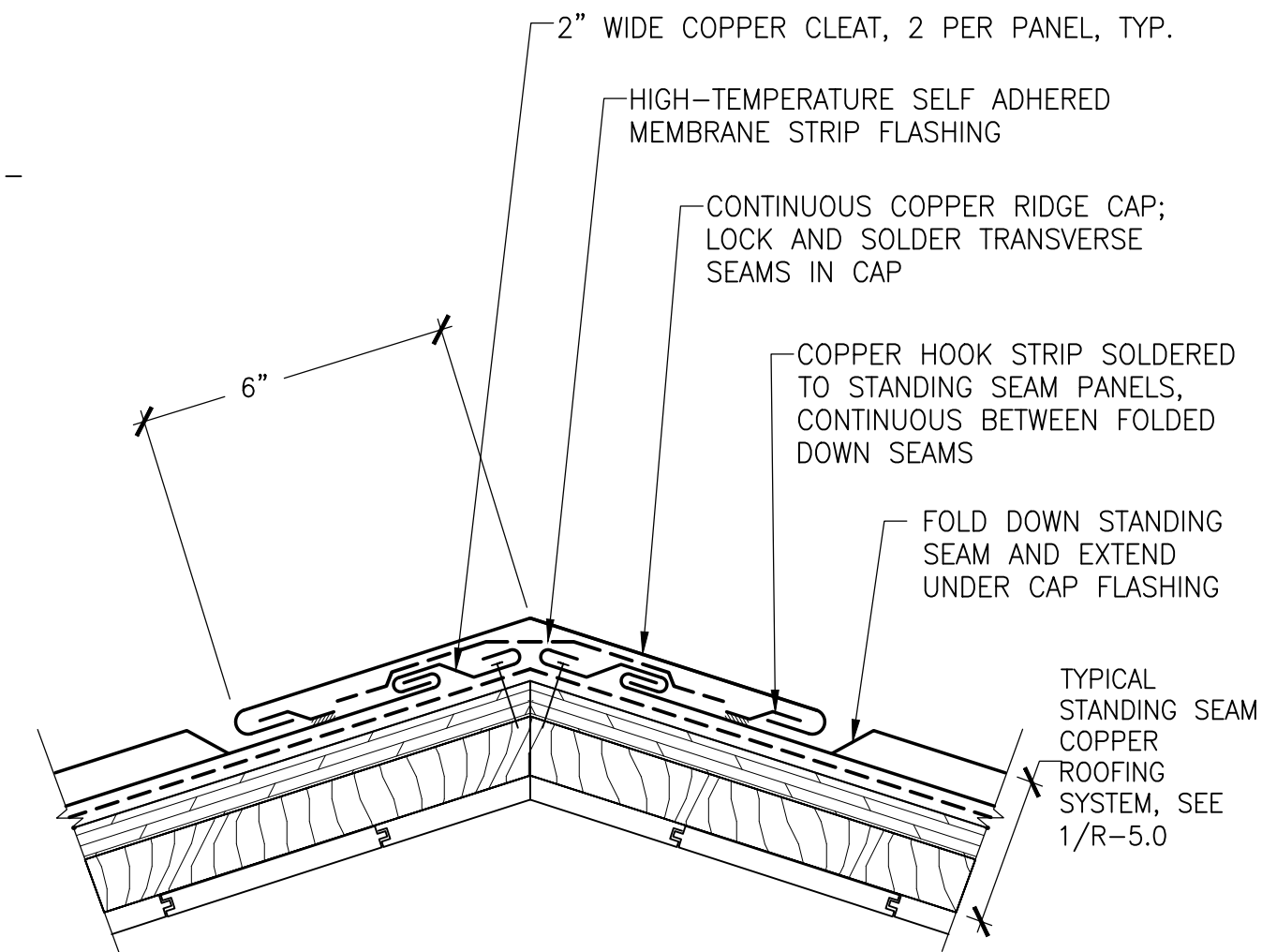
1 SECTION: TYPICAL STANDING SEAM COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



