



Charlotte Mecklenburg Schools EAST MECKLENBURG HIGH SCHOOL

PARTIAL ROOF REPLACEMENT PROJECT

Project Address

6800 Monroe Road
Charlotte, North Carolina 28212

CLIENT



Charlotte Mecklenburg Schools
3301 Stafford Drive
Charlotte, North Carolina 28208

ENGINEERING CONSULTANT

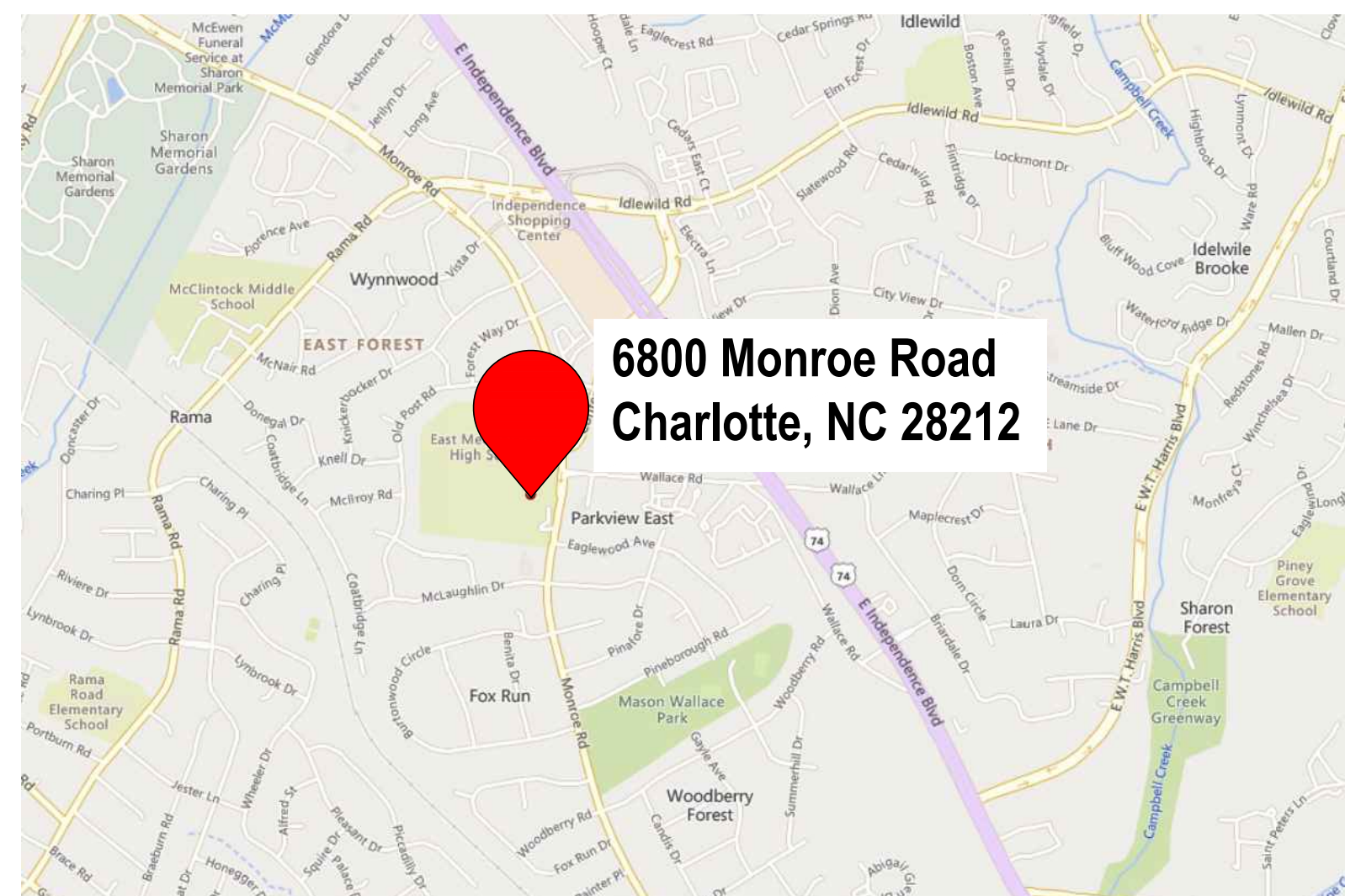


2701 Westport Rd
Charlotte, NC 28208

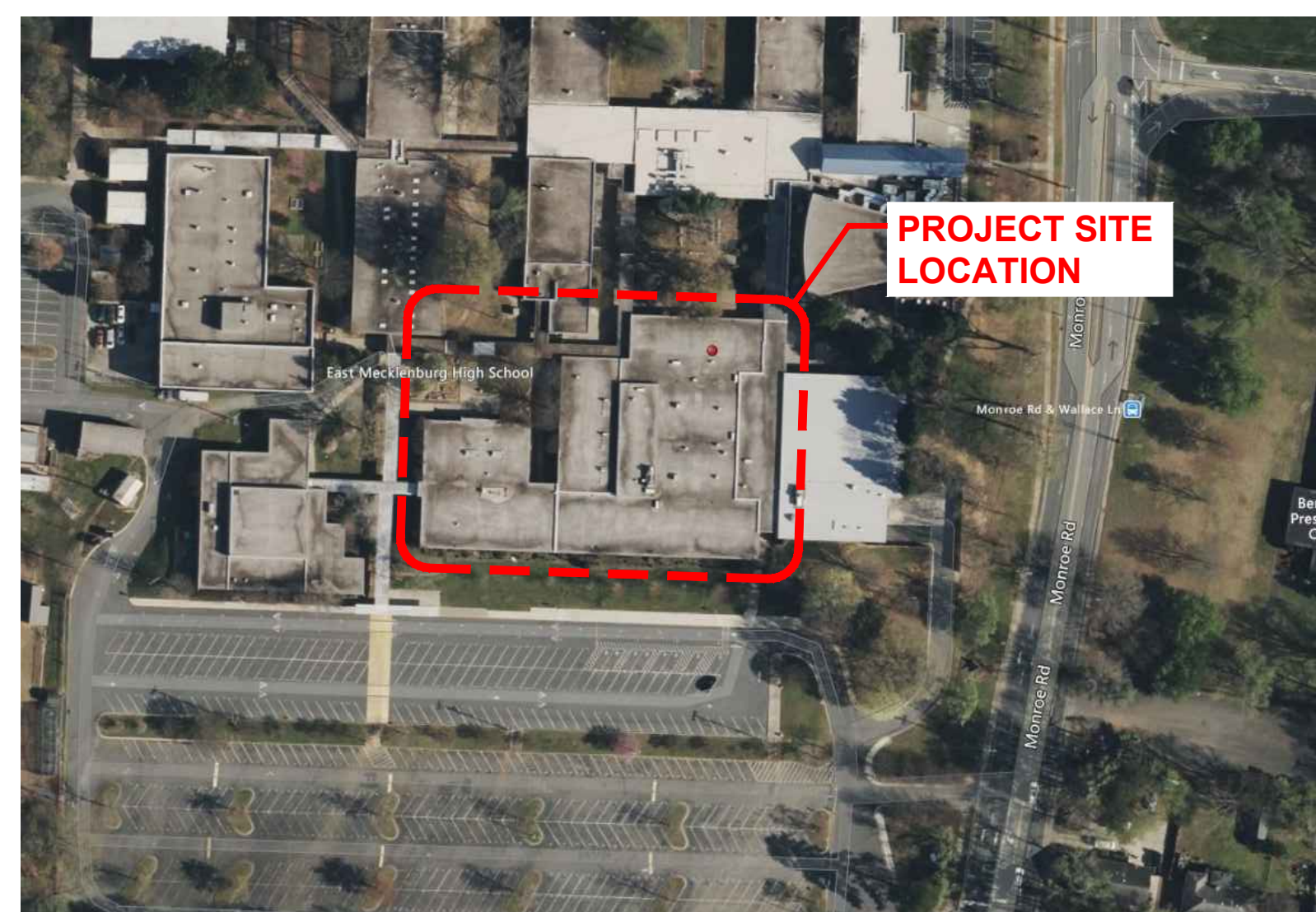
Mr. Lou Hall, P.E., RRC
Senior Engineer | Facilities
e: lou.hall@terracon.com
p: 704.594.8926

