



# Buncombe County Schools LEICESTER ELEMENTARY SCHOOL PARTIAL ROOF REPLACEMENT AND REPAIRS

Project Address:  
31 Gilbert Road  
Leicester, North Carolina 28748

## Index of Drawings

### General

- G1.00 COVER SHEET
- G1.01 KEY PLAN
- G1.02 STAGING PLAN

### Architectural

- A1.01 ROOF PLAN: AREA 1, 3, 4, 6, 9 AND 10
- A1.02 ROOF PLAN: AREA 11
- A1.03 ROOF PLAN: AREA 20, 21 AND 22
- A5.01 ROOF DETAILS
- A5.02 ROOF DETAILS
- A5.03 ROOF DETAILS
- A5.04 ROOF DETAILS
- A5.05 ROOF DETAILS
- A5.06 ROOF DETAILS
- A5.07 ROOF DETAILS
- A5.08 ROOF DETAILS



2701 Westport Road  
Charlotte, North Carolina  
p: 704.594.8939  
FIRM'S NC LICENSE No.: F-0869

terracon.com

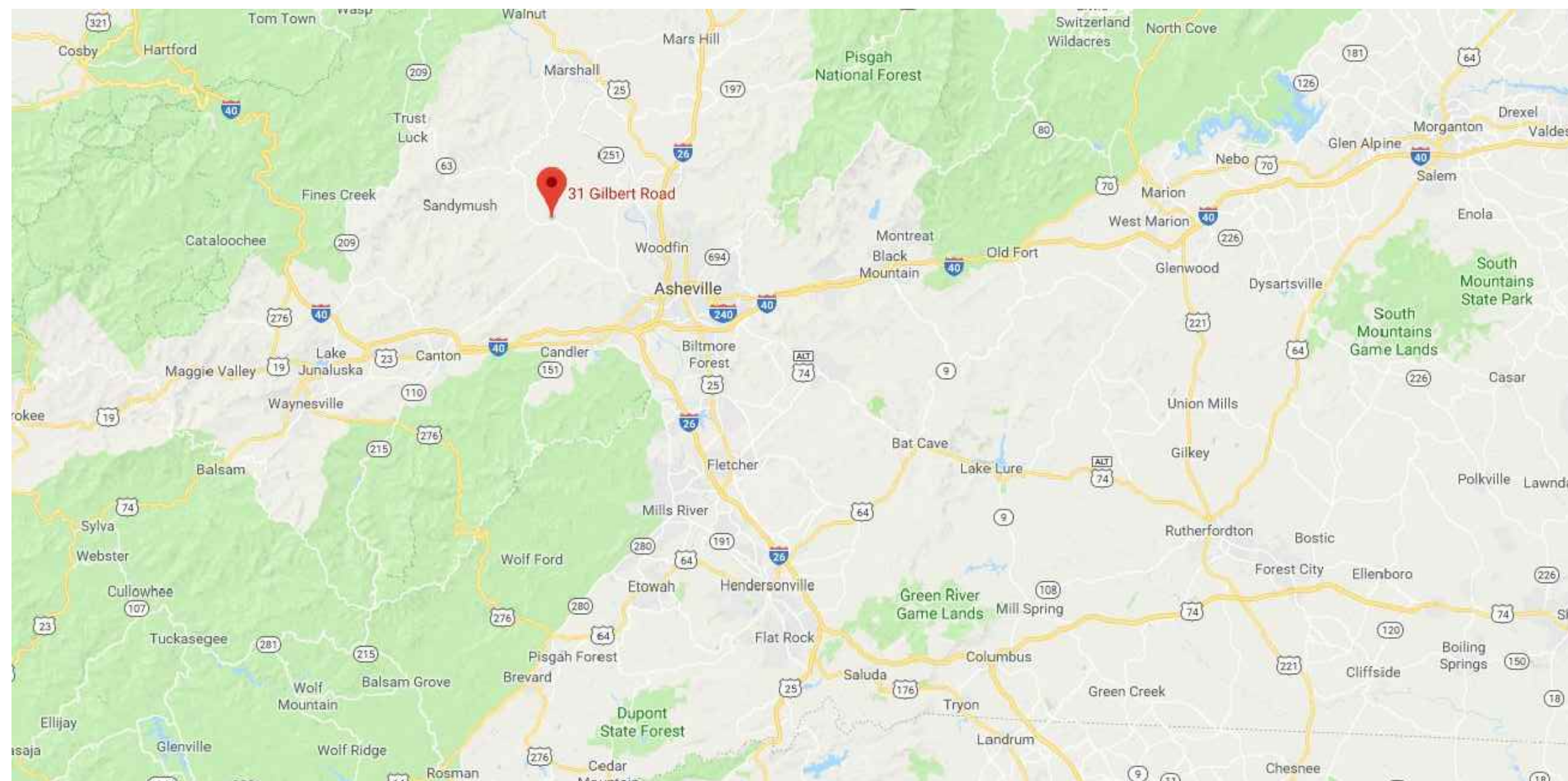
ENGINEER STATE LICENSE SEAL

PROJECT NAME AND ADDRESS:

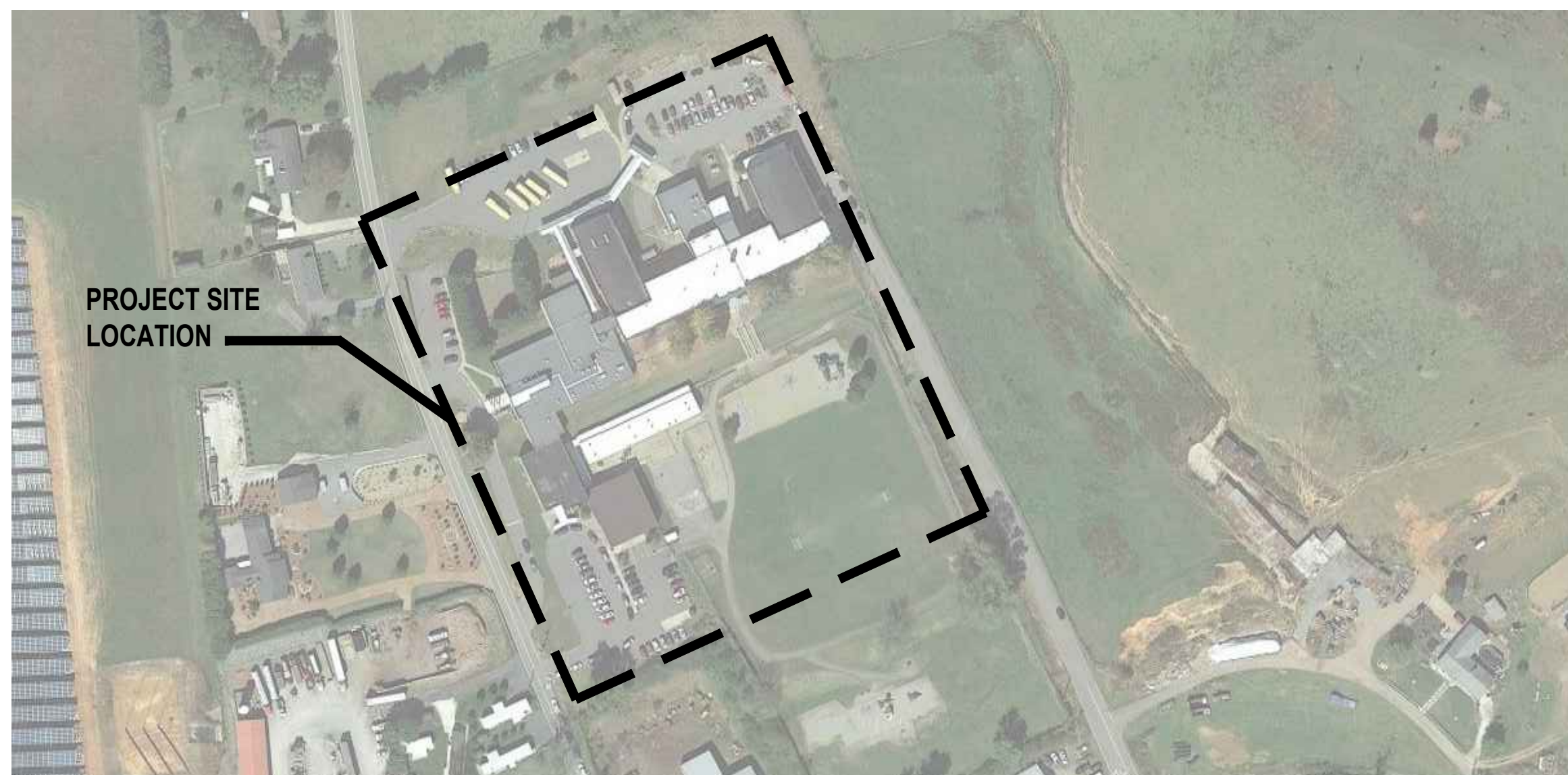
**LEICESTER ELEMENTARY SCHOOL  
PARTIAL ROOF REPLACEMENT  
AND REPAIRS**

PROJECT ADDRESS:  
31 Gilbert Road  
Leicester, North Carolina 28748

## Project Location



VICINITY MAP



LOCATION SITE

## Abbreviations

- MAX. MAXIMUM
- MIN. MINIMUM
- N.I.C NOT IN CONTRACT
- N.T.S NOT TO SCALE
- O.C. ON CENTER
- TYP. TYPICAL
- SIM. SIMILAR

## Details / Elevations / Sections Identifier

- ELEVATION / DETAIL / SECTION LABEL
- SHEET SHOWN ON
- SHADING IDENTIFIES EXISTING CONDITIONS AND NOT IN SCOPE OF WORK

## CLIENT

Mr. Tim Fierle, AIA  
Director of Facilities and Planning  
Buncombe County Schools

715 Bingham Road  
Asheville, North Carolina 28806

## ENGINEERING CONSULTANT

TERRACON CONSULTANTS, INC.  
2701 Westport Road  
Charlotte, North Carolina 28208

Jeff H. Poe Jr., PE  
Staff Engineer || Facilities  
e: Jeff.Poe@terracon.com  
p: 704.594.8939



ISSUE DATE:  
**02.20.2018**

ISSUE FOR:  
Construction Documents:  
**Not For Construction**

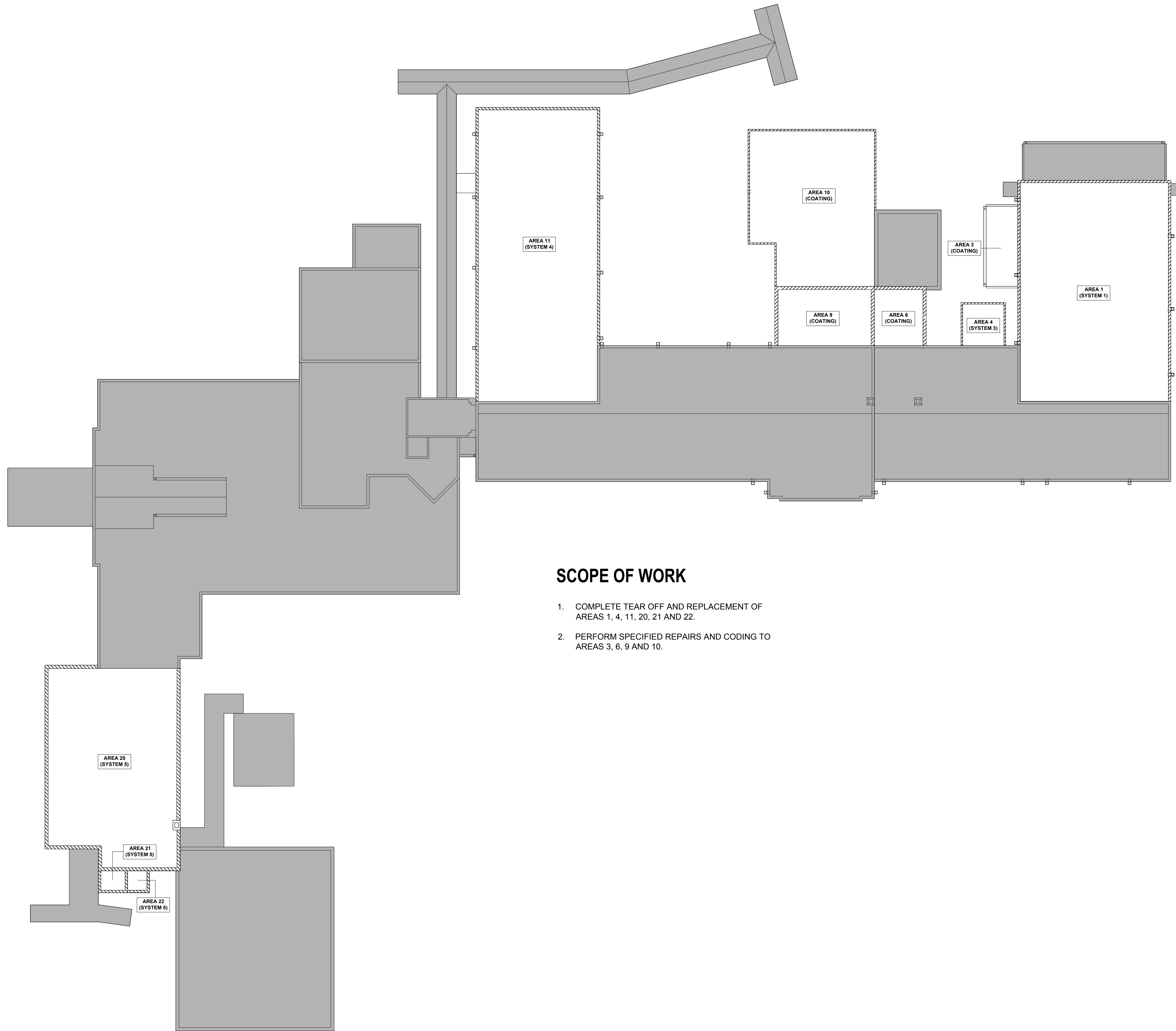
ADDENDUM:  
No. DATE DESCRIPTION:

PROJECT TEAM:  
DESIGNED BY:  
JHP  
DRAWN BY:  
EGM II  
APR REVIEWER:  
VTN

TERRACON'S PROJECT NUMBER:  
FH176189

TITLE SHEET:  
COVER SHEET

SHEET NUMBER:  
**G1.00**



**SCOPE OF WORK**

1. COMPLETE TEAR OFF AND REPLACEMENT OF AREAS 1, 4, 11, 20, 21 AND 22.
2. PERFORM SPECIFIED REPAIRS AND CODING TO AREAS 3, 6, 9 AND 10.

**LEGEND**

- SCOPE OF WORK
- NOT IN CONTRACT

**LEICESTER ELEMENTARY SCHOOL  
PARTIAL ROOF REPLACEMENT  
AND REPAIRS**

PROJECT ADDRESS:  
31 Gilbert Road  
Leicester, North Carolina 28748

02.20.2018

Construction Documents:  
**Not For Construction**

No. DATE DESCRIPTION:

DESIGNED BY:  
JHP  
DRAWN BY:  
EGM II  
APR REVIEWER:  
VTN

FH176189

KEY PLAN

**G1.01**

**LEICESTER ELEMENTARY SCHOOL  
PARTIAL ROOF REPLACEMENT  
AND REPAIRS**

PROJECT ADDRESS:  
31 Gilbert Road  
Leicester, North Carolina 28748

02.20.2018

Construction Documents:  
**Not For Construction**

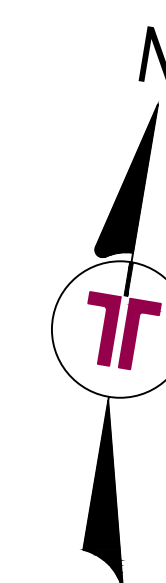
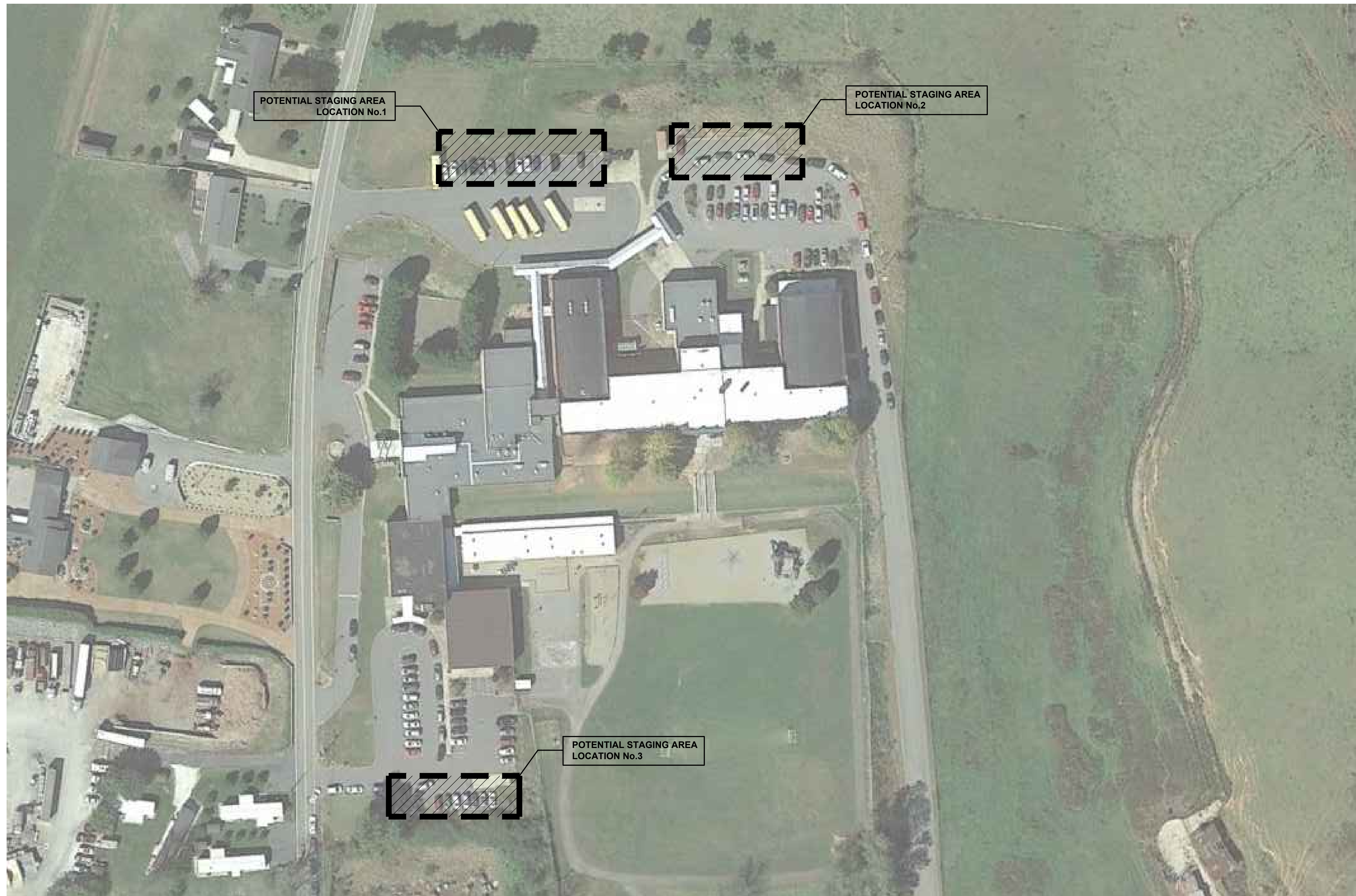
No. DATE DESCRIPTION:

DESIGNED BY:  
JHP  
DRAWN BY:  
EGM II  
APR REVIEWER:  
VTN

FH176189

STAGING PLAN

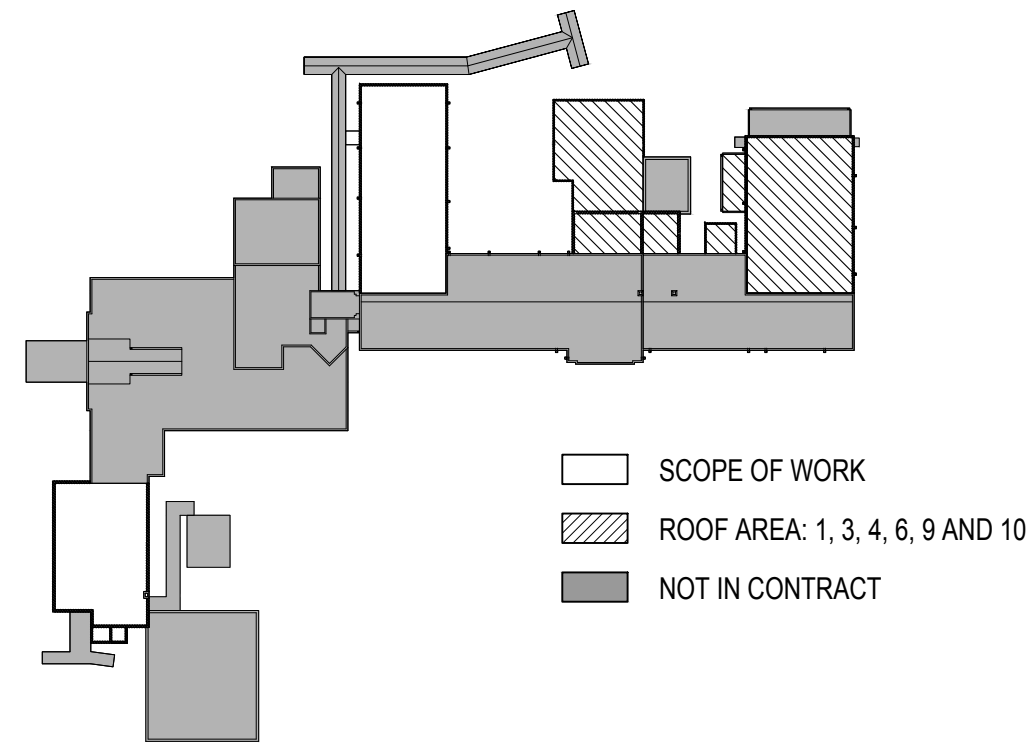
**G1.02**



1 LEICESTER ELEMENTARY SCHOOL: STAGING PLAN

SCALE: NOT TO SCALE

**KEY PLAN**



**ROOF SYSTEM TABLE**

System 1	System 2	System 3
80-mil TPO Roof Membrane (Fully Adhered)	80-mil TPO Roof Membrane (Fully Adhered)	80-mil TPO Roof Membrane (Fully Adhered)
High-Density Cover Board (Adhered)	High-Density Cover Board (Adhered)	High-Density Cover Board (Adhered)
1 1/2" Polyisocyanurate Insulation (Adhered)	2" Polyisocyanurate Insulation (Adhered)	1/4" per Foot Tapered Polyisocyanurate Insulation (Adhered)
2" Base Layer of Polyisocyanurate Insulation (Mechanically Attached)	3" Base Layer of Polyisocyanurate Insulation (Mechanically Attached)	2" Polyisocyanurate Insulation (Adhered)
Gypsum Underlayment (Loose-Laid)	Gypsum Underlayment (Loose-Laid)	3" Base Layer of Polyisocyanurate Insulation (Mechanically Attached)
Existing Wood-Plank Deck	Existing Type A Metal Deck	Gypsum Underlayment (Loose-Laid)
		Existing Type A Metal Deck

**LEGEND**

- ▬ PARAPET
- - - EXPANSION JOINT
- - - TAPERED INSULATION SLOPE
- TAPERED INSULATION SLOPE
- ↘ DECK SLOPE
- ⊠ MECHANICAL EQUIPMENT
- OS = EXISTING OVERFLOW SCUPPER
- NOS = NEW OVERFLOW SCUPPER
- RD ⊙ EXISTING ROOF DRAIN
- ⊠ EXISTING CONDUCTOR HEAD AND SCUPPER
- PP ⊙ PIPE PENETRATION
- ⊠ CHIMNEY
- ⊙ DETAIL NO.
- ⊠ LADDER
- NOT IN CONTRACT

**CODE SUMMARY**

NORTH CAROLINA BUILDING CODE (2012 EDITION) AND ASCE 7-05

BASIC WIND SPEED = 100 MPH  
 CATEGORY = III  
 EXPOSURE CATEGORY = B  
 INTERNAL PRESSURE COEF. = +/- 0.18

THE NEW ROOF SYSTEM SHALL BE DESIGNED AND CONSTRUCTED TO MEET THE FOLLOWING WIND UPLIFT PRESSURES:

- FIELD ZONE = - 20 PSF
- PERIMETER ZONE = - 35 PSF
- CORNER ZONE = - 52 PSF

**GENERAL NOTES**

- CONTRACTOR SHALL FIELD-VERIFY ALL CONDITIONS AND DIMENSIONS
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBSERVING THE ROOF DECK AND ANY DECK IRREGULARITIES (LOW SPOTS, DEFLECTED DECK AREAS, ETC.) THAT COULD POTENTIALLY LEAD TO STANDING WATER AFTER NEW ROOF IS INSTALLED PRIOR TO PROCEEDING WITH ROOF INSTALLATION. COORDINATE DECK INSPECTION WITH ENGINEER. PROCEEDING WITH THE WORK WILL BE CONSIDERED AS ACCEPTANCE OF THE SUBSTRATE BY CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE.
- TAPERED EDGE STRIP NOT SHOWN FOR CLARITY.

**Terracon**  
 Consulting Engineers and Scientists  
 2701 Westport Road  
 Charlotte, North Carolina  
 p. 704.594.8939  
 FIRM'S NC LICENSE No.: F-0869  
 terracon.com

ENGINEER STATE LICENSE SEAL

PROJECT NAME AND ADDRESS:

**LEICESTER ELEMENTARY SCHOOL  
 PARTIAL ROOF REPLACEMENT  
 AND REPAIRS**

PROJECT ADDRESS:  
 31 Gilbert Road  
 Leicester, North Carolina 28748

ISSUE DATE:

02.20.2018

ISSUE FOR:  
 Construction Documents:  
**Not For Construction**

ADDENDUM:  
 No. DATE DESCRIPTION:

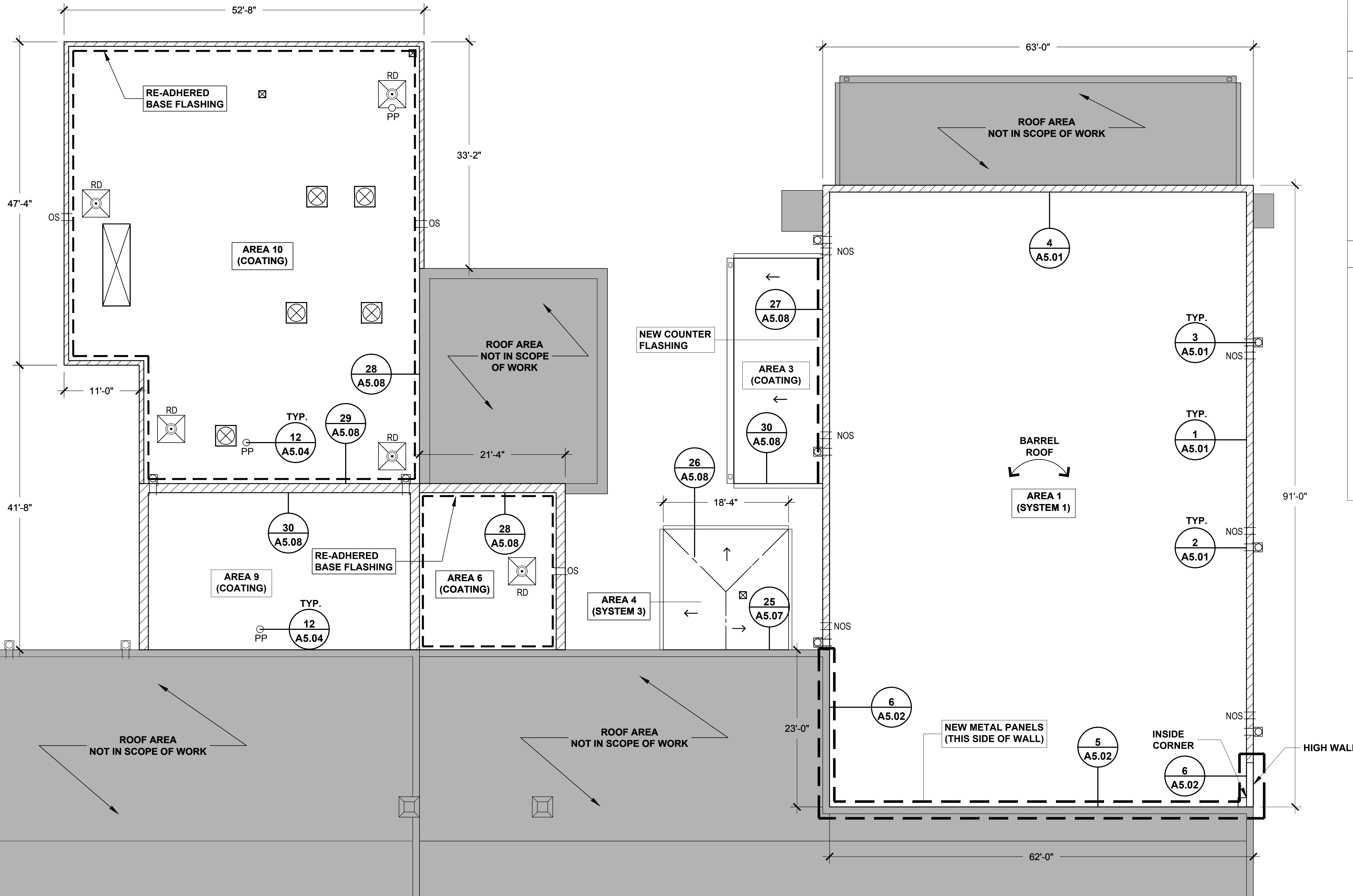
PROJECT TEAM:  
 DESIGNED BY:  
 JHP  
 DRAWN BY:  
 EGM II  
 APR REVIEWER:  
 VTN

TERRACON'S PROJECT NUMBER:  
 FH176189

TITLE SHEET:  
 ROOF PLAN:  
 AREA 1, 3, 4, 6, 9 AND 10

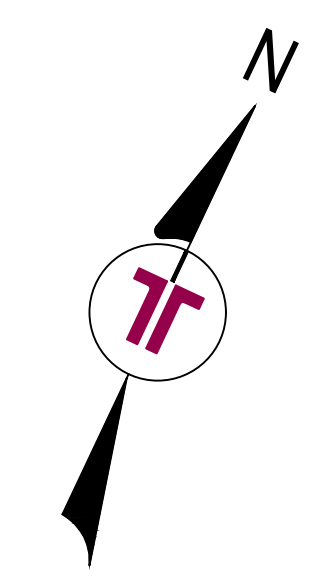
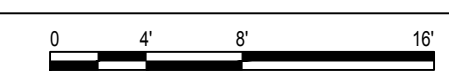
SHEET NUMBER:

**A1.01**

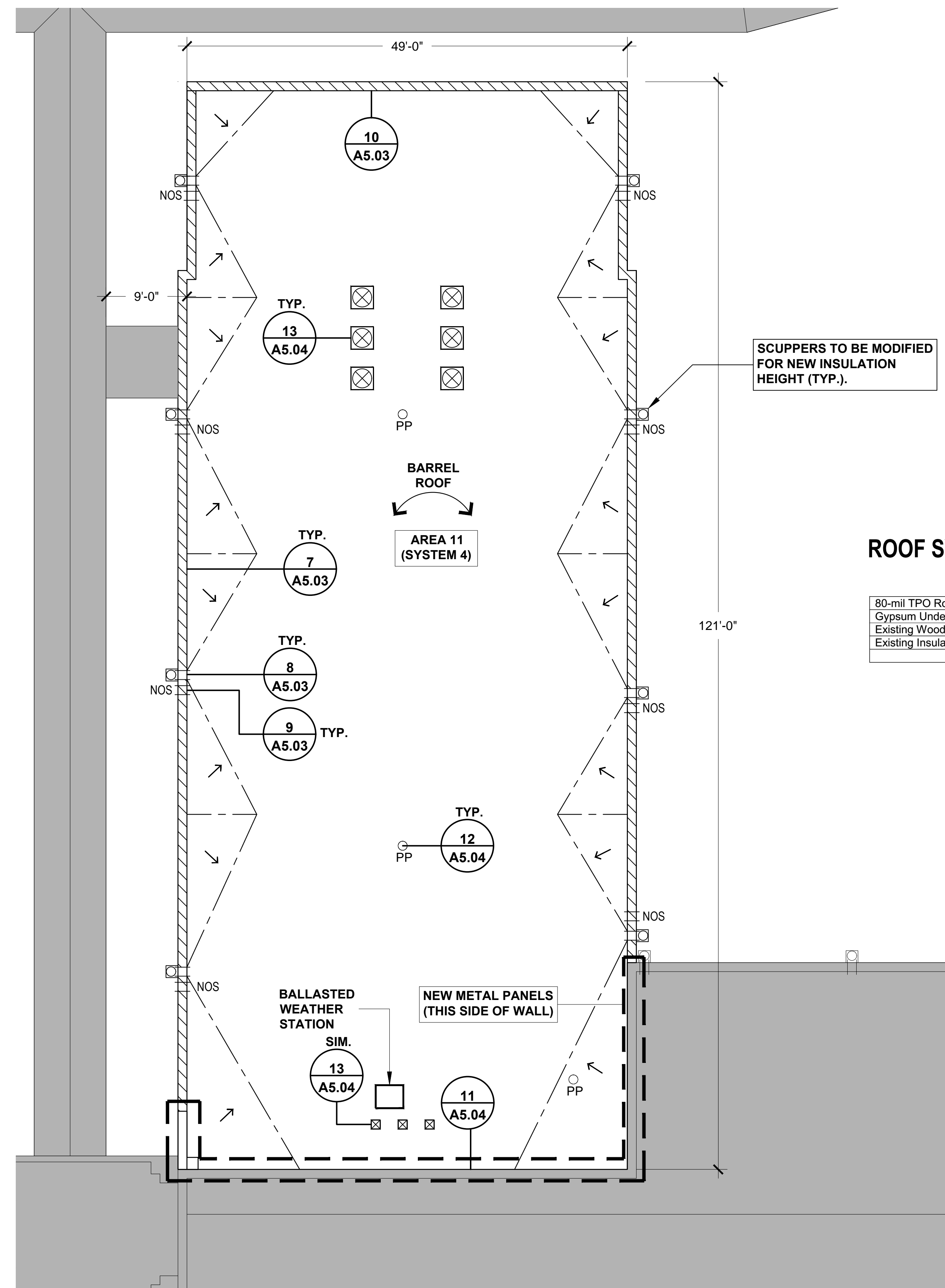
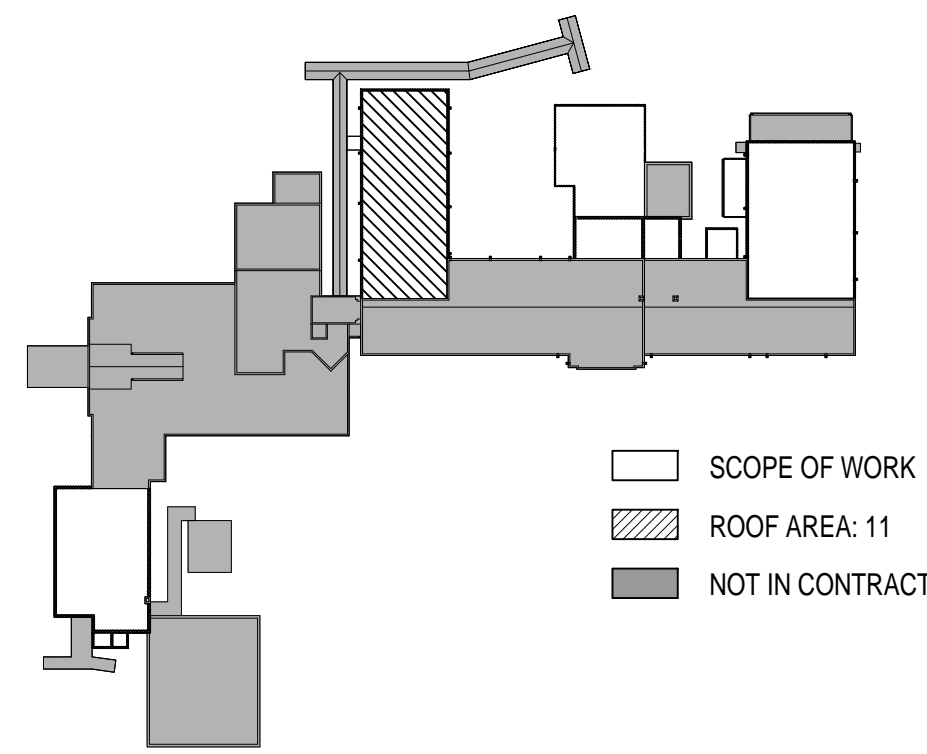


1 LEICESTER ELEMENTARY SCHOOL ROOF PLAN: AREA 1, 3, 4, 6, 9 AND 10

SCALE: 1/8" = 1'-0"



**KEY PLAN**



**ROOF SYSTEM TABLE**

System 4	
80-mil TPO Roof Membrane (Fully Adhered)	
Gypsum Underlayment (Loose-Laid)	
Existing Wood-Plank Deck	
Existing Insulation Above Existing Drop Ceiling	

**LEGEND**

- PARAPET
- EXPANSION JOINT
- TAPERED INSULATION
- TAPERED INSULATION SLOPE
- DECK SLOPE
- MECHANICAL EQUIPMENT
- OS = EXISTING OVERFLOW SCUPPER
- NOS = NEW OVERFLOW SCUPPER
- RD = EXISTING ROOF DRAIN
- EXISTING CONDUCTOR HEAD AND SCUPPER
- PPO = PIPE PENETRATION
- CHIMNEY
- DETAIL NO.
- LADDER
- NOT IN CONTRACT

**CODE SUMMARY**

NORTH CAROLINA BUILDING CODE (2012 EDITION) AND ASCE 7-05

BASIC WIND SPEED = 100 MPH  
 CATEGORY = III  
 EXPOSURE CATEGORY = B  
 INTERNAL PRESSURE COEF. = +/- 0.18

THE NEW ROOF SYSTEM SHALL BE DESIGNED AND CONSTRUCTED TO MEET THE FOLLOWING WIND UPLIFT PRESSURES:

- FIELD ZONE = - 20 PSF
- PERIMETER ZONE = - 35 PSF
- CORNER ZONE = - 52 PSF

**GENERAL NOTES**

- CONTRACTOR SHALL FIELD-VERIFY ALL CONDITIONS AND DIMENSIONS
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBSERVING THE ROOF DECK AND ANY DECK IRREGULARITIES (LOW SPOTS, DEFLECTED DECK AREAS, ETC.) THAT COULD POTENTIALLY LEAD TO STANDING WATER AFTER NEW ROOF IS INSTALLED PRIOR TO PROCEEDING WITH ROOF INSTALLATION. COORDINATE DECK INSPECTION WITH ENGINEER. PROCEEDING WITH THE WORK WILL BE CONSIDERED AS ACCEPTANCE OF THE SUBSTRATE BY CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE.
- TAPERED EDGE STRIP NOT SHOWN FOR CLARITY.