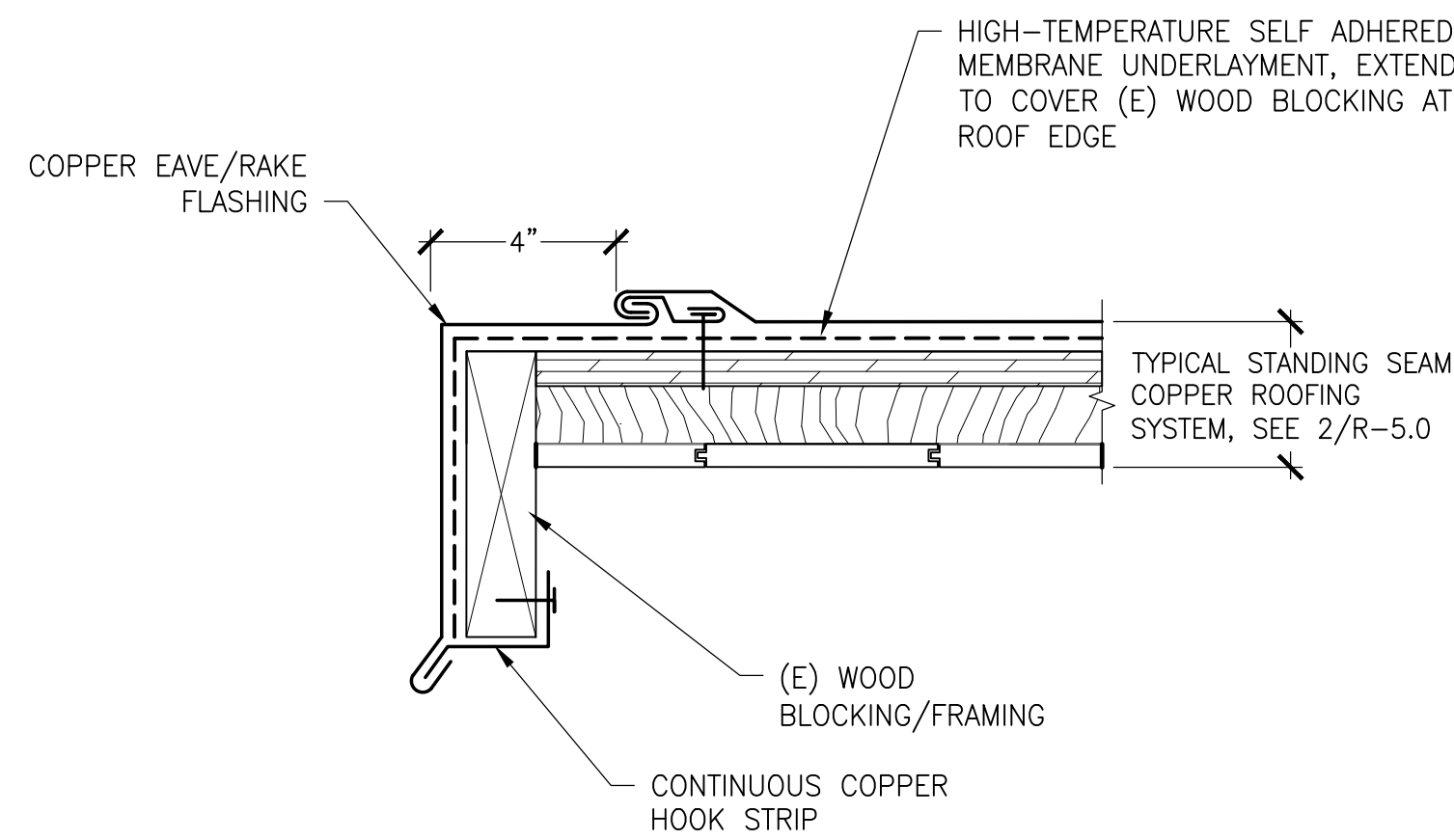
2 SECTION: TYPICAL FLAT SEAM COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



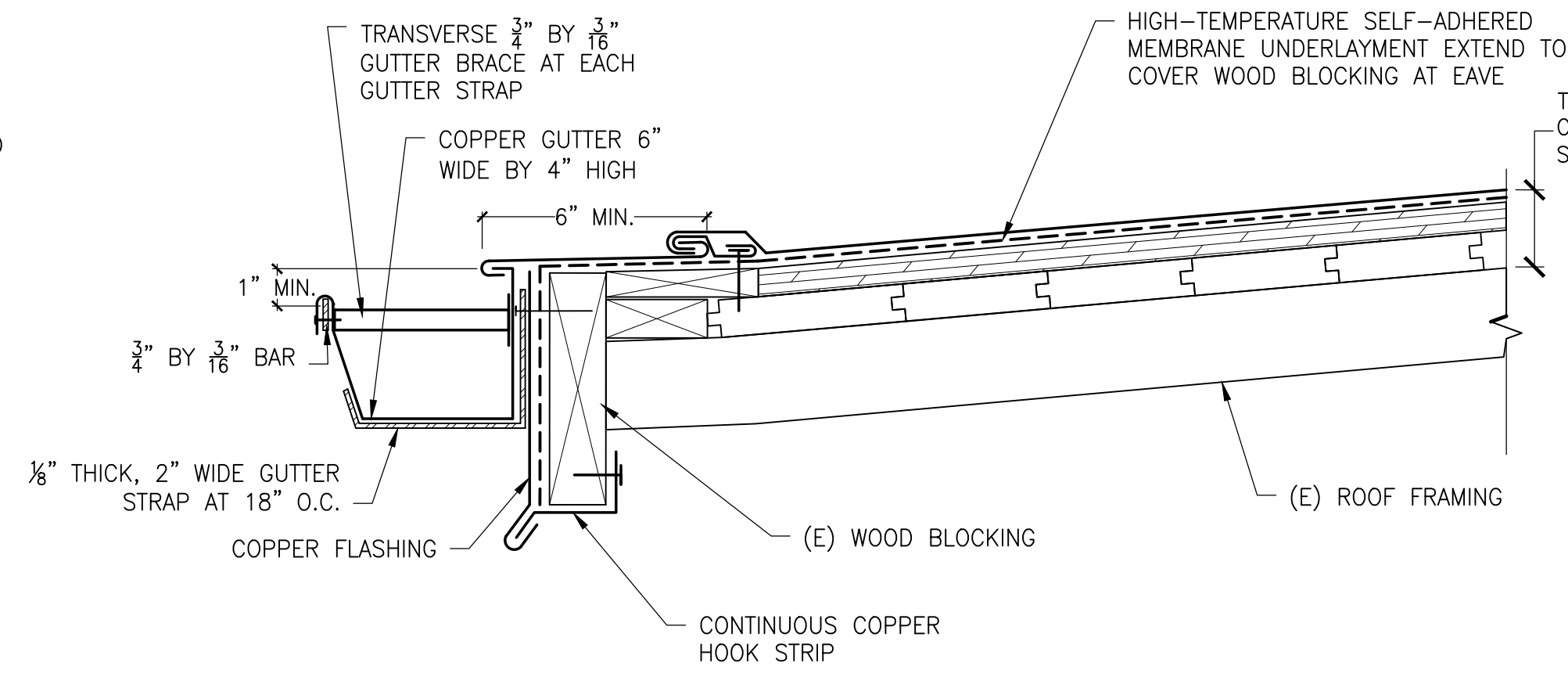
3 ISOMETRIC: TYPICAL FLAT SEAM COPPER PANEL LAYOUT
ADD ALTERNATE #LS2 N.T.S.