Mr. Thomas Lambdin
Field Engineer | Facilities
e: thomas.lambdin@terracon.com
p: 704.594.8924

PROJECT LOCATION



VICINITY MAP



LOCATION SITE

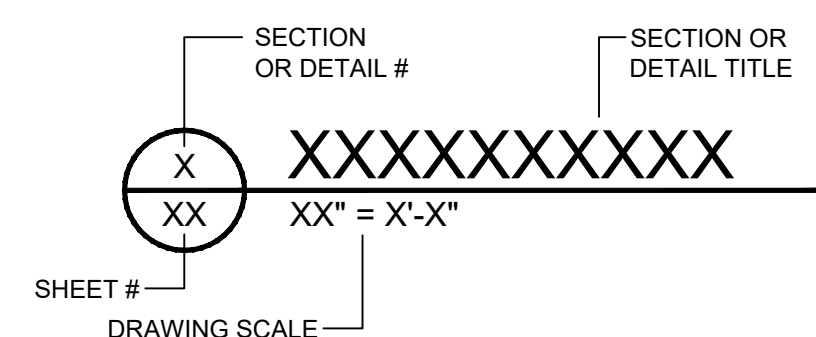
SCOPE OF WORK SUMMARY

WORK UNDER THE BASE BID GENERALLY CONSISTS OF

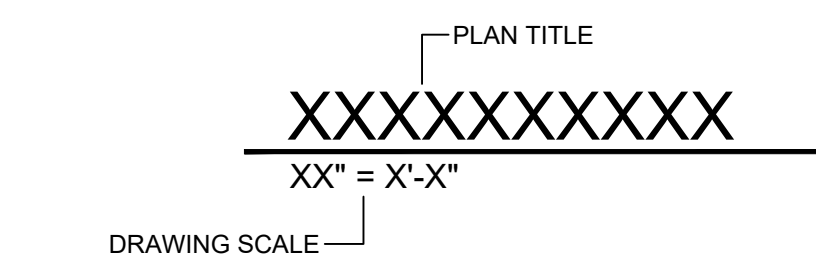
- REMOVAL OF EXISTING INSULATION, COVER BOARD, AND ASSOCIATED FLASHINGS DOWN TO EXISTING LIGHTWEIGHT INSULATING CONCRETE.
- INSTALLATION OF NEW FASTENED BASE SHEET, INSULATION ADHERED IN RIBBON ADHESIVE, AND MODIFIED BITUMEN ROOFING SYSTEM AND ALL ASSOCIATED FLASHINGS.
- INSTALLATION OF NEW EDGE METAL FASCIA.

SYMBOL LEGEND

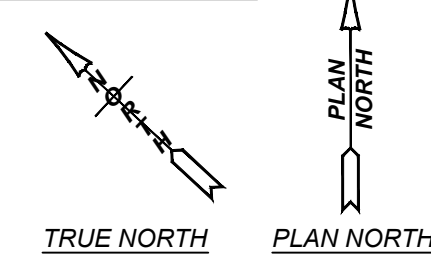
DETAIL/SECTION VIEW TITLE:



PLAN VIEW TITLE:



NORTH ARROWS:



SHADING IDENTIFIES EXISTING CONDITIONS NOT IN SCOPE OF WORK

ABBREVIATION LIST

TYP.	TYPICAL
CONT.	CONTINUOUS
O/C	ON CENTER
VERT.	VERTICAL
HORIZ.	HORIZONTAL
S.S.	STAINLESS STEEL
P.T.	PRESSURE TREATED

DRAWING INDEX

G-100	COVER SHEET
G-101	APPENDIX B
A-100	WIND ZONES
A-101	ENLARGED ROOF PLAN: AREA I1
A-102	ENLARGED ROOF PLAN: AREAS I2, I3 & I4
A-501	ROOFING DETAILS
A-502	ROOFING DETAILS

TERRACON PROJECT NUMBER:

FH226304

ISSUE DATE:

03.15.2023

ISSUE FOR:

- REVIEW / PRICING DOCUMENTS NOT FOR CONSTRUCTION
- SURVEY REPORT - REPAIR DOCUMENTS NOT FOR CONSTRUCTION
- SCHEMATIC DESIGN DOCUMENTS NOT FOR CONSTRUCTION
- DESIGN DEVELOPMENT DOCUMENTS NOT FOR CONSTRUCTION
- PERMITTING / BIDDING
- CONSTRUCTION DOCUMENTS
- ADDENDUM SUBMITTAL
- RECORD DRAWINGS

REVISIONS:

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

ENGINEER STATE LICENSE SEAL

DRAWING BID SET NUMBER

TITLE SHEET

COVER SHEET

SHEET NUMBER

G-100

**2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL ROOF PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)**

Name of Project: East Mecklenburg High School Partial Roof Replacement Project
Address: 6800 Monroe Road, Charlotte, North Carolina Zip Code: 28212
Owner/Authorized Agent: William J. Wooten Phone #: (980)343-6580 E-Mail: williamj.wooten@cms.k12.nc.us
Owned By: City/County Private State
Code Enforcement Jurisdiction: City County State

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	Terracon Consultants, Inc.	Louis T. Hall	021987	(704)594-8926	Lou.Hall@Terracon.com
Civil				()	
Electrical				()	
Fire Alarm				()	
Plumbing				()	
Mechanical				()	
Sprinkler-Standpipe				()	
Structural				()	

2018 NC CODE FOR: Roof Replacement Roof Recover Roof Repair

CONSTRUCTED: (date)

CURRENT OCCUPANCY(S) (Ch. 3) : Education

BASIC BUILDING DATA

Construction Type: I-A II-A III-A IV V-A
(check all that apply) I-B II-B III-B V-B

Sprinklers: No Partial Yes NFPA 13 NFPA 13R NFPA 13D

Standpipes: No Yes Class I II III Wet Dry

Fire District: No Yes (Primary)

Gross Area (sq. ft.):

STORIES	AREA I1	AREA I2	AREA I3	AREA I4	TOTAL
	10,300	25,900	3,020	5,300	44,520

2018 NC Administrative Code and Policies

Appendix B for Roof

2018 NC Administrative Code and Policies

Appendix B for Roof

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY
Roof Construction, including supporting beams and joists	No Change		
Roof Ceiling Assembly	No Change		
Column Supporting Roof	No Change		

STRUCTURAL DESIGN

(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_s) No Change
Seismic (I_e) No Change

Live Loads: Roof 20 psf

Ground Snow Load: No Change psf

Wind Load: Ultimate Wind Speed 120 mph (ASCE-7-10)
Exposure Category B



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PARTIAL ROOF REPLACEMENT PROJECT
Charlotte Mecklenburg Schools
6800 Monroe Road, Charlotte North Carolina

APPENDIX B

REVISIONS:

NO.	DATE	DESCRIPTION
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DESIGNED BY: TL