**Terracon**  
 Consulting Engineers and Scientists  
 2701 Westport Road  
 Charlotte, North Carolina  
 p: 704.594.8939  
 FIRM'S NC LICENSE No.: F-0869  
 terracon.com

ENGINEER STATE LICENSE SEAL

PROJECT NAME AND ADDRESS:

**LEICESTER ELEMENTARY SCHOOL  
 PARTIAL ROOF REPLACEMENT  
 AND REPAIRS**

PROJECT ADDRESS:  
 31 Gilbert Road  
 Leicester, North Carolina 28748

ISSUE DATE:  
**02.20.2018**

ISSUE FOR:  
 Construction Documents:  
**Not For Construction**

ADDENDUM:  
 No. DATE DESCRIPTION:

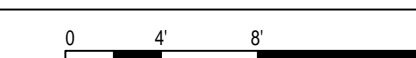
PROJECT TEAM:  
 DESIGNED BY:  
**JHP**  
 DRAWN BY:  
**EGM II**  
 APR REVIEWER:  
**VTN**

TERRACON'S PROJECT NUMBER:  
**FH176189**

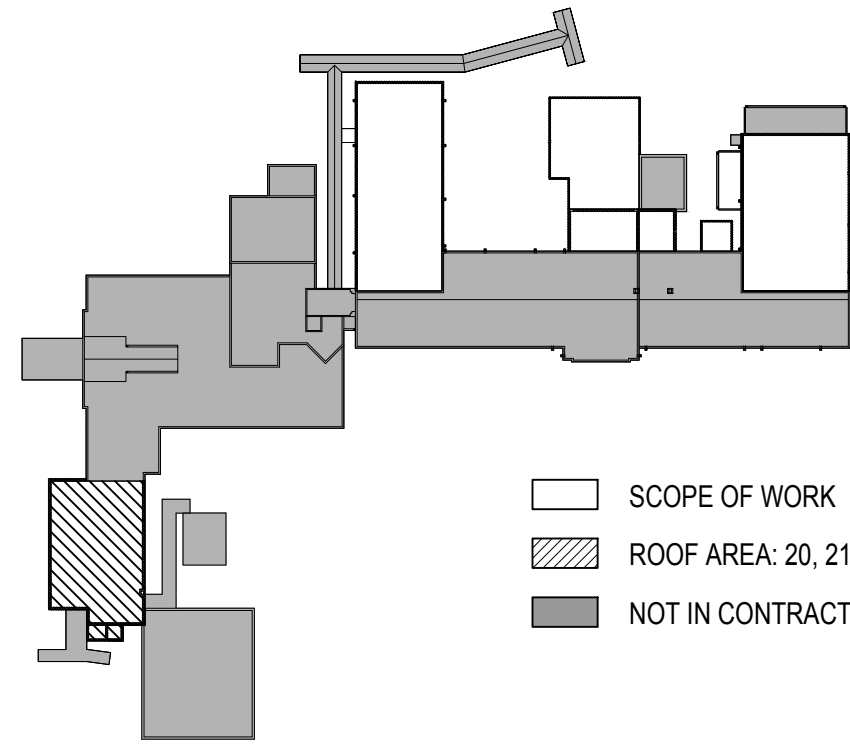
TITLE SHEET:  
**ROOF PLAN:  
 AREA 11**

SHEET NUMBER:

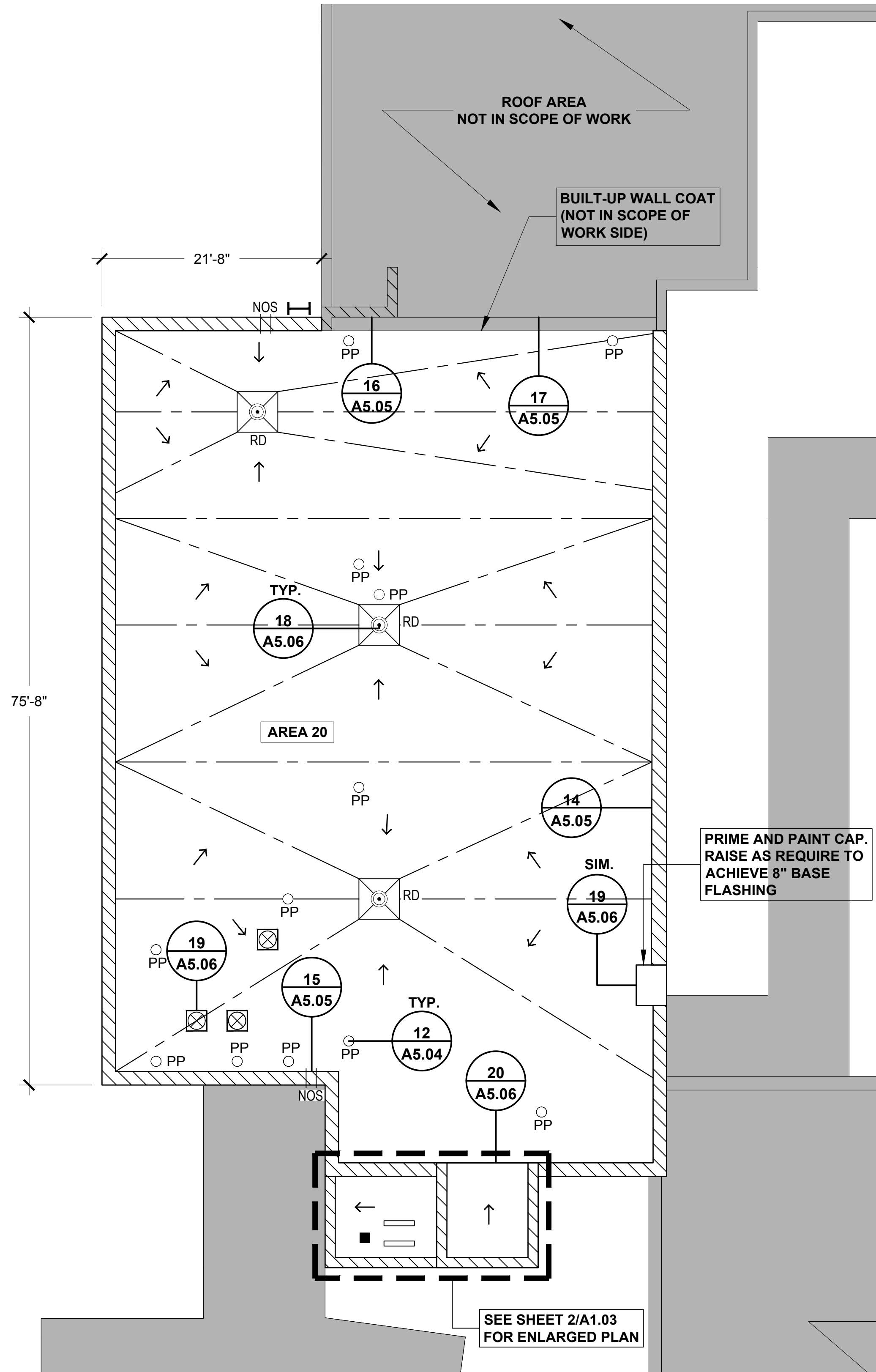
**A1.02**



**KEY PLAN**

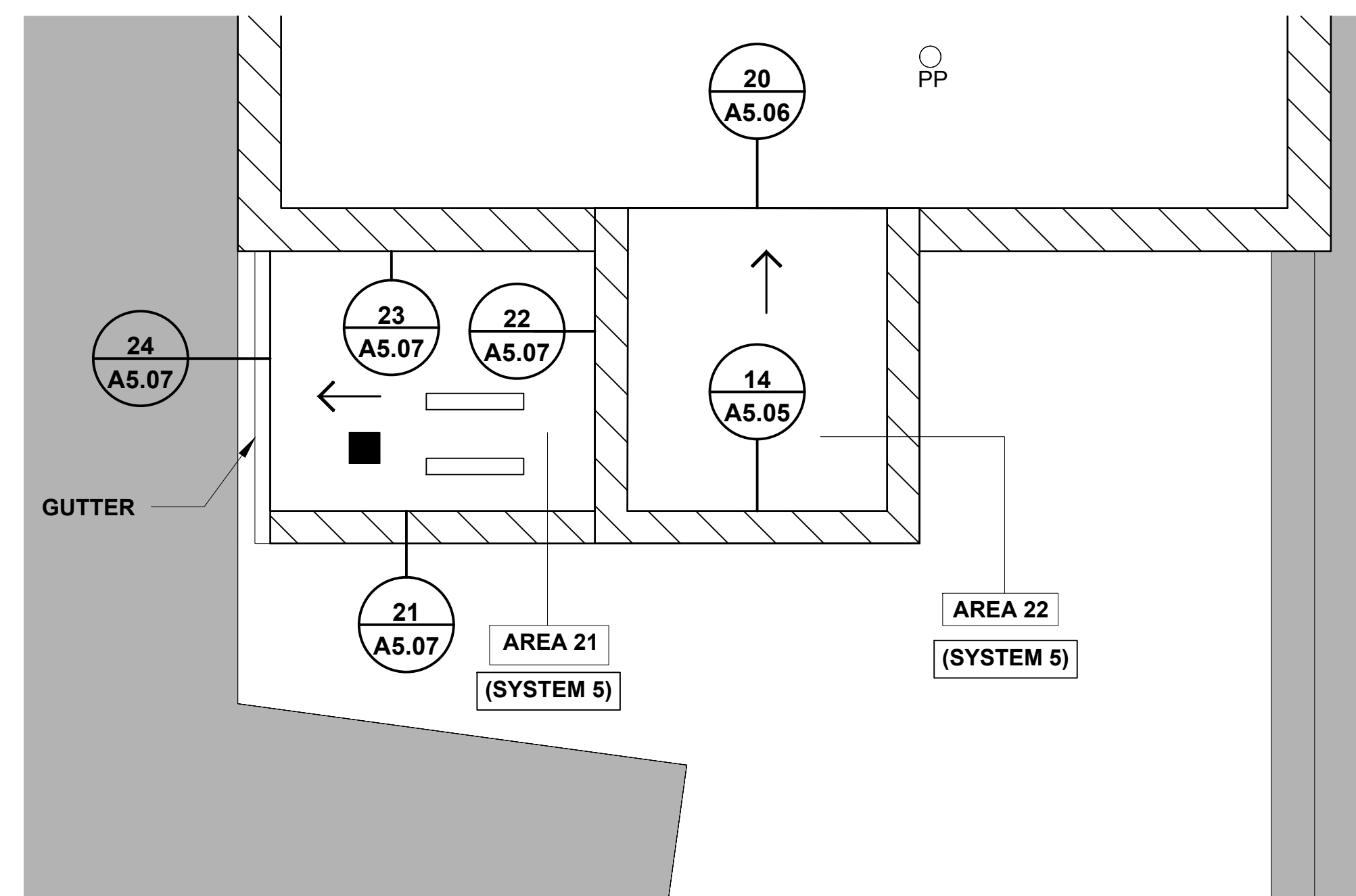


- SCOPE OF WORK
- ▨ ROOF AREA: 20, 21 AND 22
- NOT IN CONTRACT



**ROOF SYSTEM TABLE**

System 5	
80-mil TPO Roof Membrane (Fully Adhered)	
High-Density Cover Board (Adhered)	
1/4" per Foot Tapered Polyisocyanurate Insulation (Adhered)	
2" Polyisocyanurate Insulation (Adhered)	
3" Base Layer of Polyisocyanurate Insulation (Mechanically Attached)	
Existing Concrete Deck with Lightweight Slurry Layer	



**LEGEND**

- ▬ PARAPET
- - - EXPANSION JOINT
- - - TAPERED INSULATION
- TAPERED INSULATION SLOPE
- ↘ DECK SLOPE
- ⊠ MECHANICAL EQUIPMENT
- OS = EXISTING OVERFLOW SCUPPER
- NOS = NEW OVERFLOW SCUPPER
- RD = EXISTING ROOF DRAIN
- ⊠ EXISTING CONDUCTOR HEAD AND SCUPPER
- PP = PIPE PENETRATION
- ⊠ CHIMNEY
- DETAIL NO.
- ⊠ LADDER
- NOT IN CONTRACT

**CODE SUMMARY**

NORTH CAROLINA BUILDING CODE (2012 EDITION) AND ASCE 7-05

BASIC WIND SPEED = 100 MPH  
 CATEGORY = III  
 EXPOSURE CATEGORY = B  
 INTERNAL PRESSURE COEF. = +/- 0.18

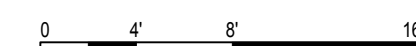
THE NEW ROOF SYSTEM SHALL BE DESIGNED AND CONSTRUCTED TO MEET THE FOLLOWING WIND UPLIFT PRESSURES:

- FIELD ZONE = - 20 PSF
- PERIMETER ZONE = - 35 PSF
- CORNER ZONE = - 52 PSF

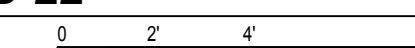
**GENERAL NOTES**

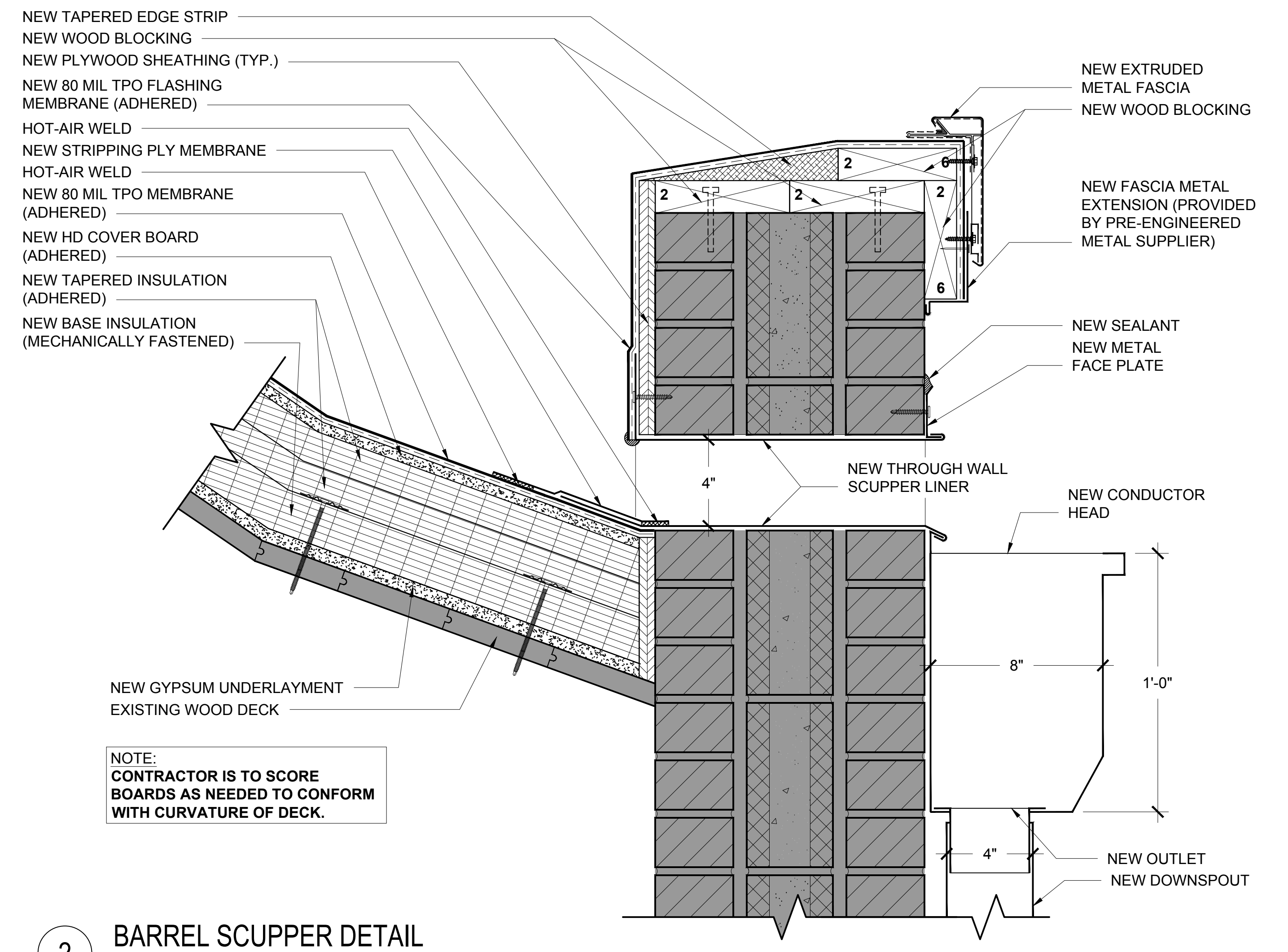
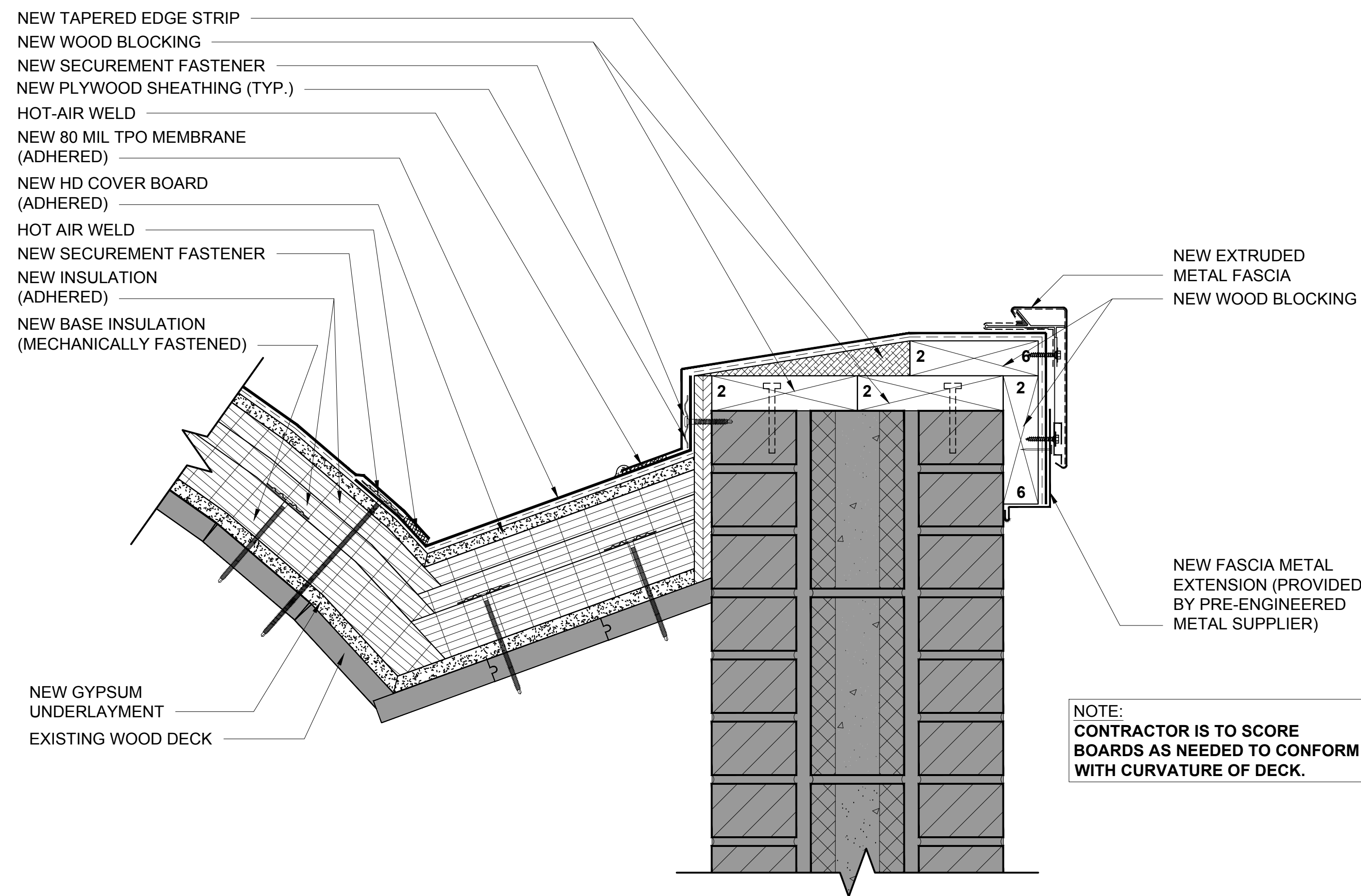
- CONTRACTOR SHALL FIELD-VERIFY ALL CONDITIONS AND DIMENSIONS
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBSERVING THE ROOF DECK AND ANY DECK IRREGULARITIES (LOW SPOTS, DEFLECTED DECK AREAS, ETC.) THAT COULD POTENTIALLY LEAD TO STANDING WATER AFTER NEW ROOF IS INSTALLED PRIOR TO PROCEEDING WITH ROOF INSTALLATION. COORDINATE DECK INSPECTION WITH ENGINEER. PROCEEDING WITH THE WORK WILL BE CONSIDERED AS ACCEPTANCE OF THE SUBSTRATE BY CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE.
- TAPERED EDGE STRIP NOT SHOWN FOR CLARITY.