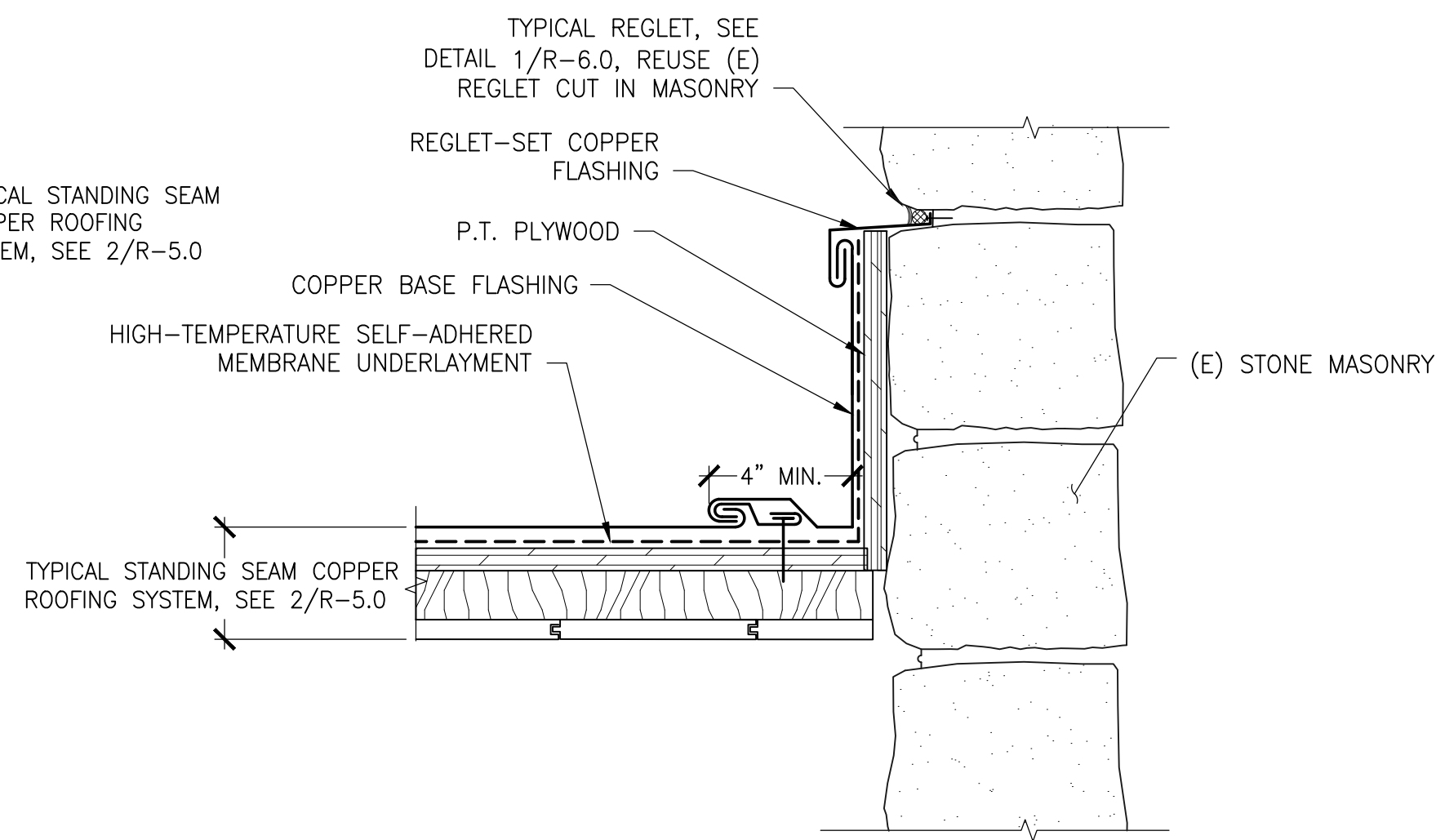
4 SECTION: TYPICAL RIDGE AT COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



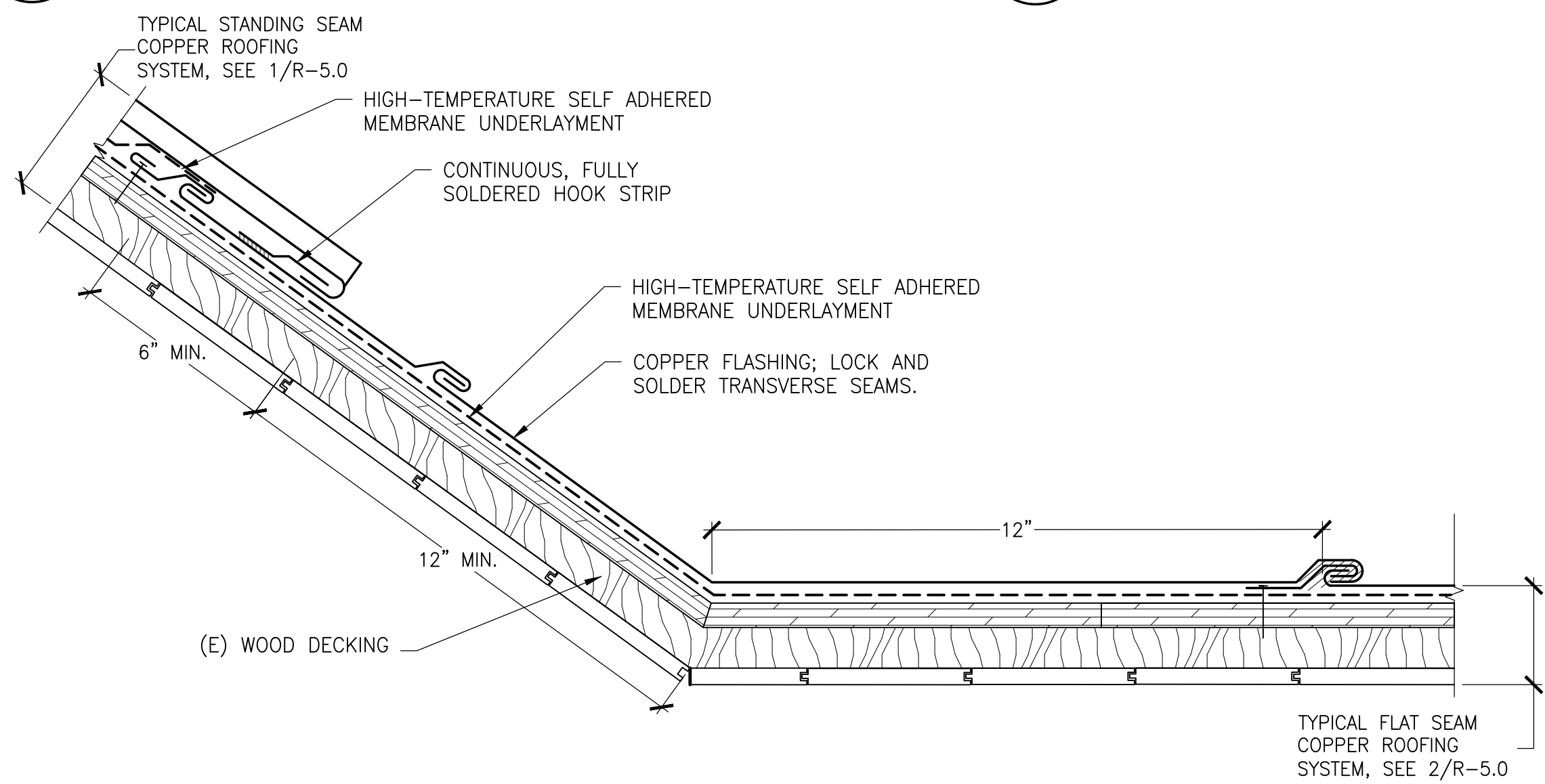
5 SECTION: COPPER ROOFING EAVE
ADD ALTERNATE #LS2 N.T.S.



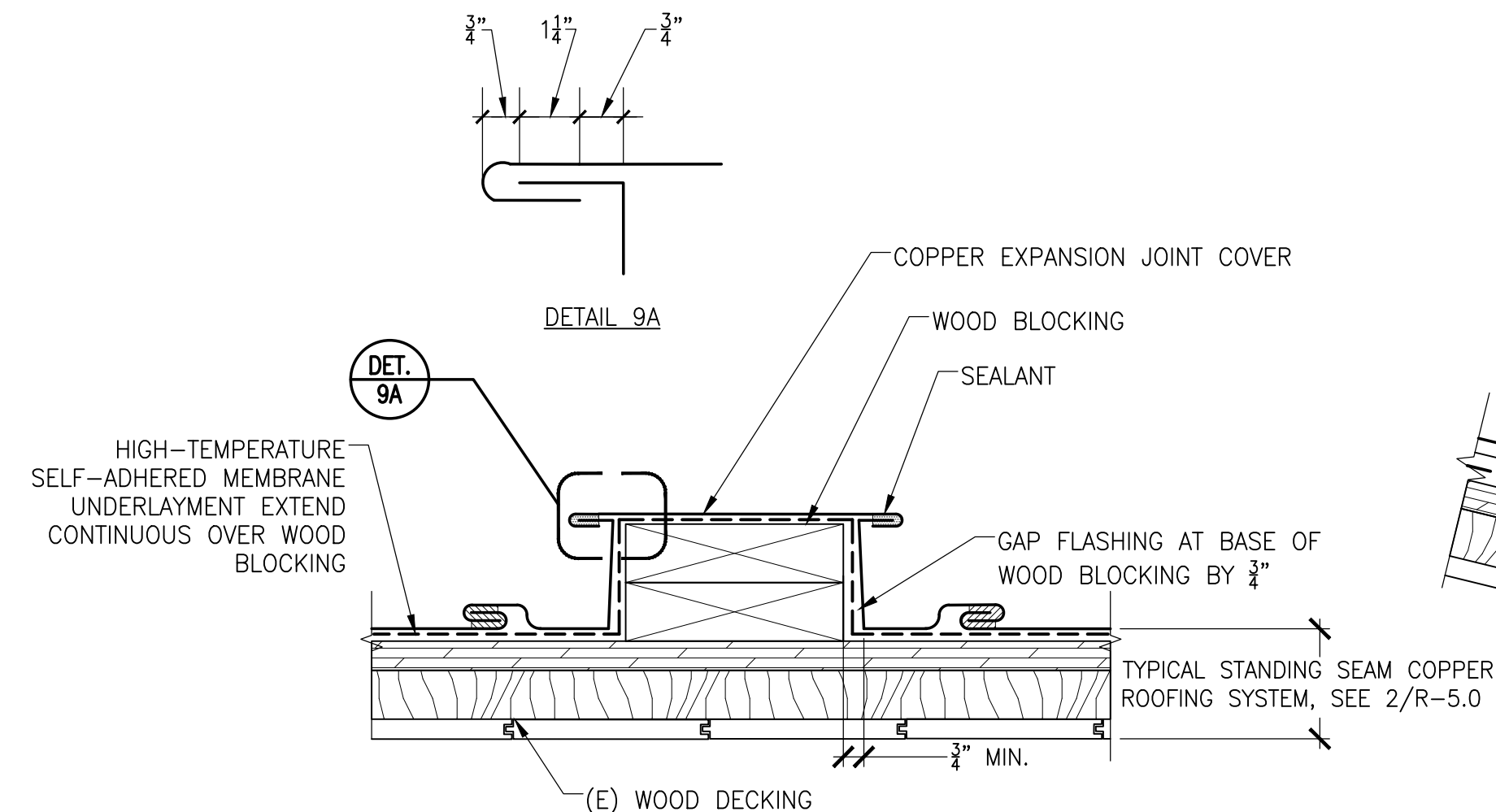
6 SECTION: COPPER ROOFING EAVE WITH GUTTER
ADD ALTERNATE #LS2 N.T.S.