1 LEICESTER ELEMENTARY SCHOOL ROOF PLAN: AREA 20  
 SCALE: 1/8" = 1'-0"



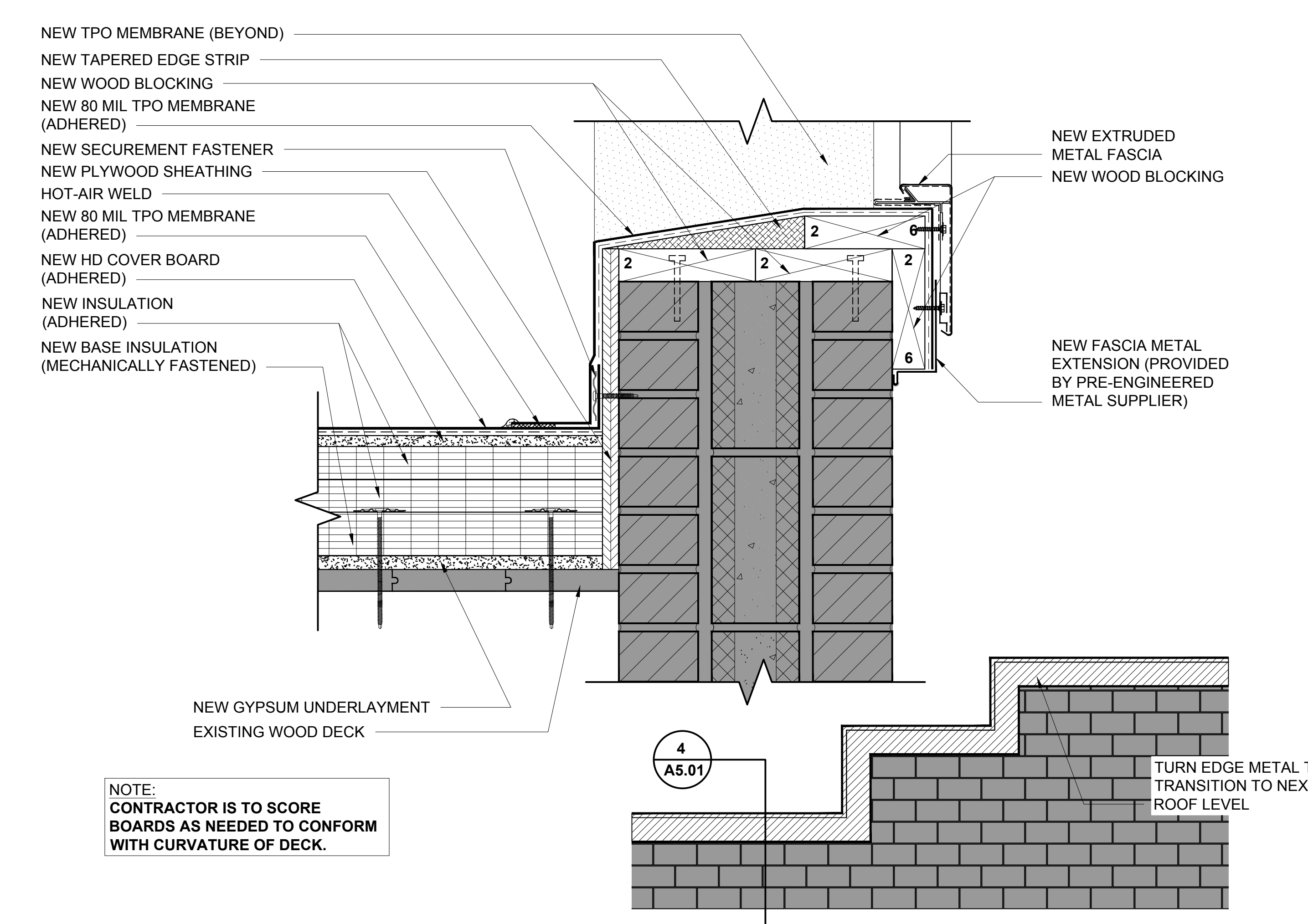
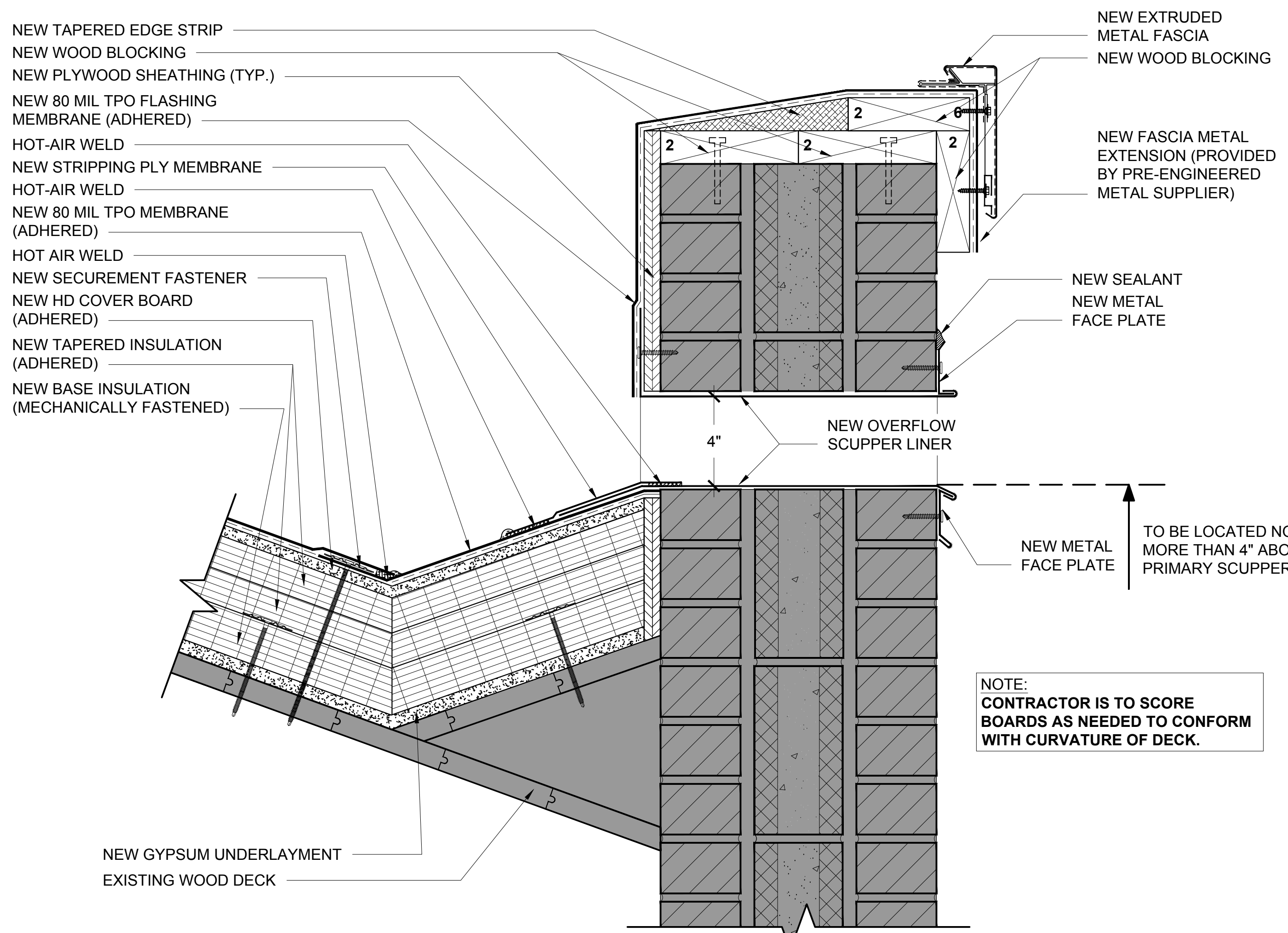
2 LEICESTER ELEMENTARY SCHOOL ROOF PLAN: AREA 21 AND 22  
 SCALE: 1/4" = 1'-0"





1 BARREL PARAPET (LONG WALL) DETAIL  
3" = 1'-0"

2 BARREL SCUPPER DETAIL  
3" = 1'-0"



3 BARREL OVERFLOW SCUPPER DETAIL  
3" = 1'-0"

4 BARREL PARAPET (SHORT WALL) DETAIL  
3" = 1'-0"

**LEICESTER ELEMENTARY SCHOOL  
PARTIAL ROOF REPLACEMENT  
AND REPAIRS**

PROJECT ADDRESS:  
31 Gilbert Road  
Leicester, North Carolina 28748

02.20.2018

Construction Documents:  
**Not For Construction**

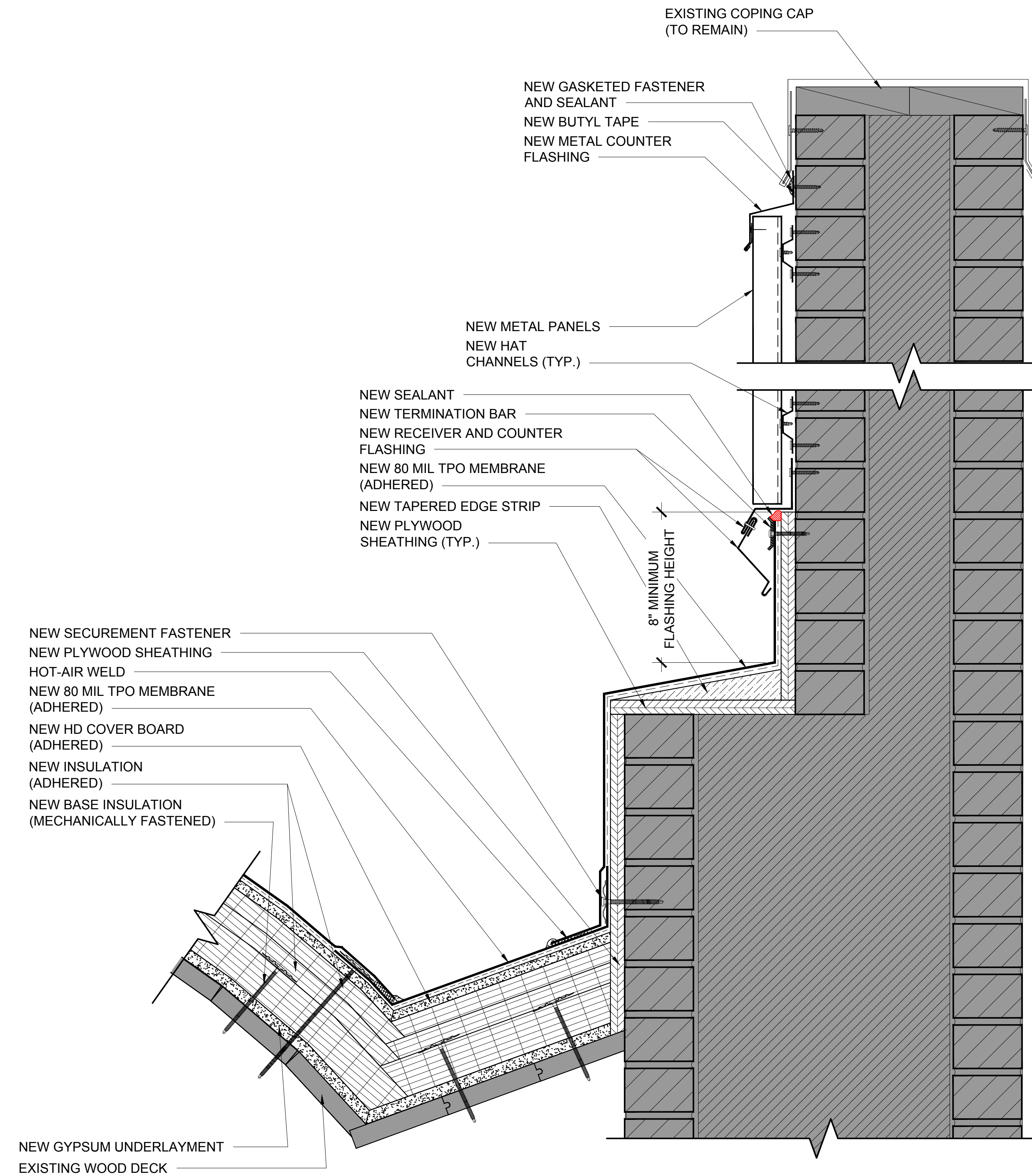
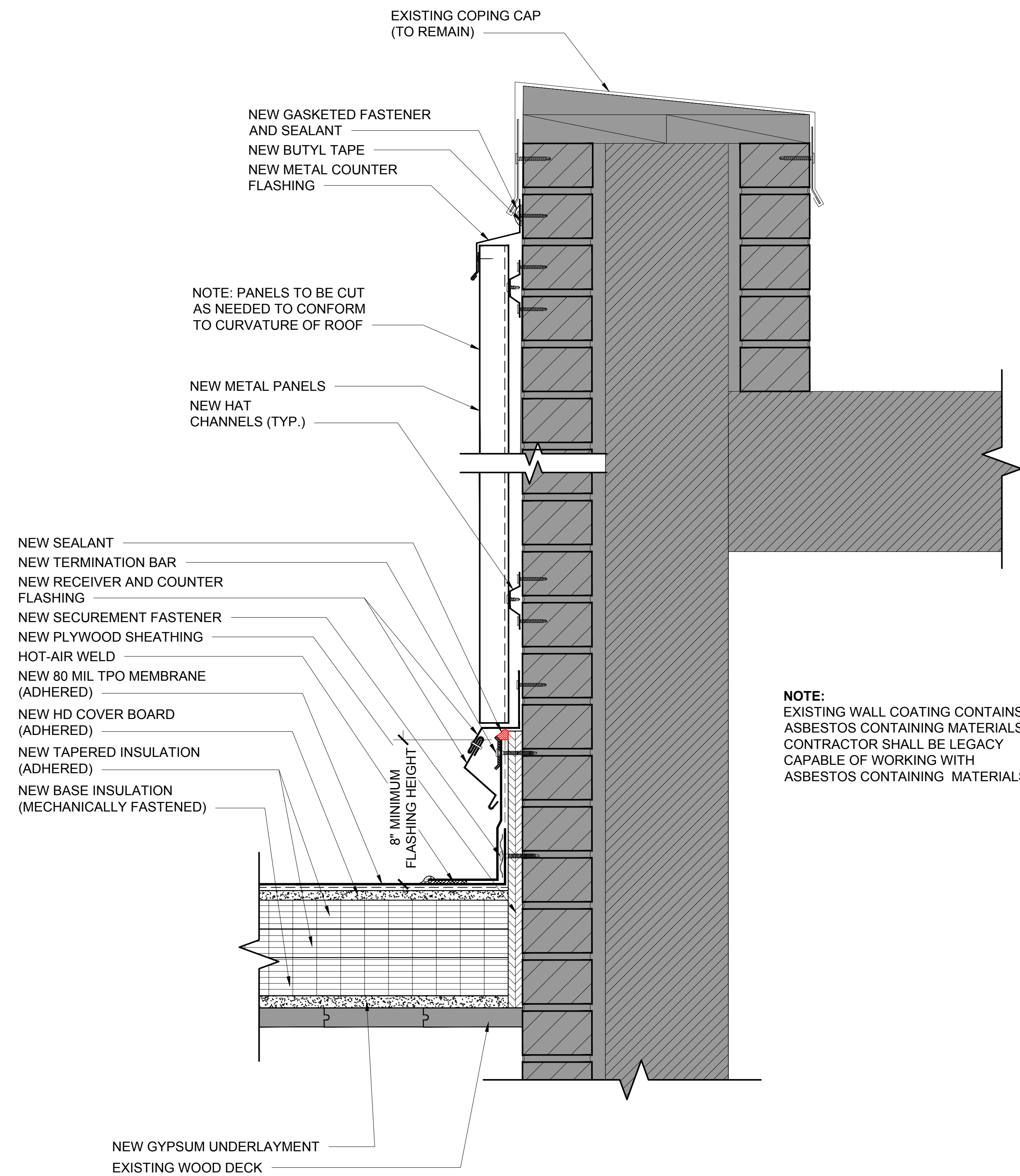
No. DATE DESCRIPTION:

DESIGNED BY:  
JHP  
DRAWN BY:  
EGM II  
APR REVIEWER:  
VTN

FH176189

ROOF DETAILS

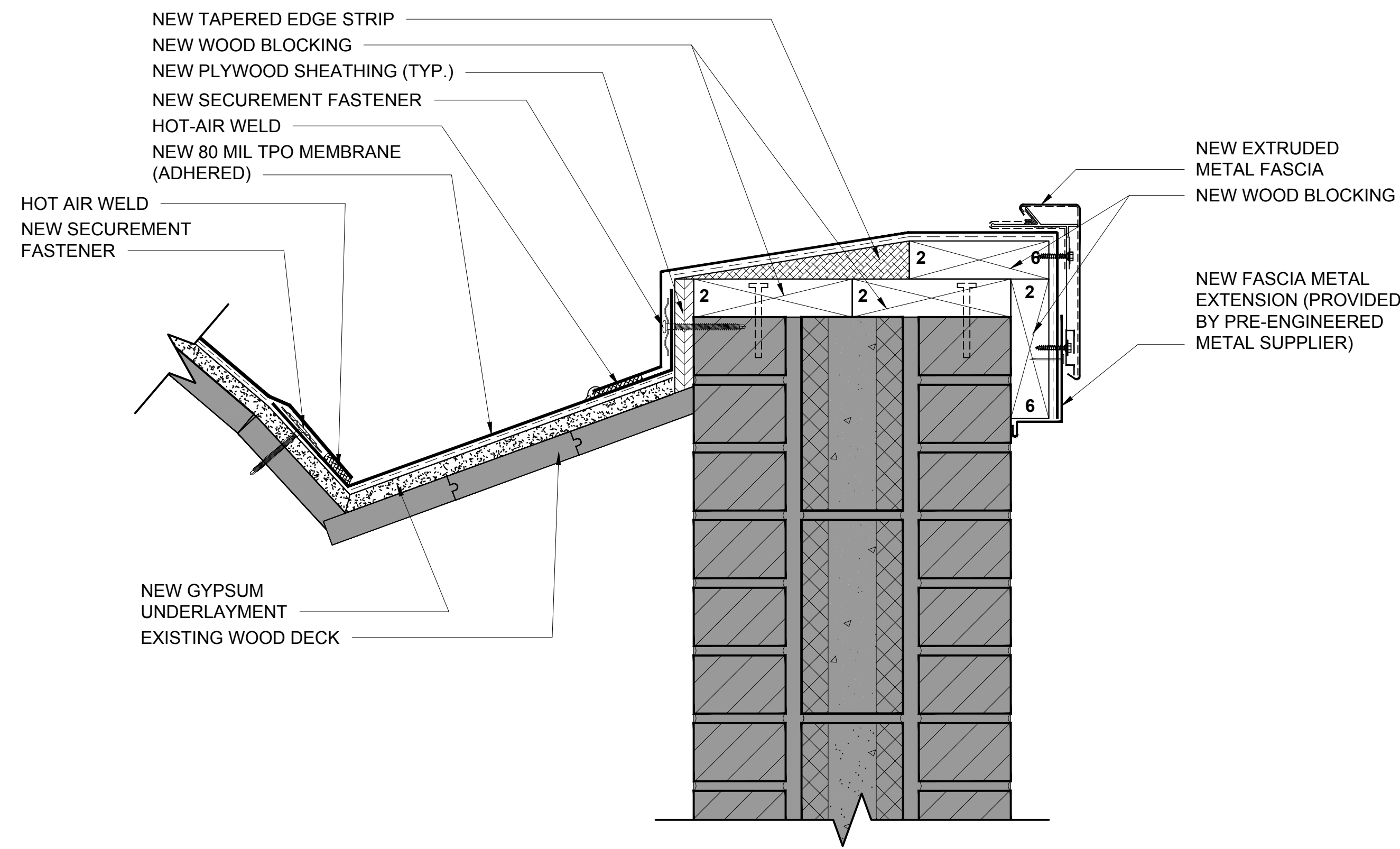
**A5.02**



5 HIGH WALL DETAIL  
3" = 1'-0"

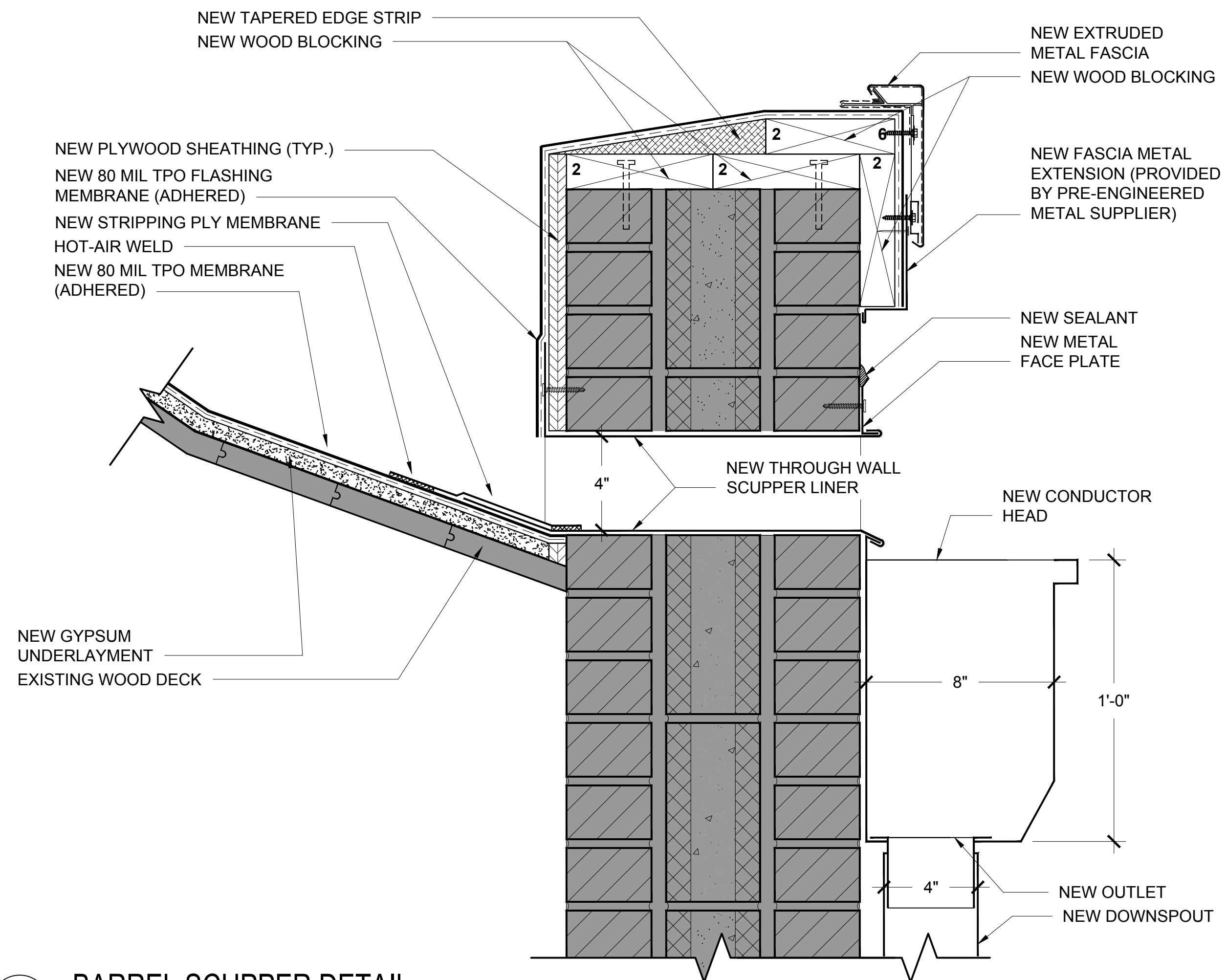
6 HIGH WALL DETAIL WITH STEP-OUT DETAIL  
3" = 1'-0"