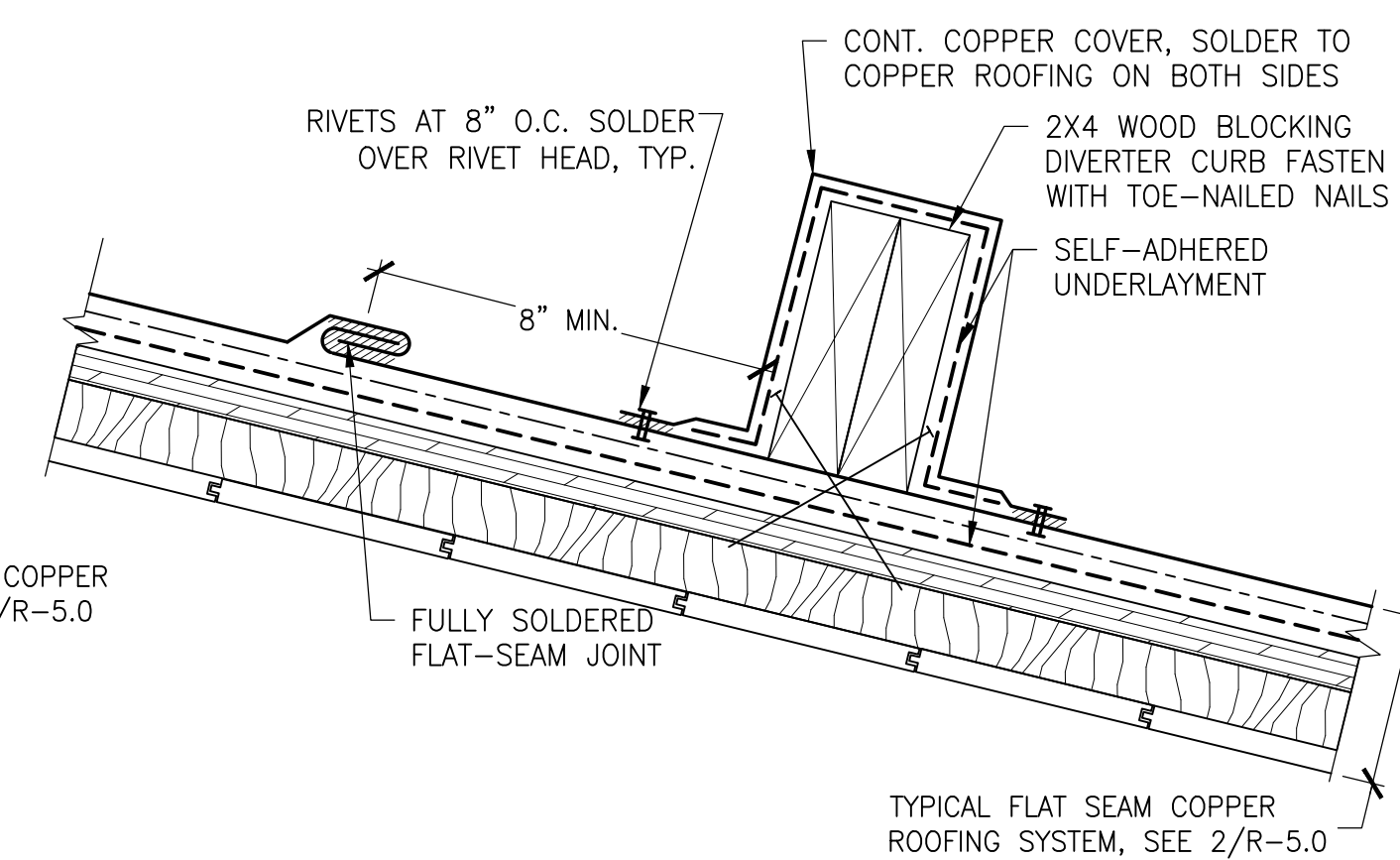
7 SECTION: RISING WALL OF COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