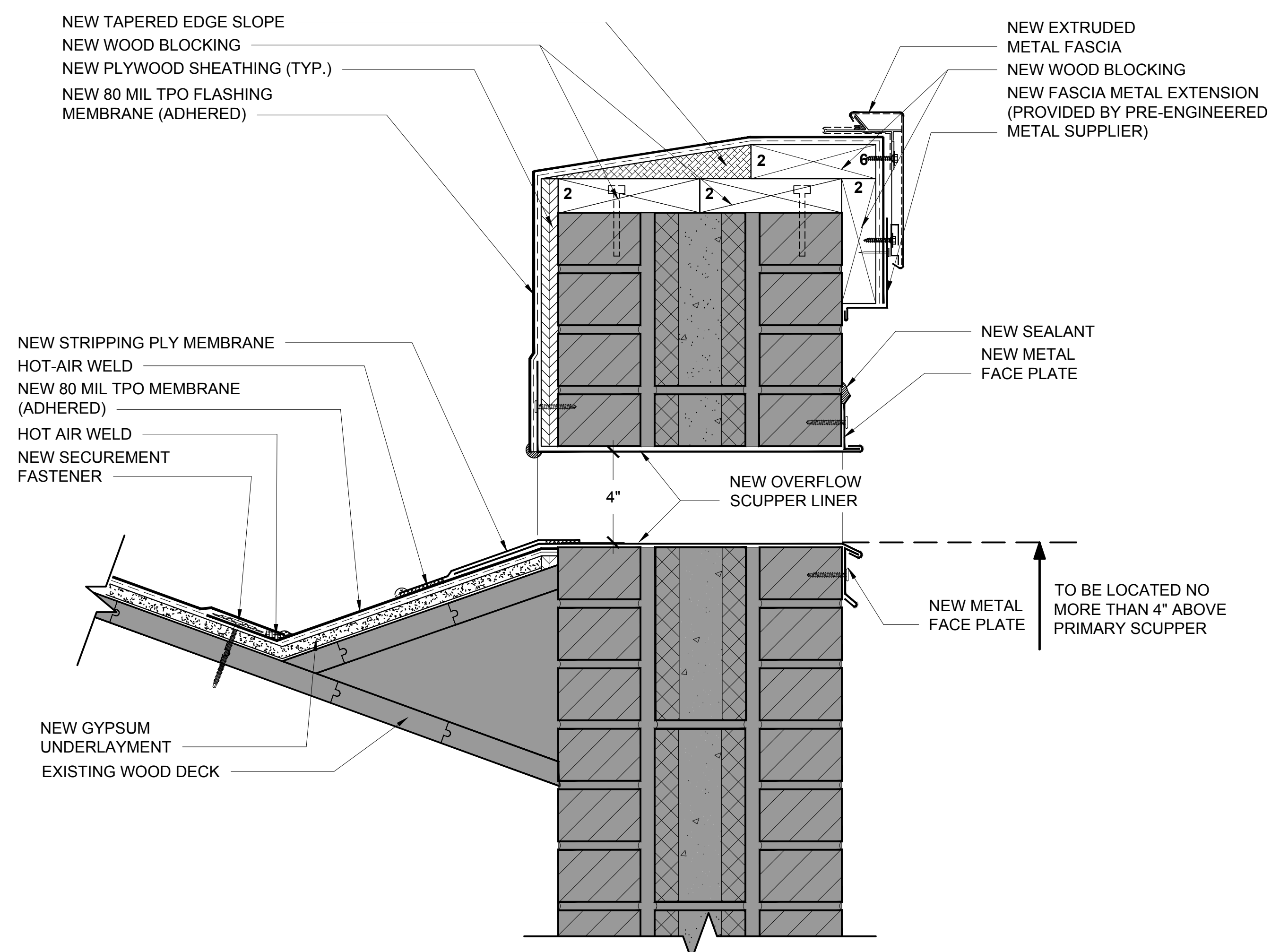
**7** BARREL PARAPET (LONG WALL) DETAIL

3" = 1'-0"



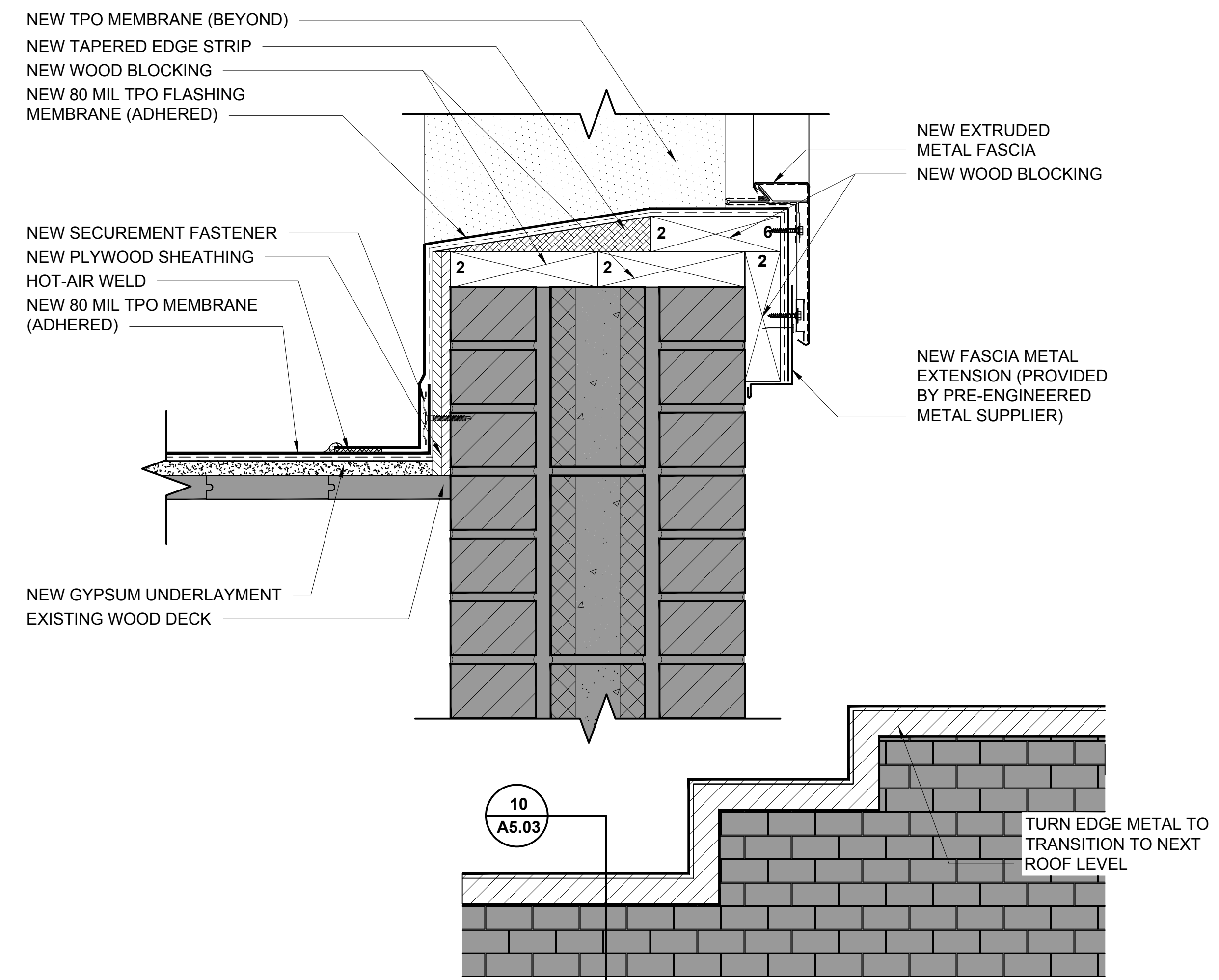
**8** BARREL SCUPPER DETAIL

3" = 1'-0"



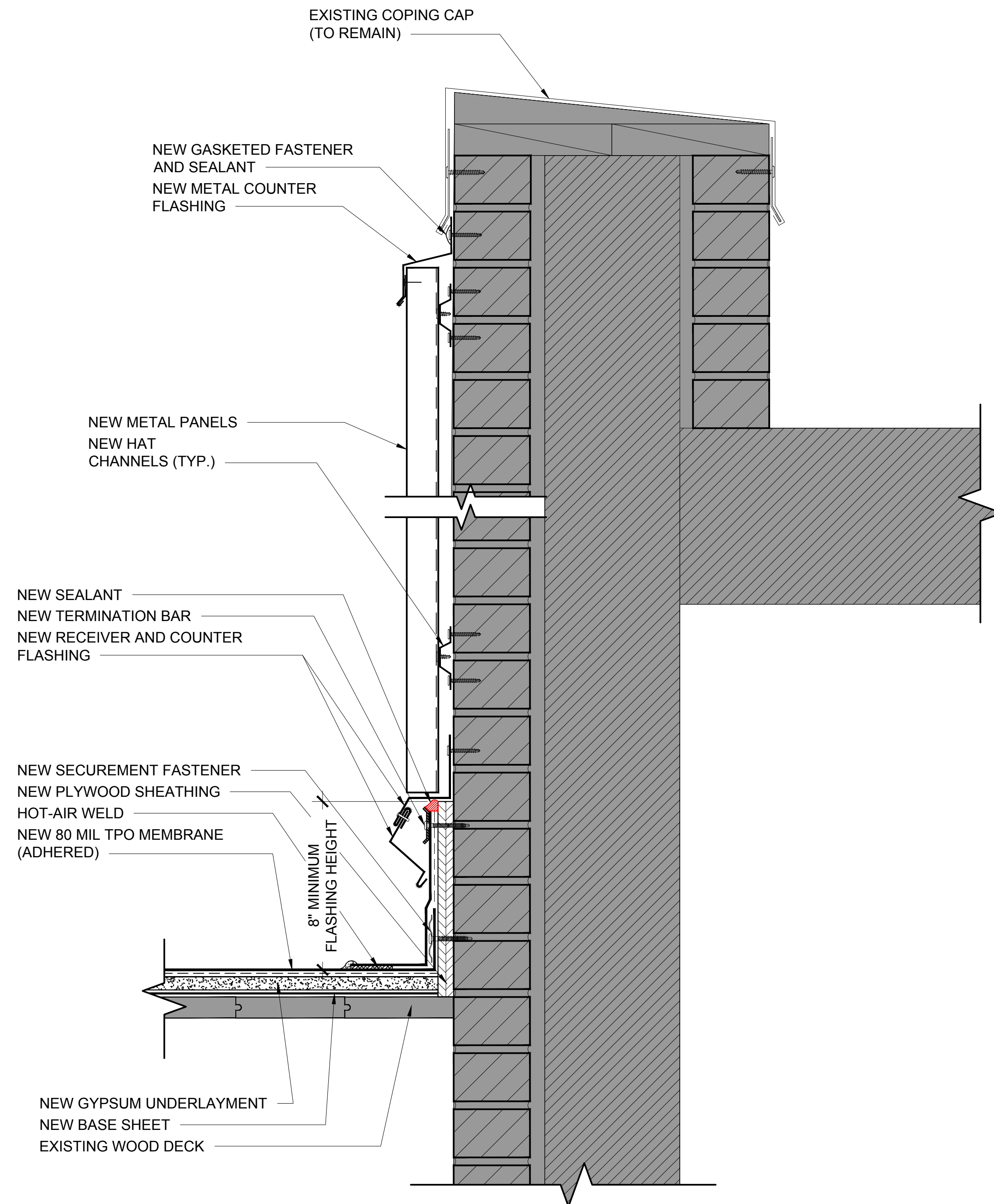
**9** BARREL OVERFLOW SCUPPER DETAIL

3" = 1'-0"

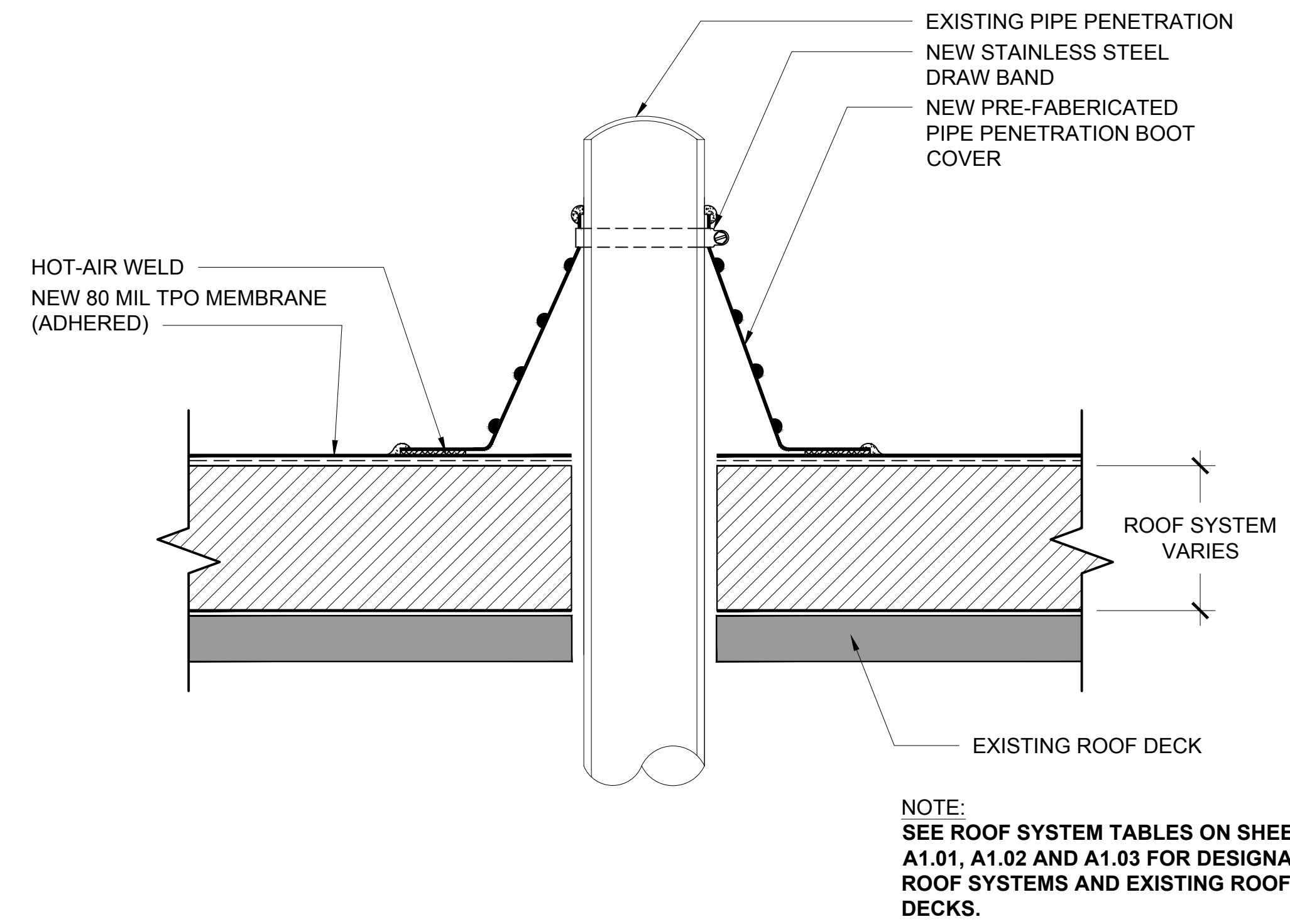


**10** BARREL PARAPET (SHORT WALL) DETAIL

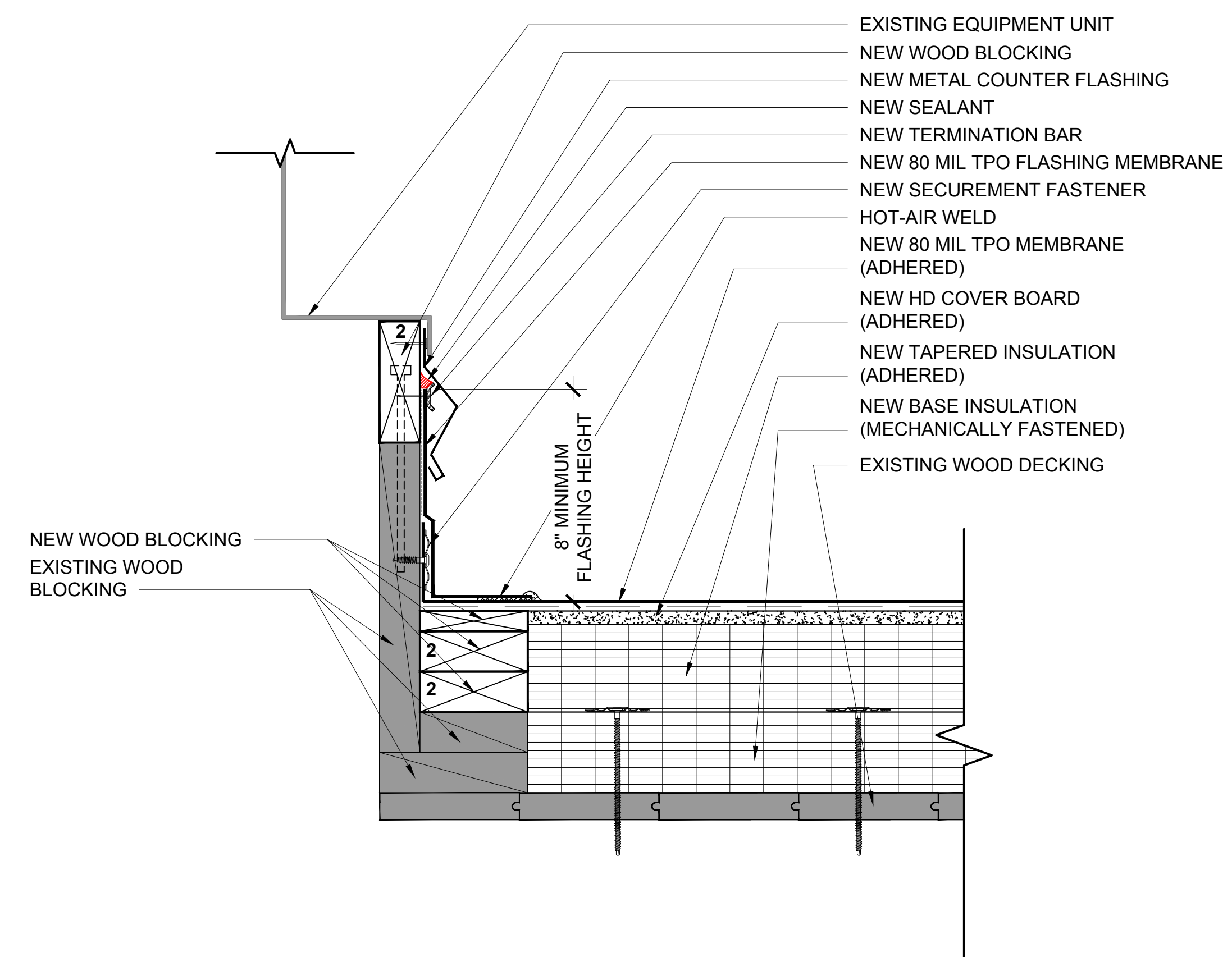
3" = 1'-0"