8 SECTION: TRANSITION STANDING SEAM TO FLAT SEAM COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



9 SECTION: EXPANSION JOINT IN FLAT-SEAM COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



10 SECTION: RAIN DIVERTER CURB
ADD ALTERNATE #LS2 N.T.S.

PERMIT SET

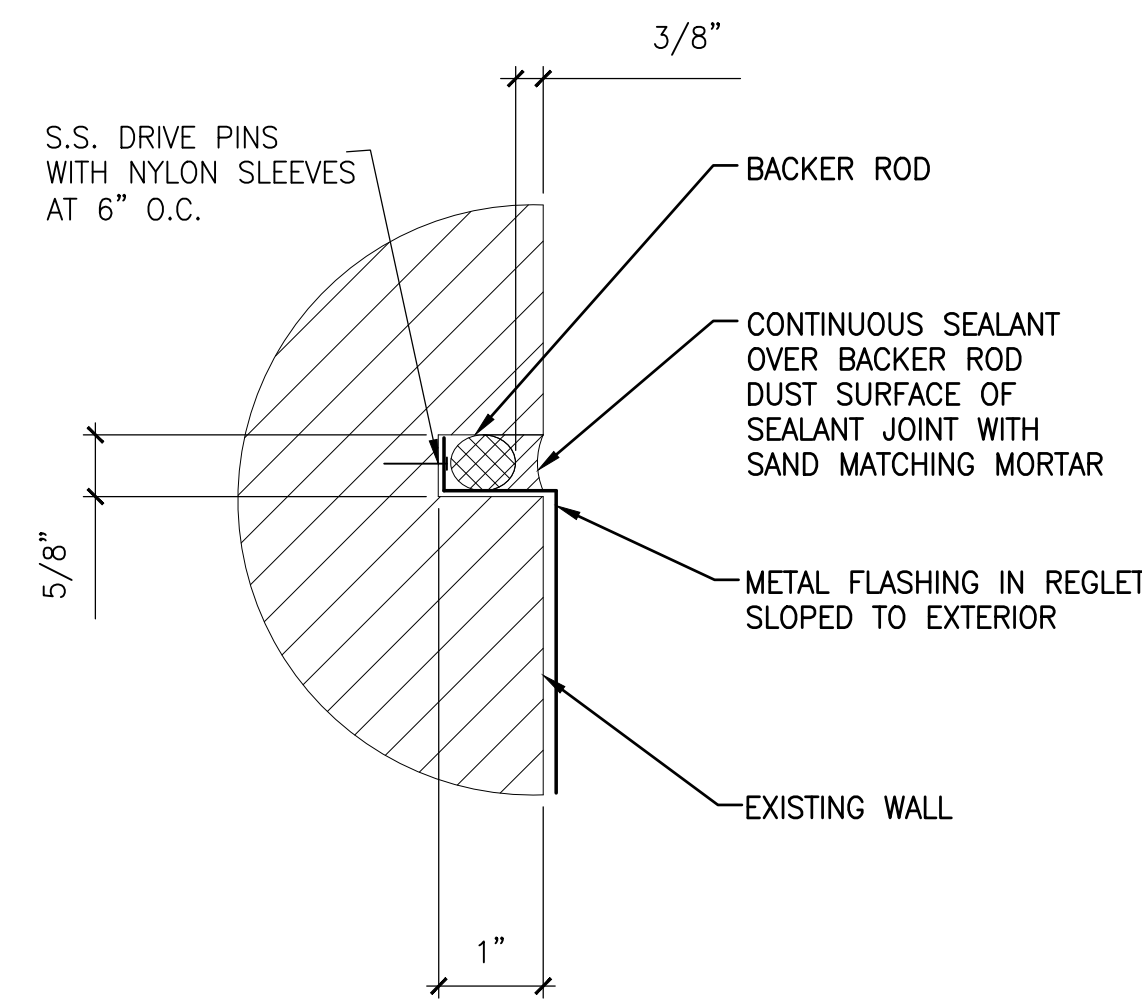
No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
1 UNION PLACE, HARTFORD, CT