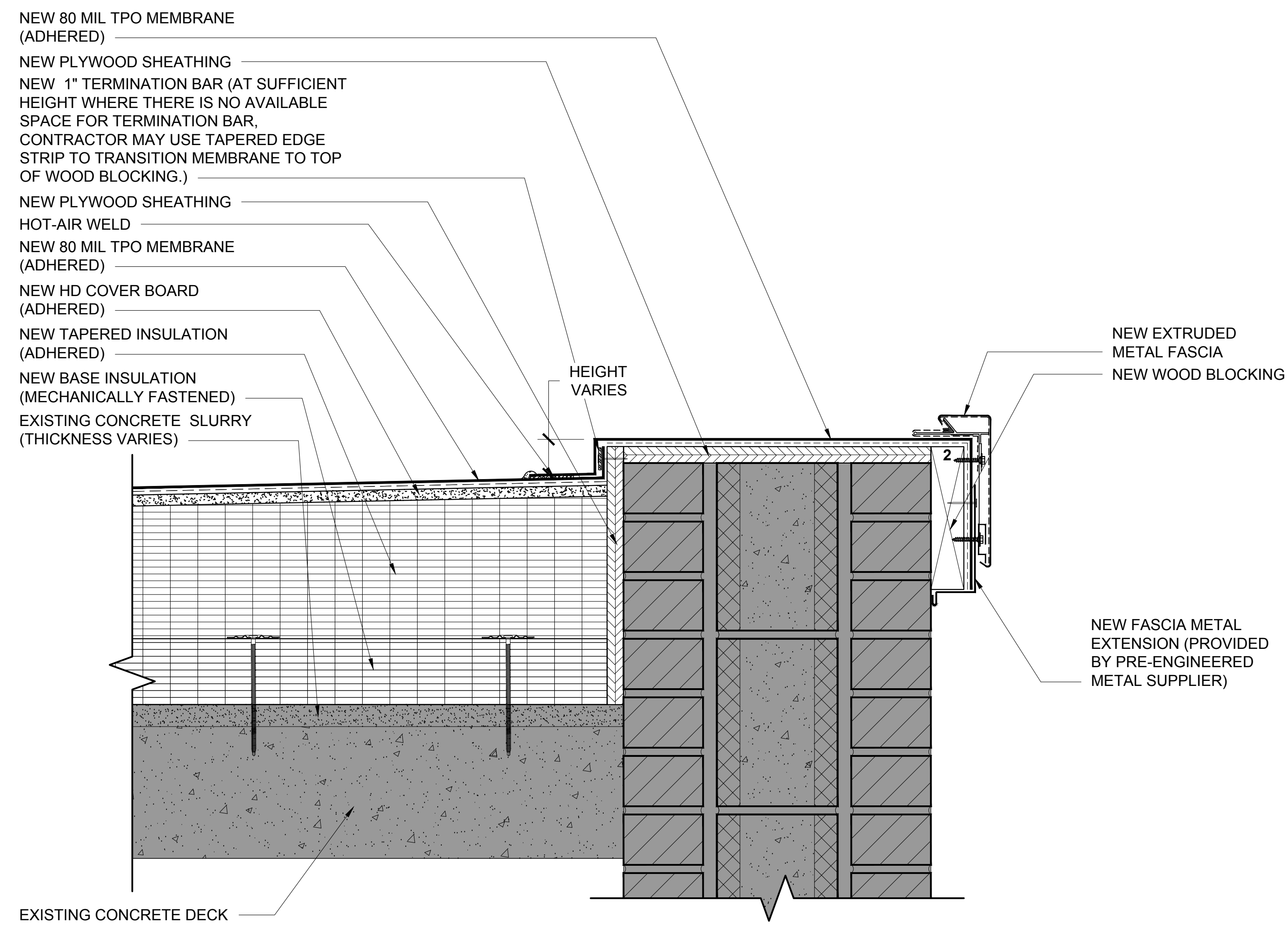
**11** HIGH WALL DETAIL  
3" = 1'-0"



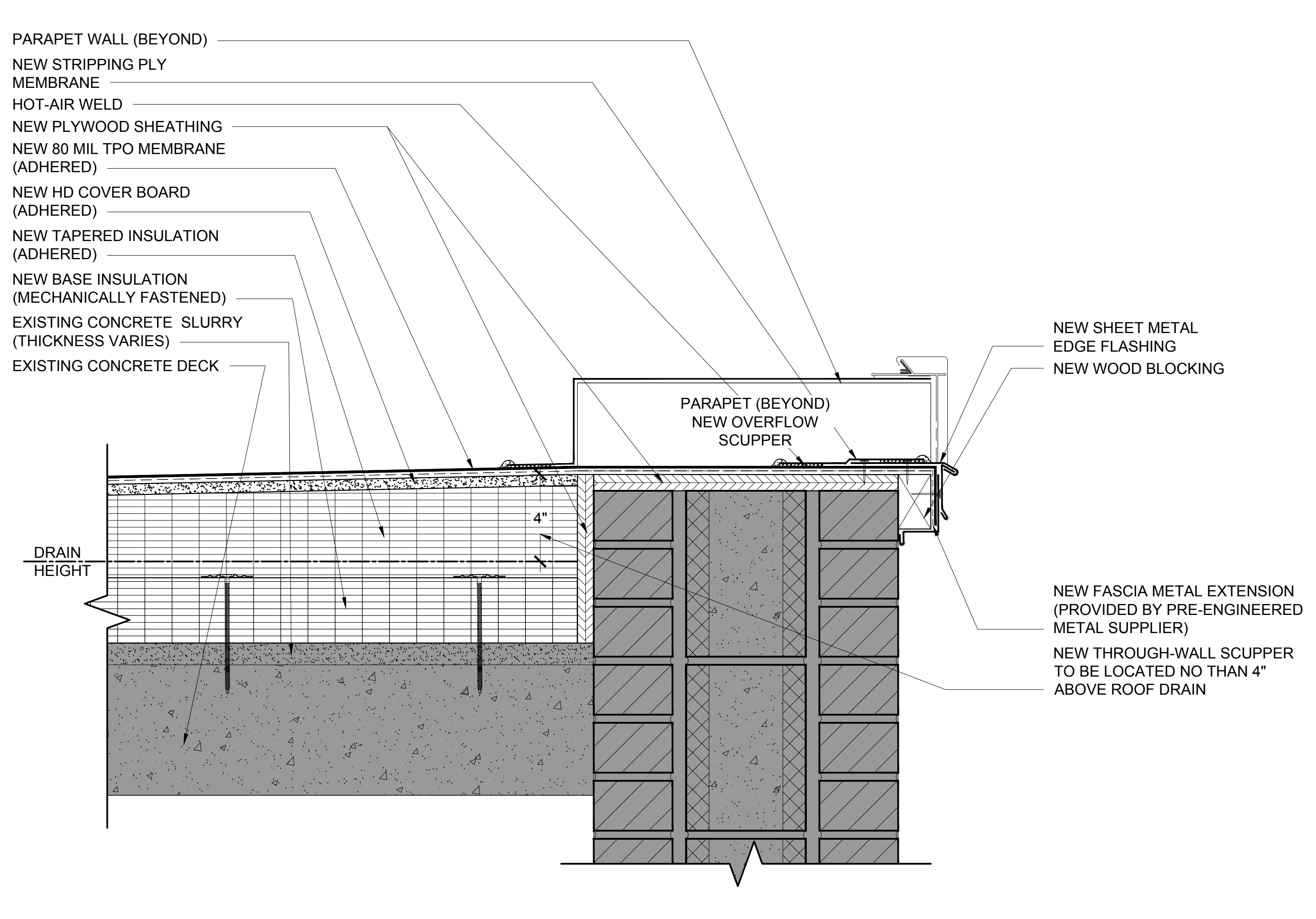
**12** PIPE PENETRATION DETAIL  
3" = 1'-0"



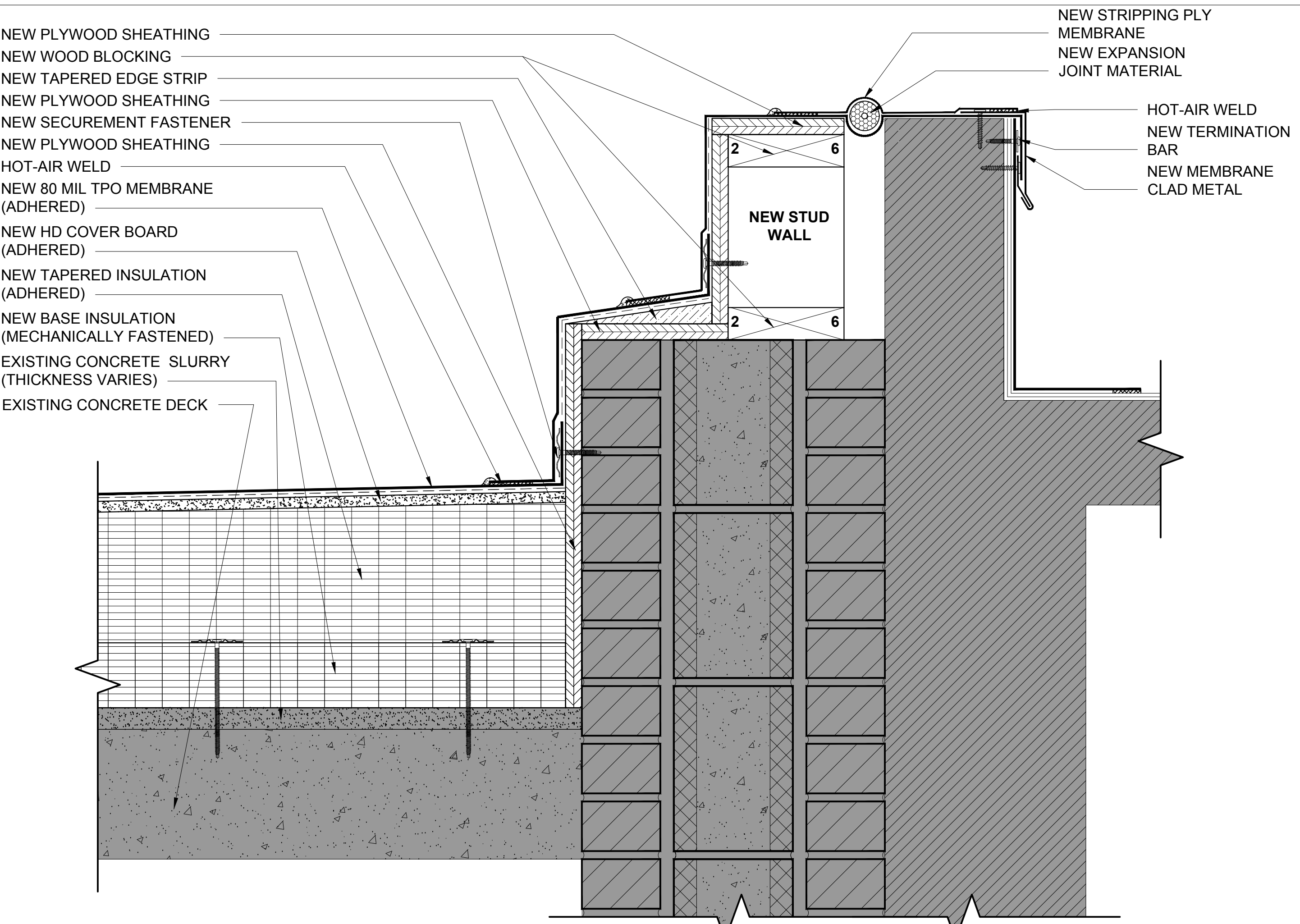
**13** EQUIPMENT CURB DETAIL  
3" = 1'-0"



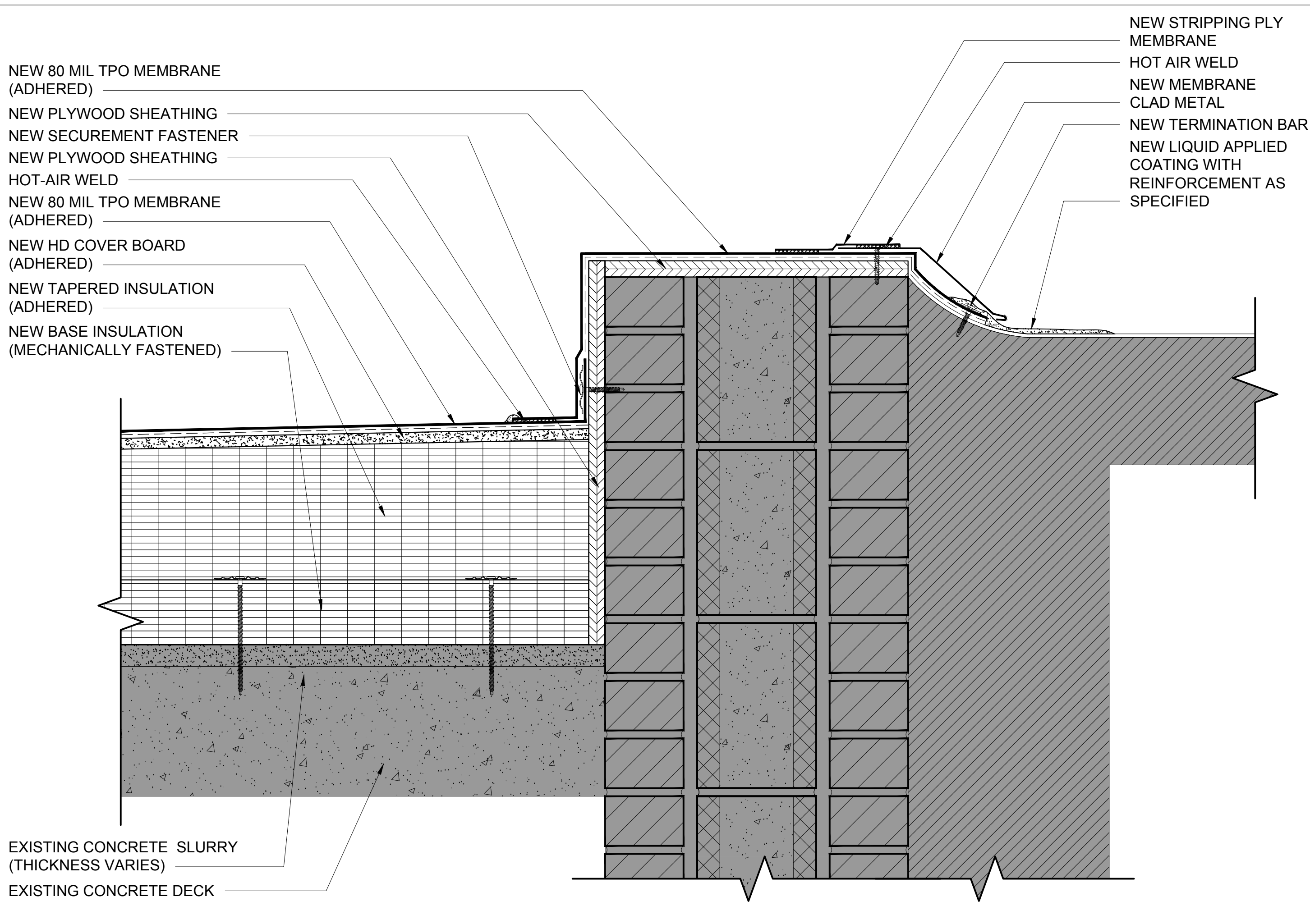
14 PARAPET WALL DETAIL  
 3" = 1'-0"



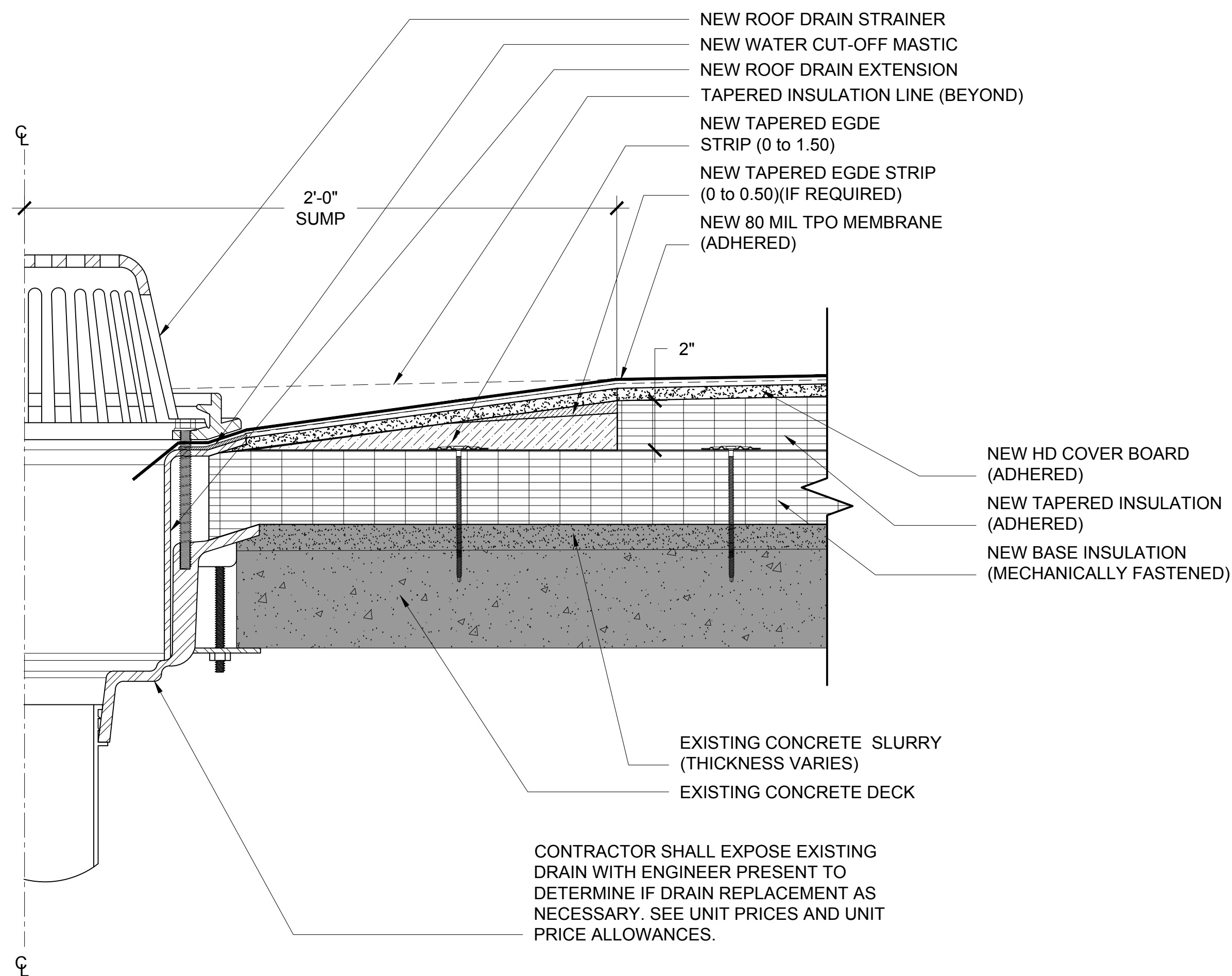
15 OVERFLOW SCUPPER DETAIL  
 3" = 1'-0"



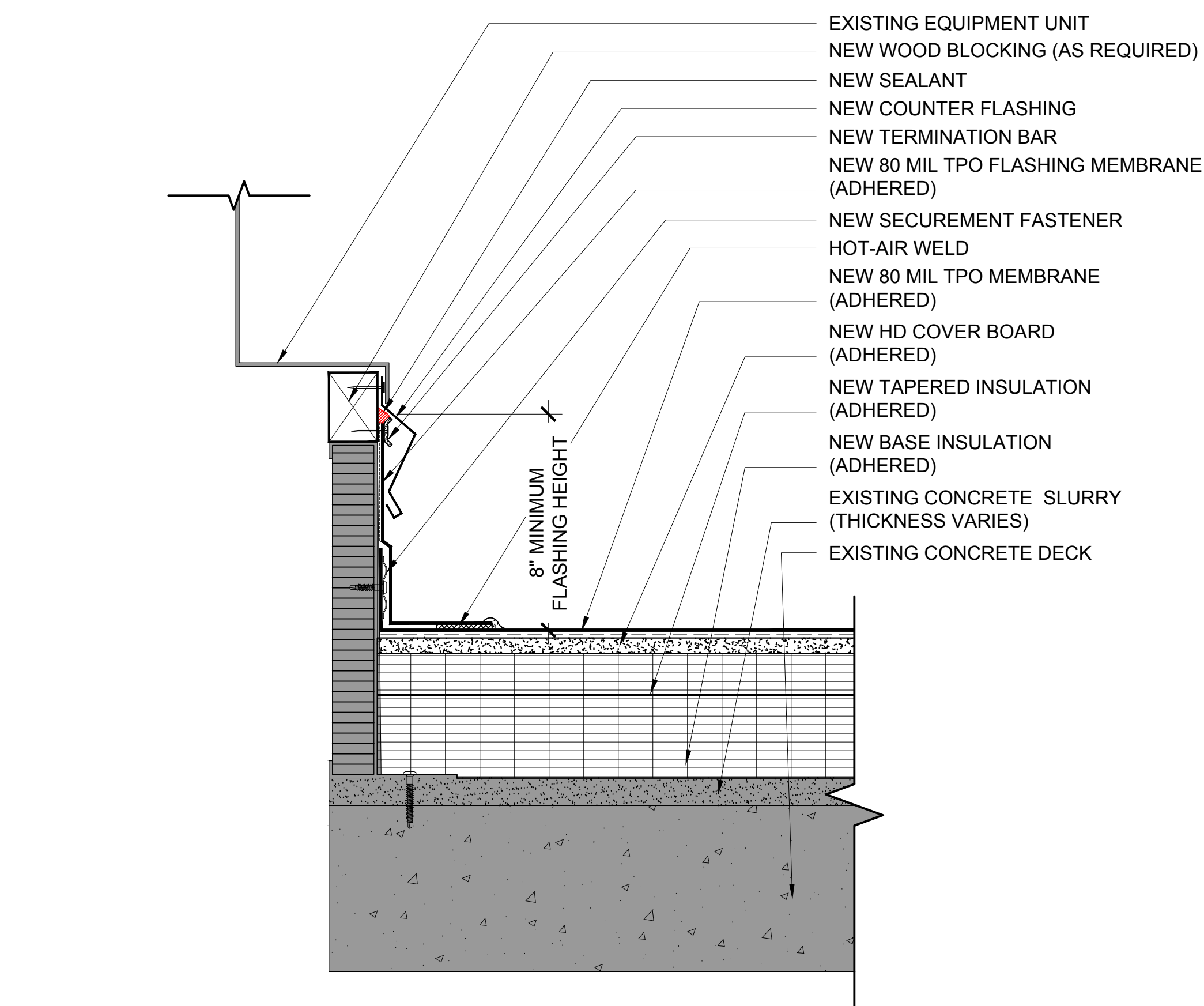
16 EXPANSION JOINT DETAIL  
 3" = 1'-0"