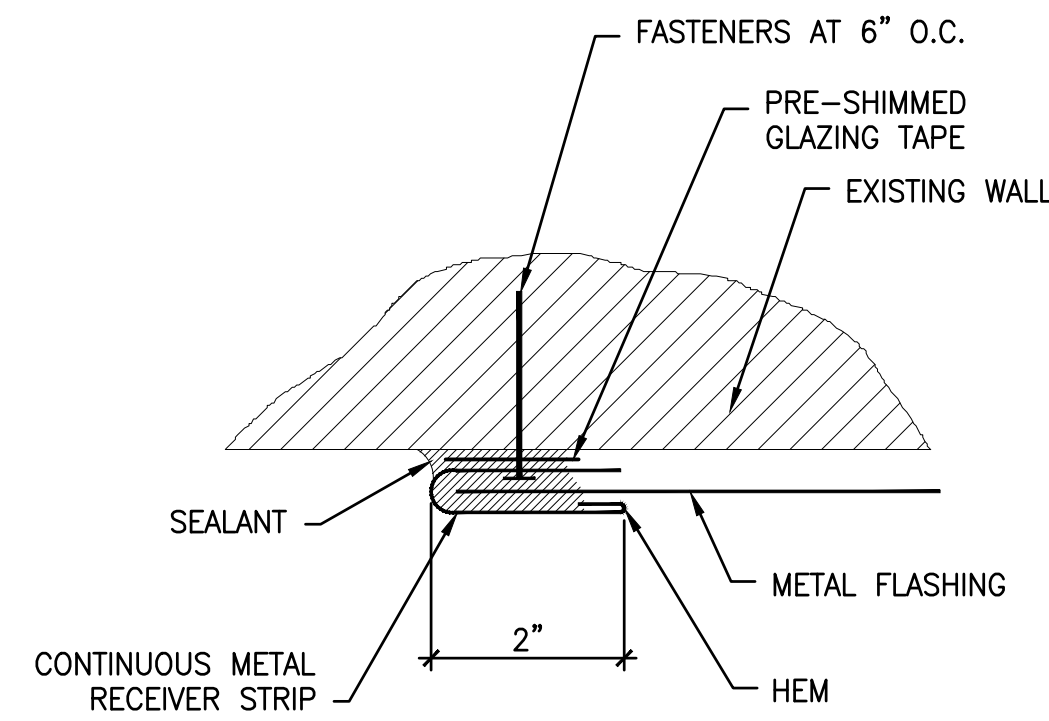
COPPER ROOFING DETAILS ADD ALTERNATE #LS2

Drawing Title

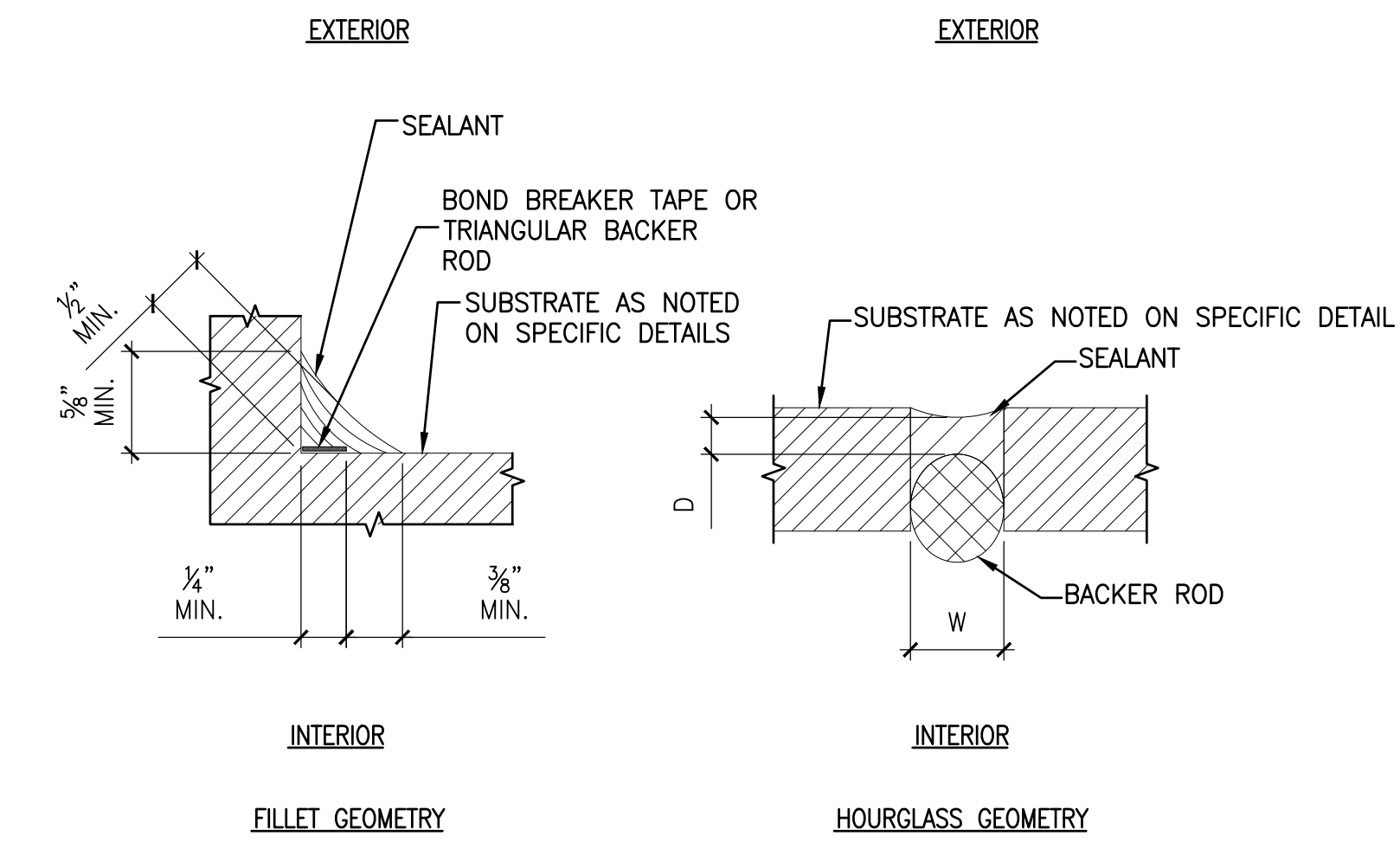
Project No. 191971.00	Checked RML	Date 05/03/2021
Drawn RCW	Approved MBB	Scale AS NOTED
Drawing No.		R-5.0