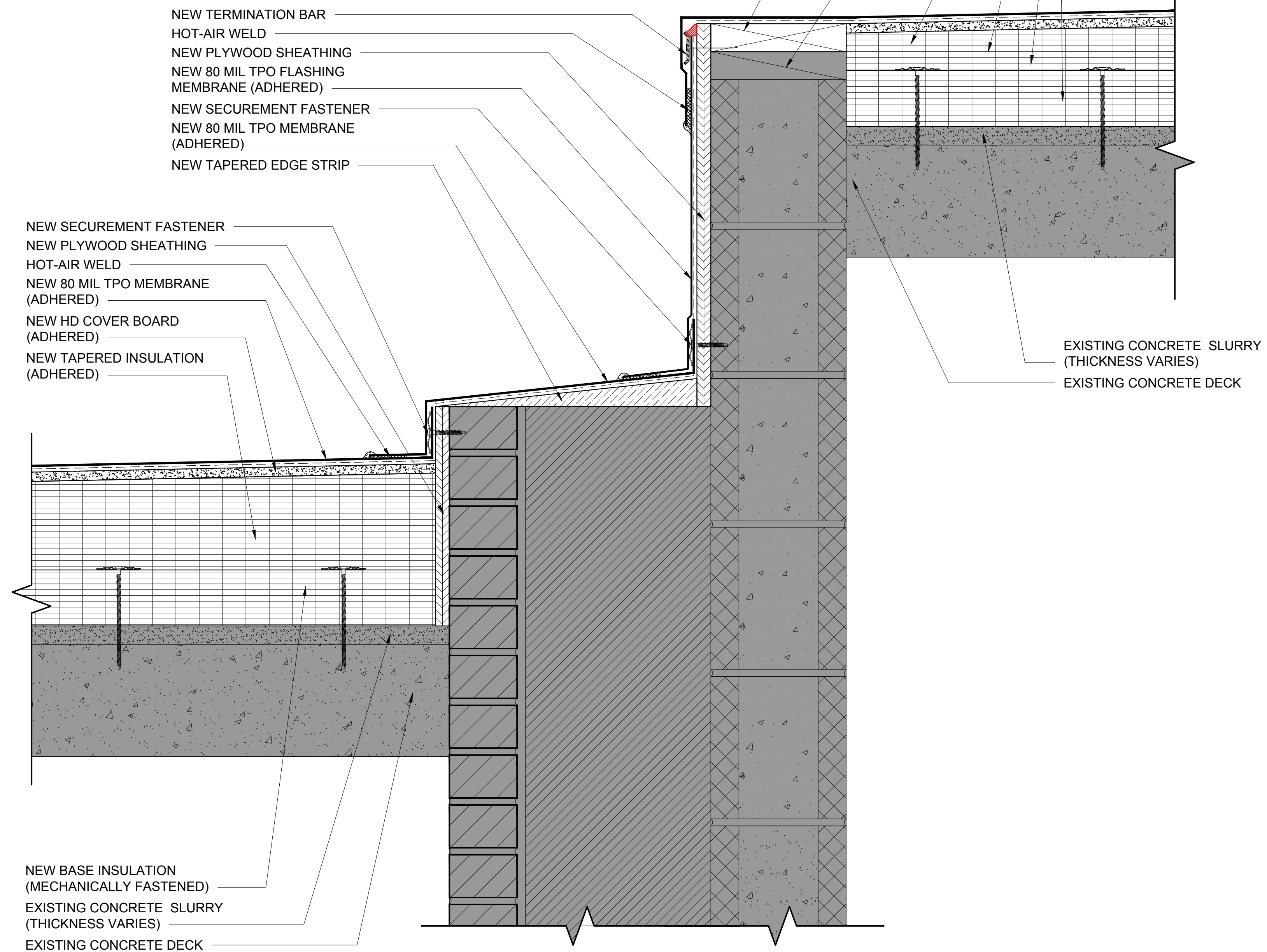
17 LOW PROFILE TRANSITION DETAIL  
 3" = 1'-0"



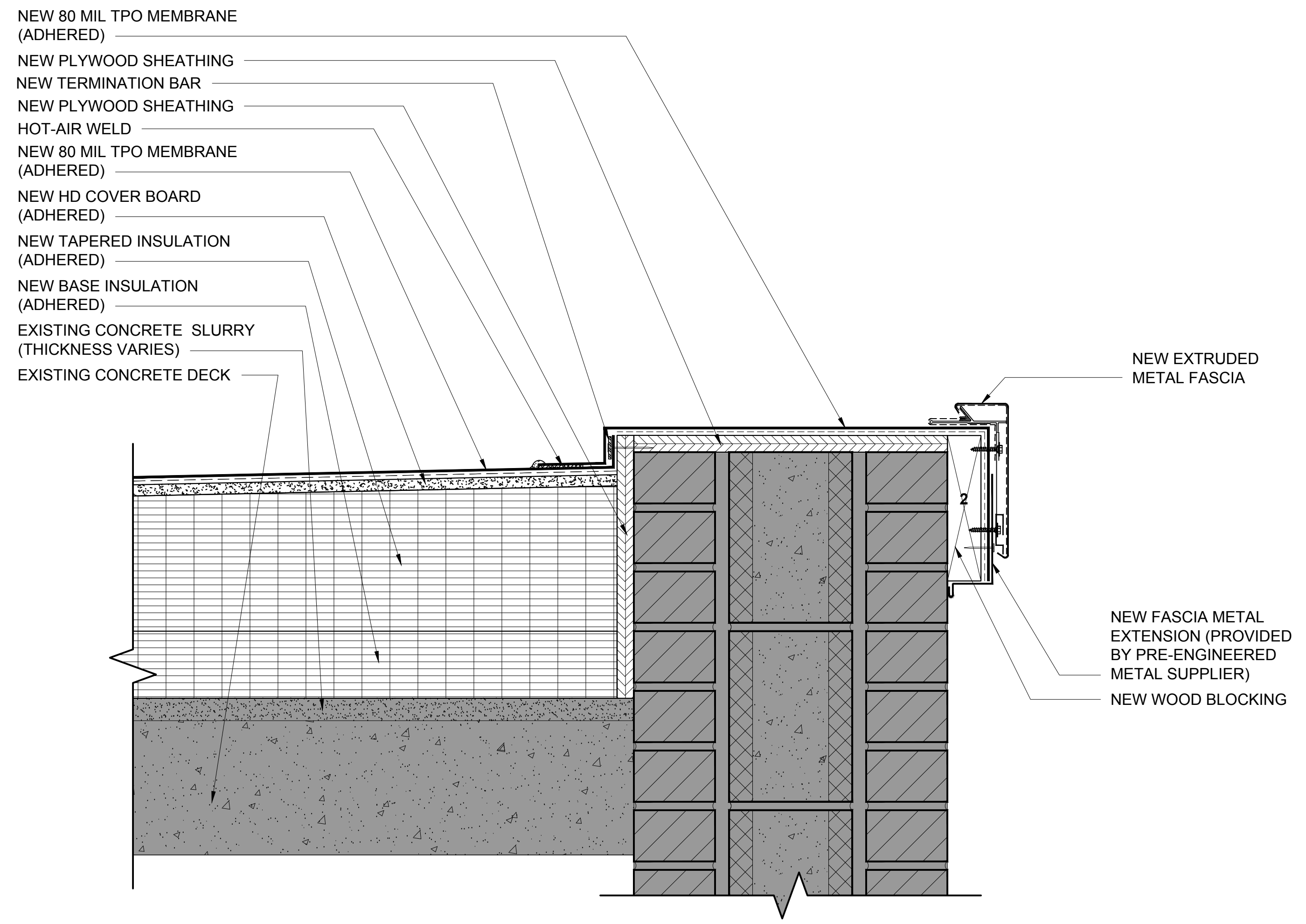
18 ROOF DRAIN DETAIL  
3" = 1'-0"



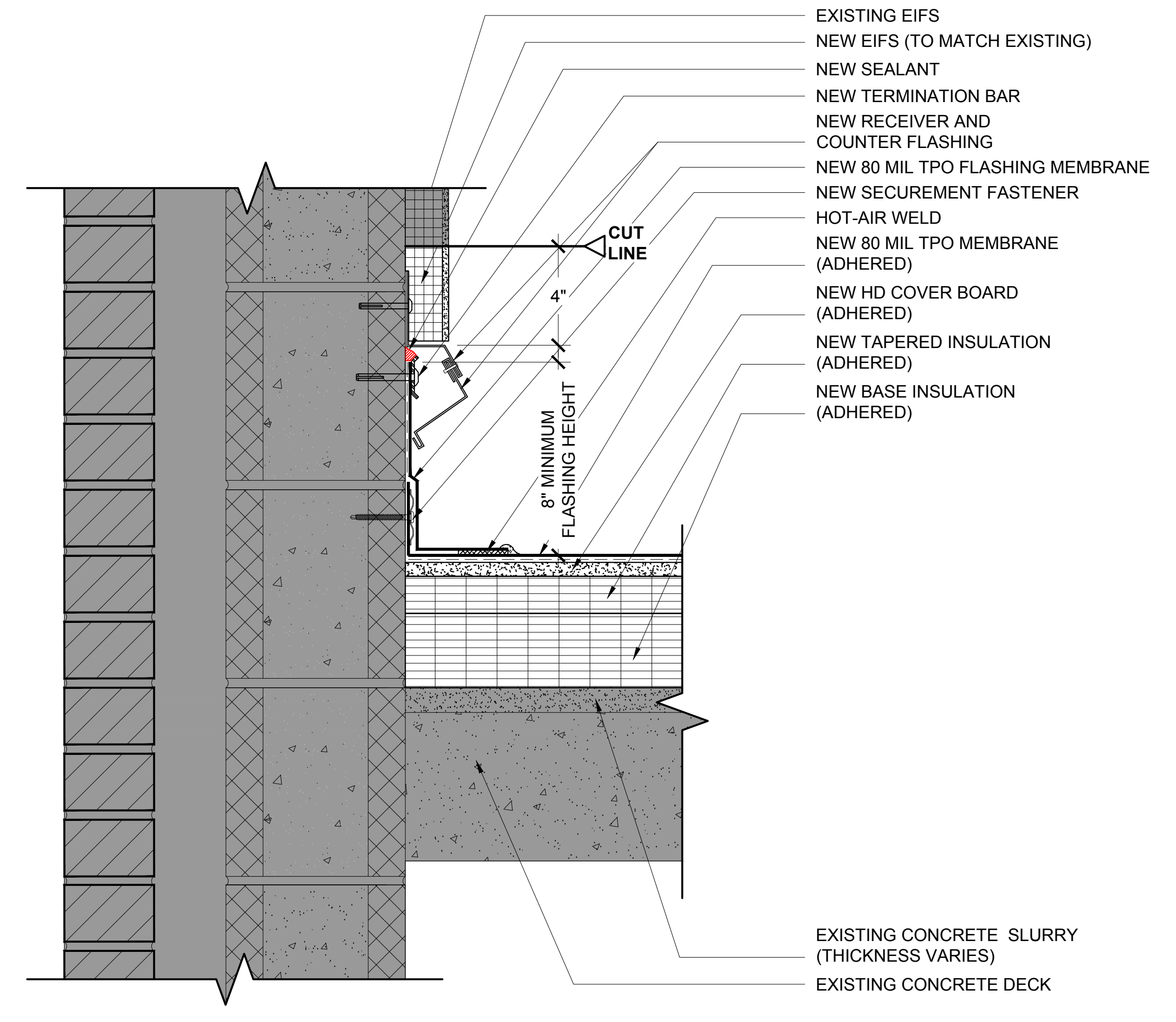
19 EQUIPMENT DETAIL  
3" = 1'-0"



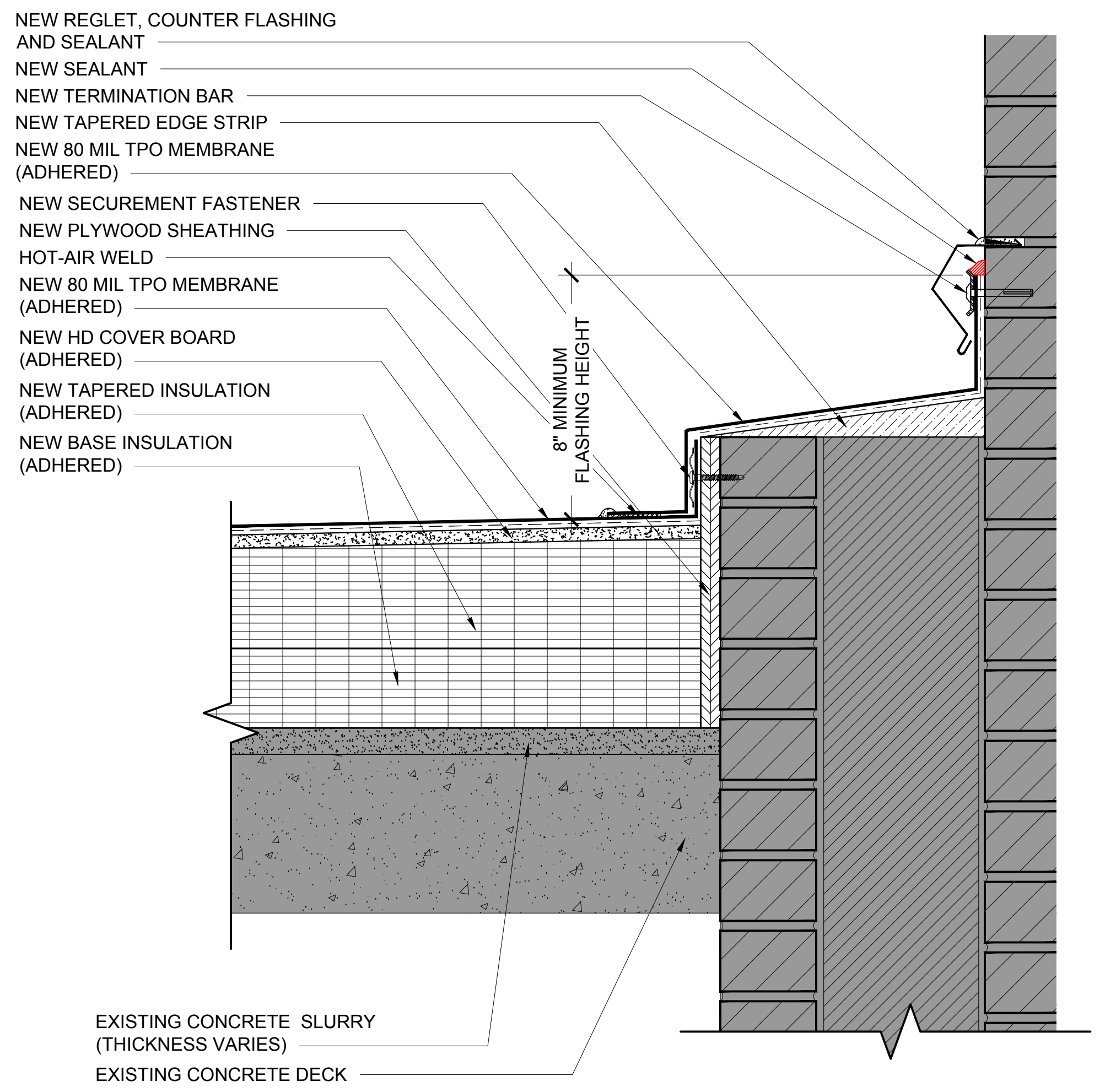
20 INTERSECTION WITH AREA 22 DETAIL  
3" = 1'-0"



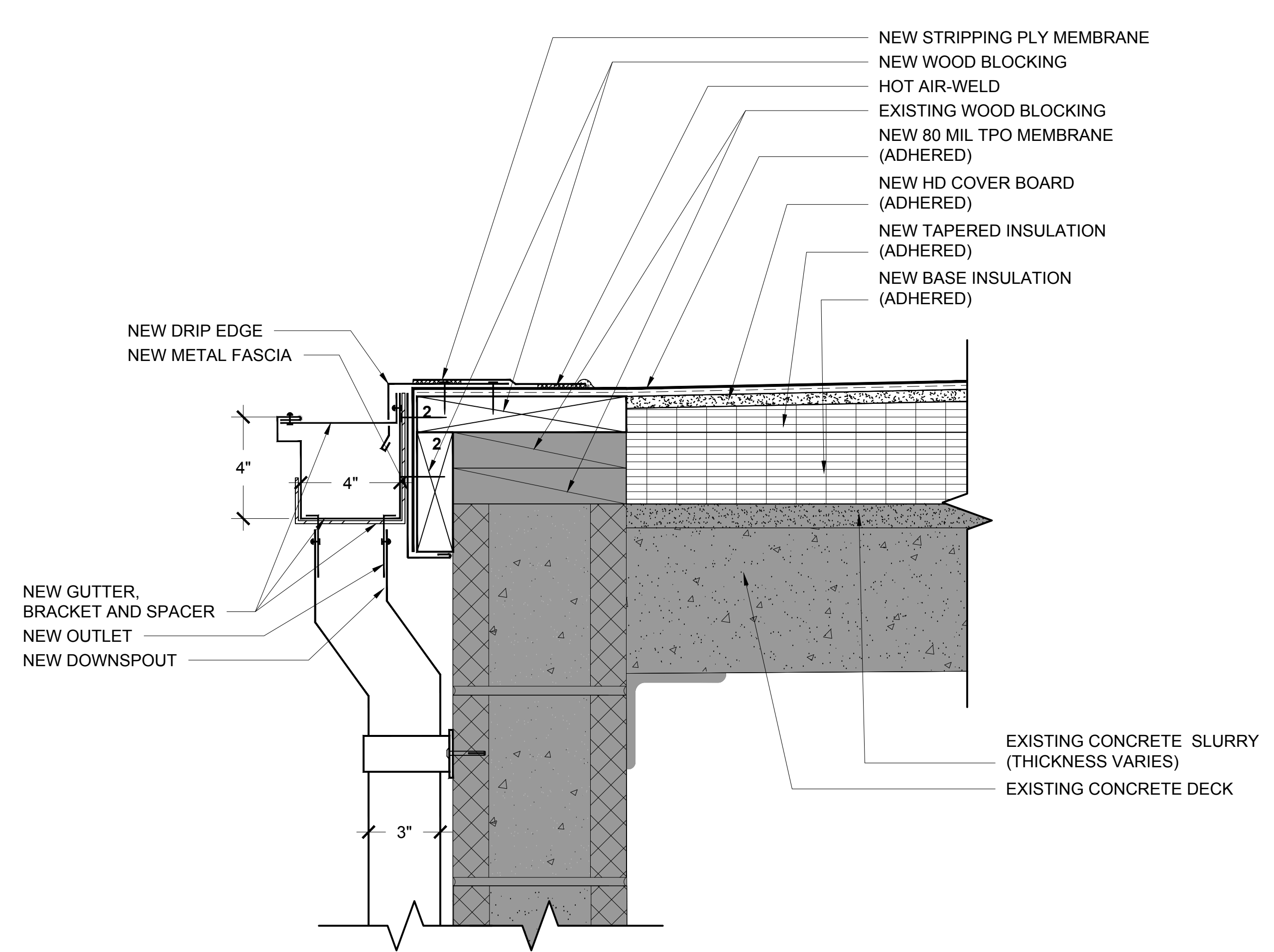
21 PARAPET DETAIL  
 3" = 1'-0"



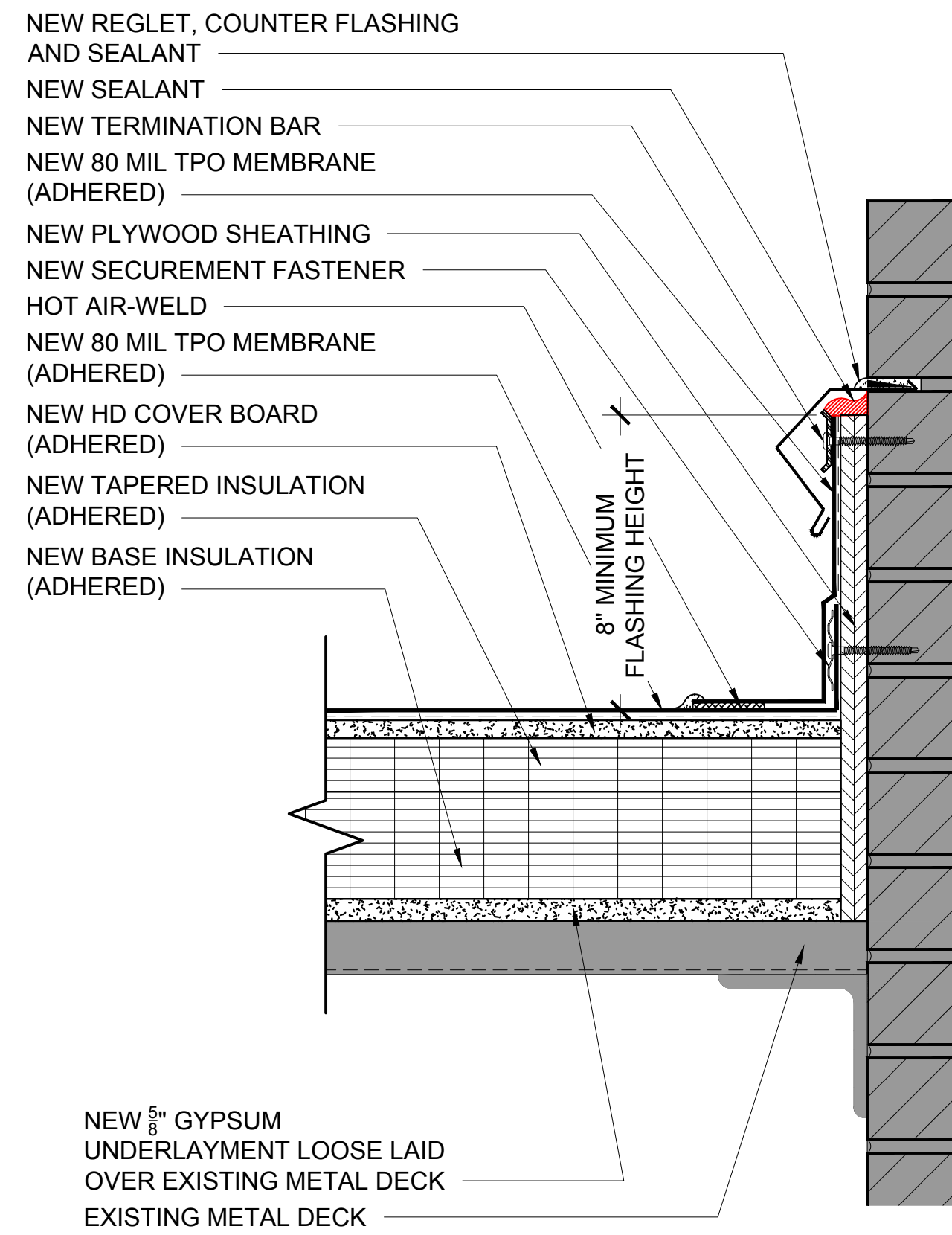
22 WALL DETAIL  
 3" = 1'-0"



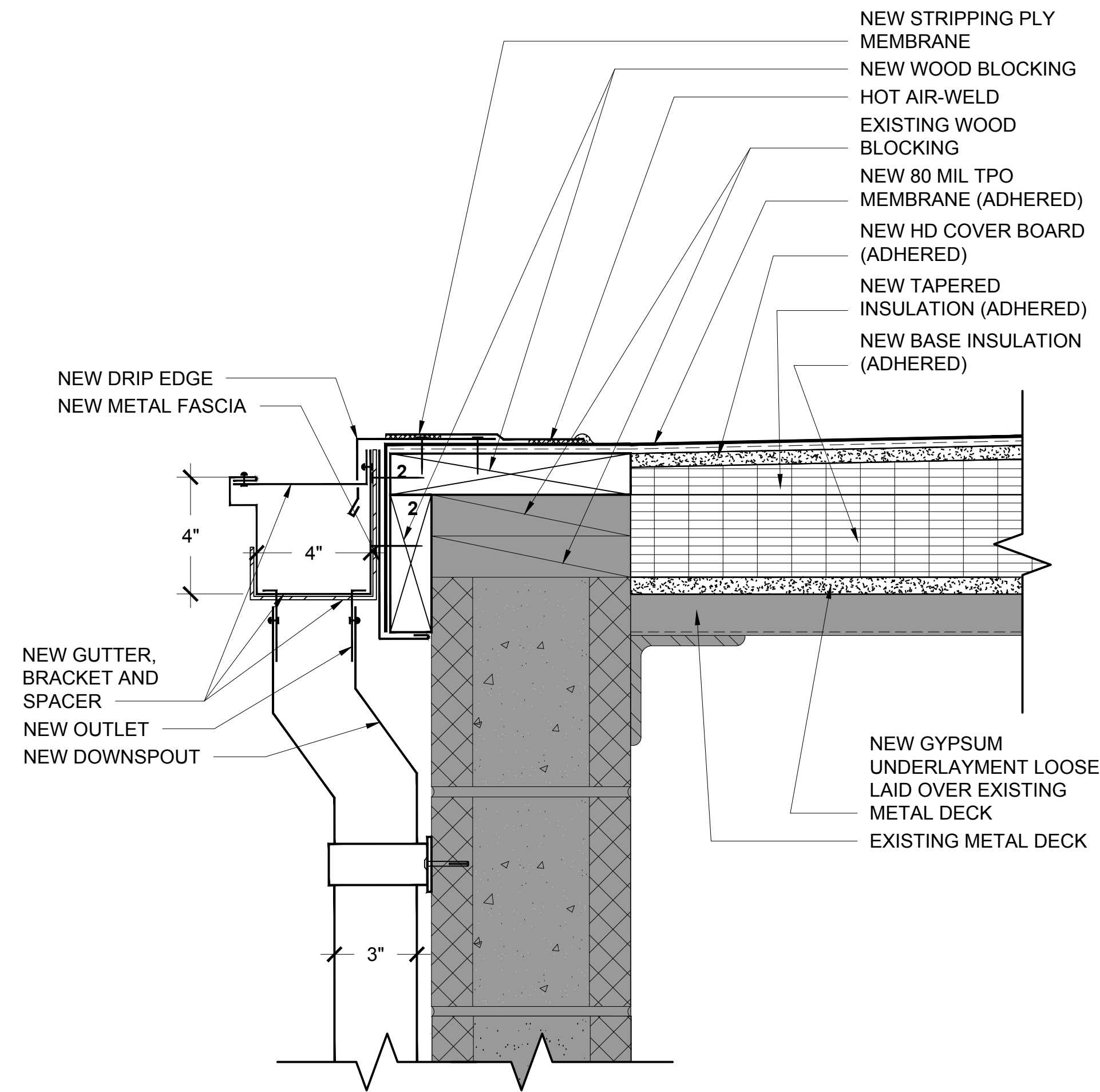
23 WALL DETAIL  
 3" = 1'-0"



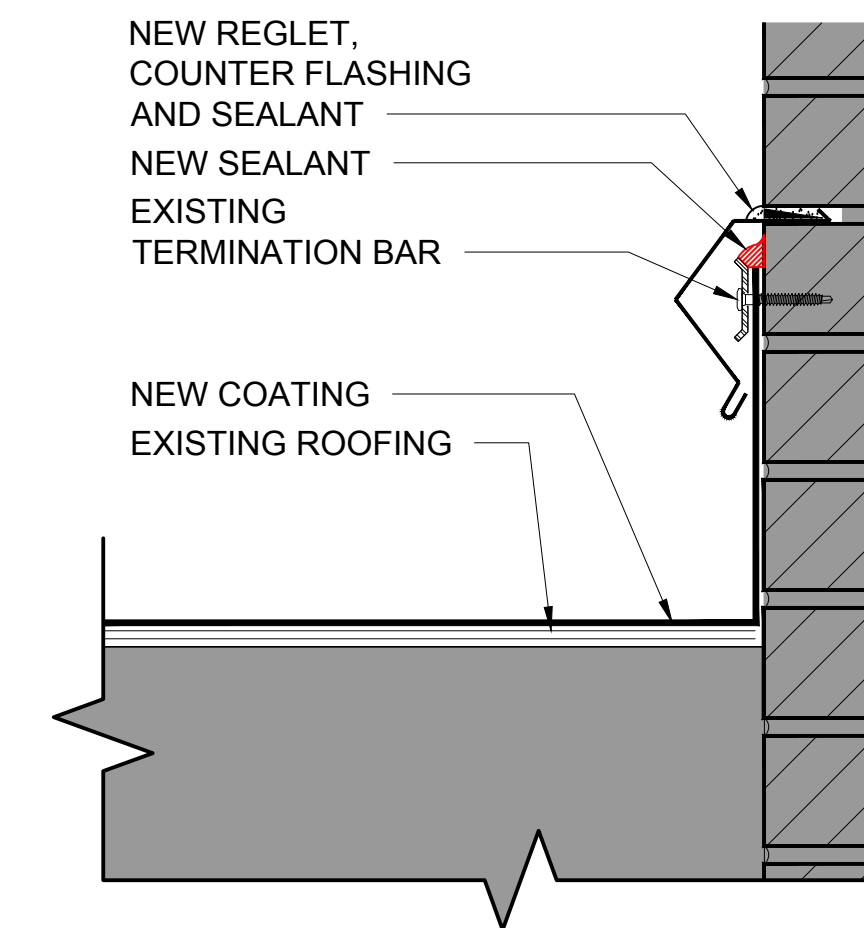
24 EAVE DETAIL WITH GUTTER/DOWNSPOUT  
 3" = 1'-0"



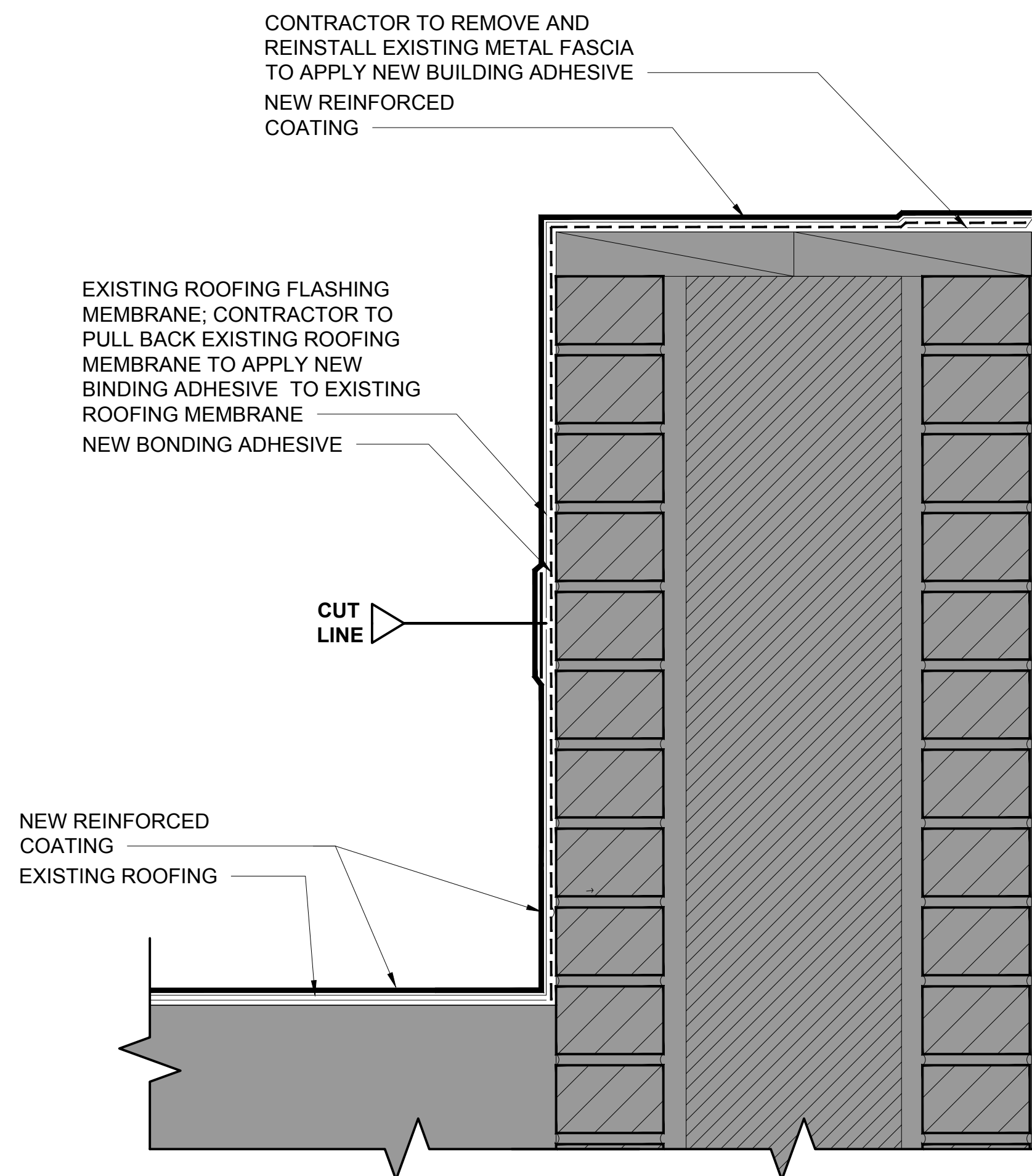
25 WALL DETAIL  
 3" = 1'-0"



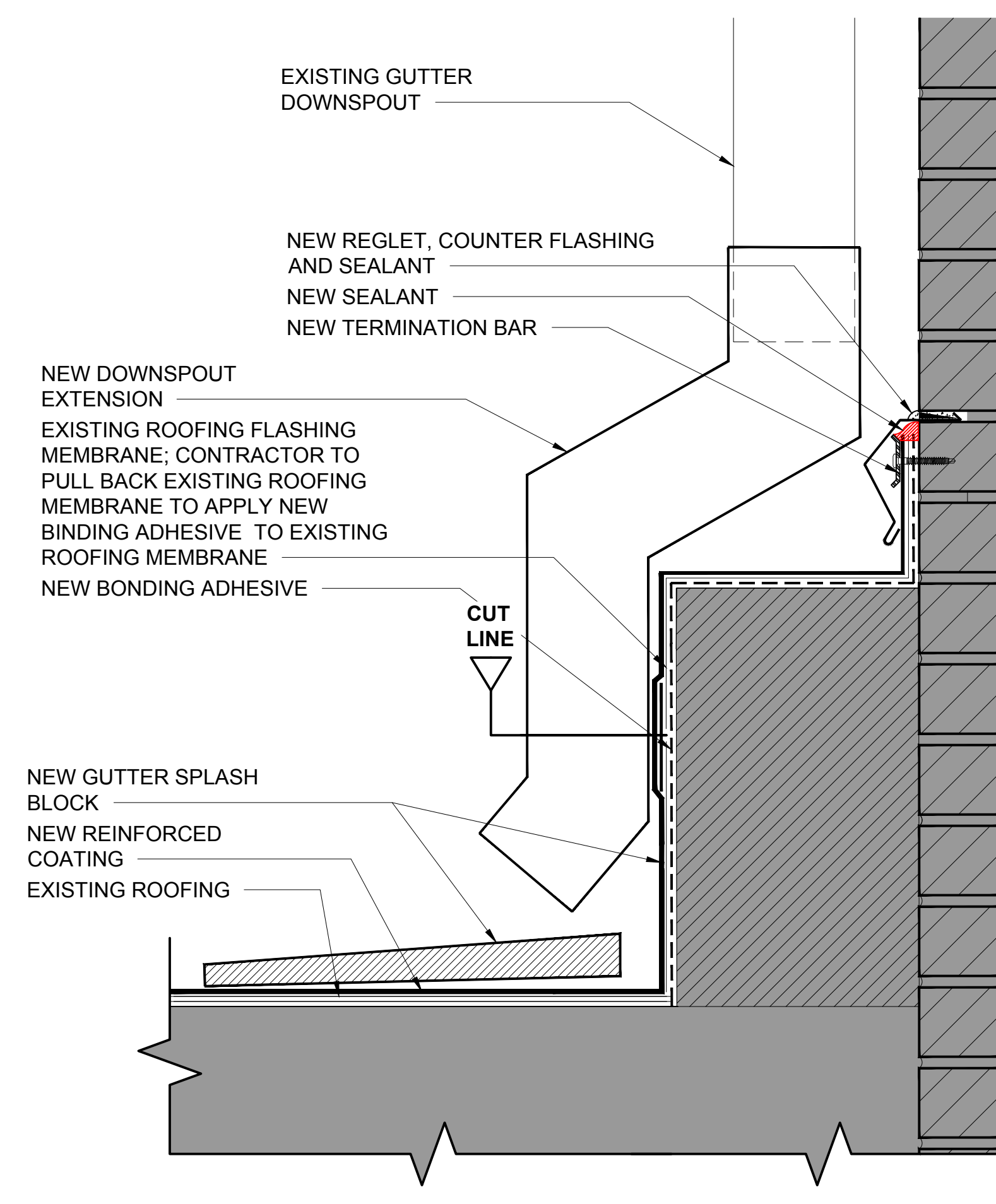
26 EAVE DETAIL WITH GUTTER/DOWNSPOUT  
 3" = 1'-0"



27 WALL DETAIL  
 3" = 1'-0"

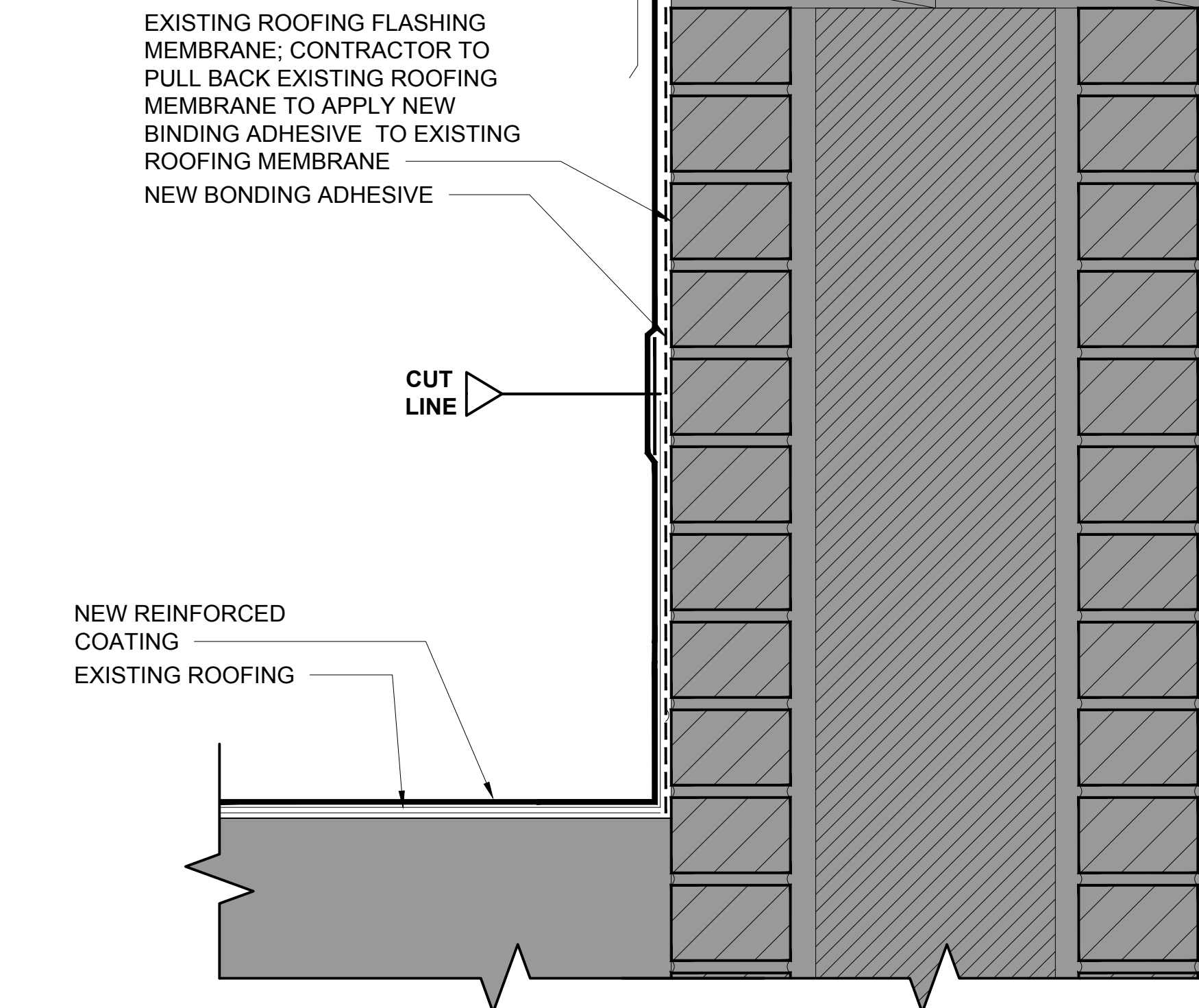


28 PARAPET DETAIL  
 3" = 1'-0"



29 WALL DETAIL  
 3" = 1'-0"

CONTRACTOR TO REMOVE AND REINSTALL EXISTING COPPING CAP TO APPLY NEW BUILDING ADHESIVE AND NEW REINFORCED COATING



30 WALL DETAIL  
 3" = 1'-0"