1 SECTION: TYPICAL REGLET N.T.S.

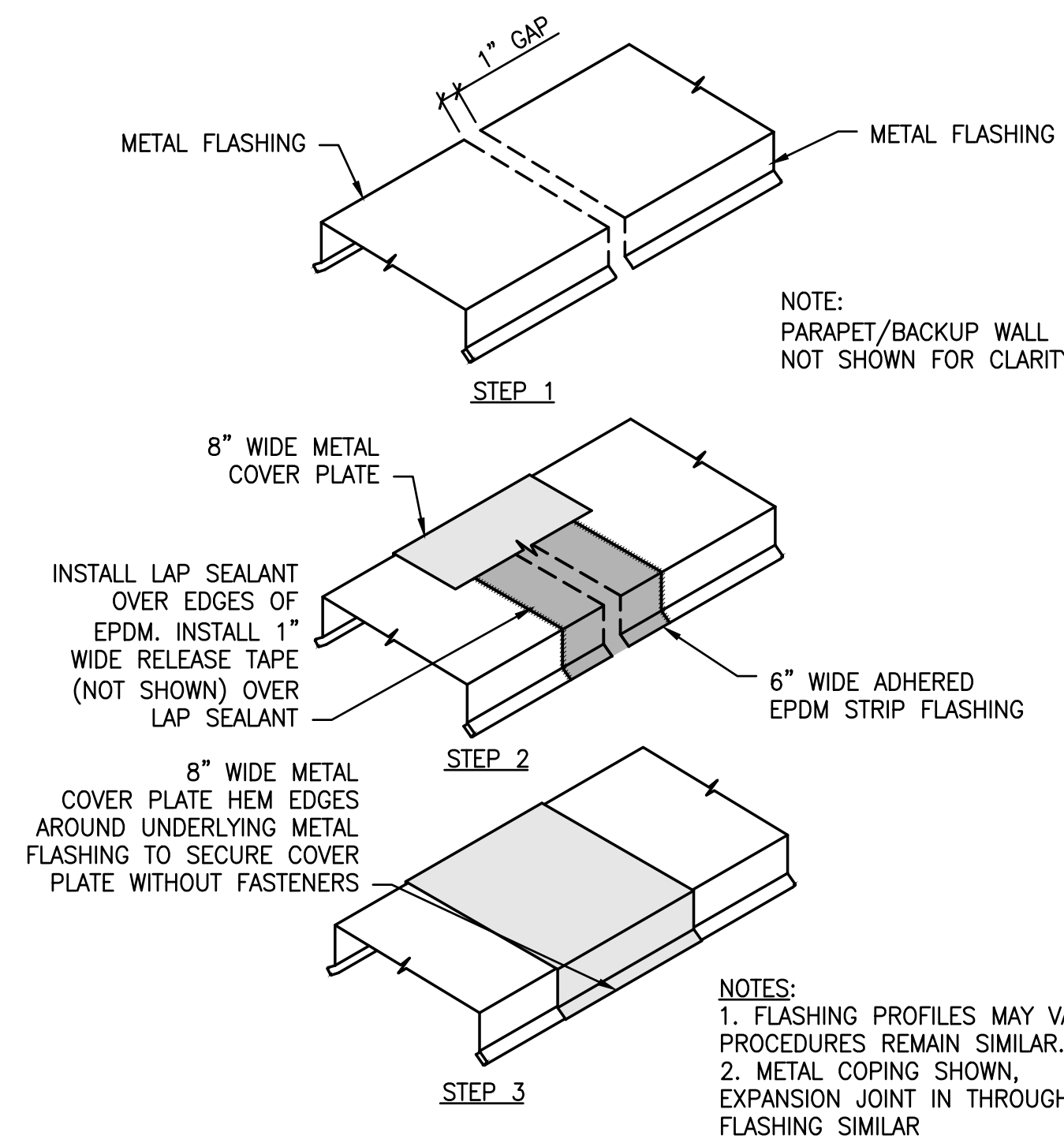


2 SECTION: TYPICAL RECEIVER STRIP N.T.S.



- NOTES:
1. USE HOURGLASS GEOMETRY FOR ALL JOINTS WITH IN-PLANE, PARALLEL SURFACES ON EACH SIDE OF JOINT.
 2. USE FILLET GEOMETRY FOR ALL JOINTS WITH PERPENDICULAR SURFACES ON EACH SIDE OF JOINT.
 3. FOR HOURGLASS GEOMETRY INSTALL BACKER ROD SUCH THAT SEALANT DEPTH (D) EQUALS 1/2W, TO A MAXIMUM DEPTH OF 1/2\".

3 SECTION AND PLAN: TYPICAL SEALANT AND JOINT GEOMETRIES N.T.S.



4 ISOMETRIC: EXPANSION JOINT IN METAL COPING N.T.S.

PERMIT SET

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
1 UNION PLACE, HARTFORD, CT

TYPICAL DETAILS

Drawing Title

Project No. 191971.00	Checked RML	Date 05/03/2021
Drawn SKW	Approved MBB	Scale AS NOTED

Drawing No.
R-6.0