DRAWN BY: EGM

APPROVED BY: LTH

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SHEET NUMBER

G-101

LEGEND	
SYMBOL	DESCRIPTION
	ZONE 1 - FIELD
	ZONE 2 - PERIMETER
	ZONE 3 - CORNERS
	ROOF TOP STRUCTURE

**CODE SUMMARY:
ROOF AREAS I1, I2, I3 & I4**

NORTH CAROLINA BUILDING CODE (2018 EDITION)
AND ASCE 7-10

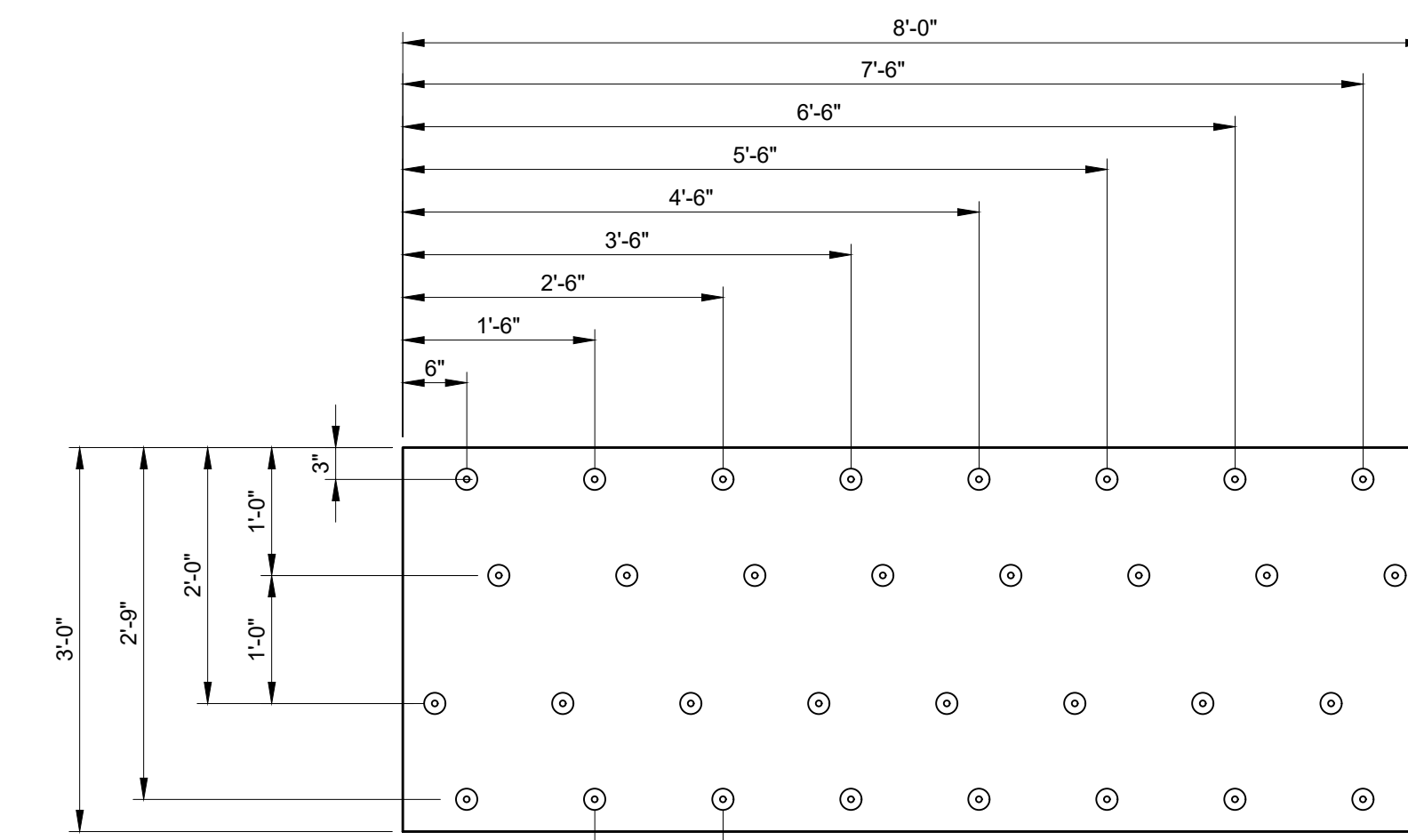
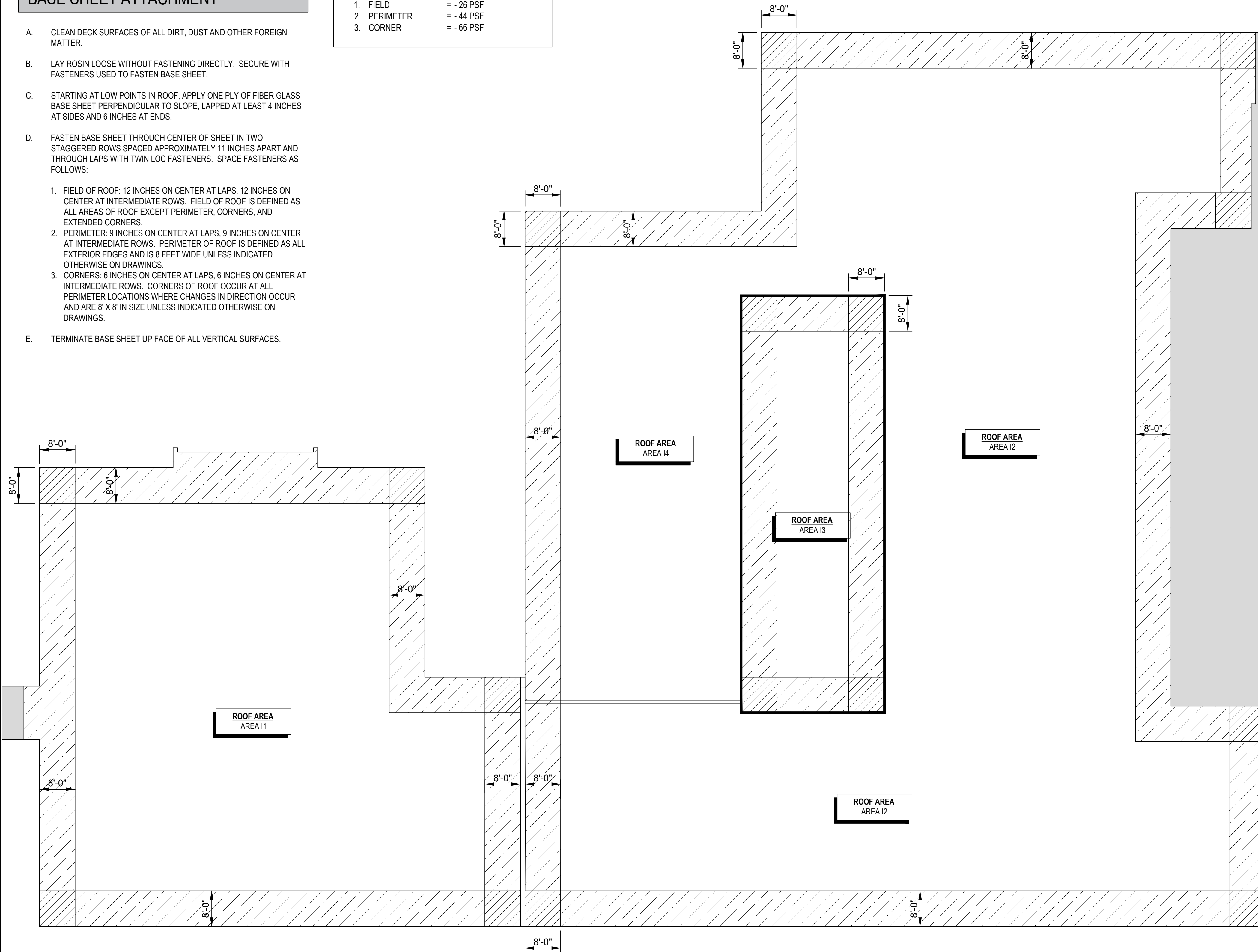
BASIC WIND SPEED = 120 MPH
CATEGORY = III
EXPOSURE CATEGORY = B
INTERNAL PRESSURE COEF. = +/-0.18

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

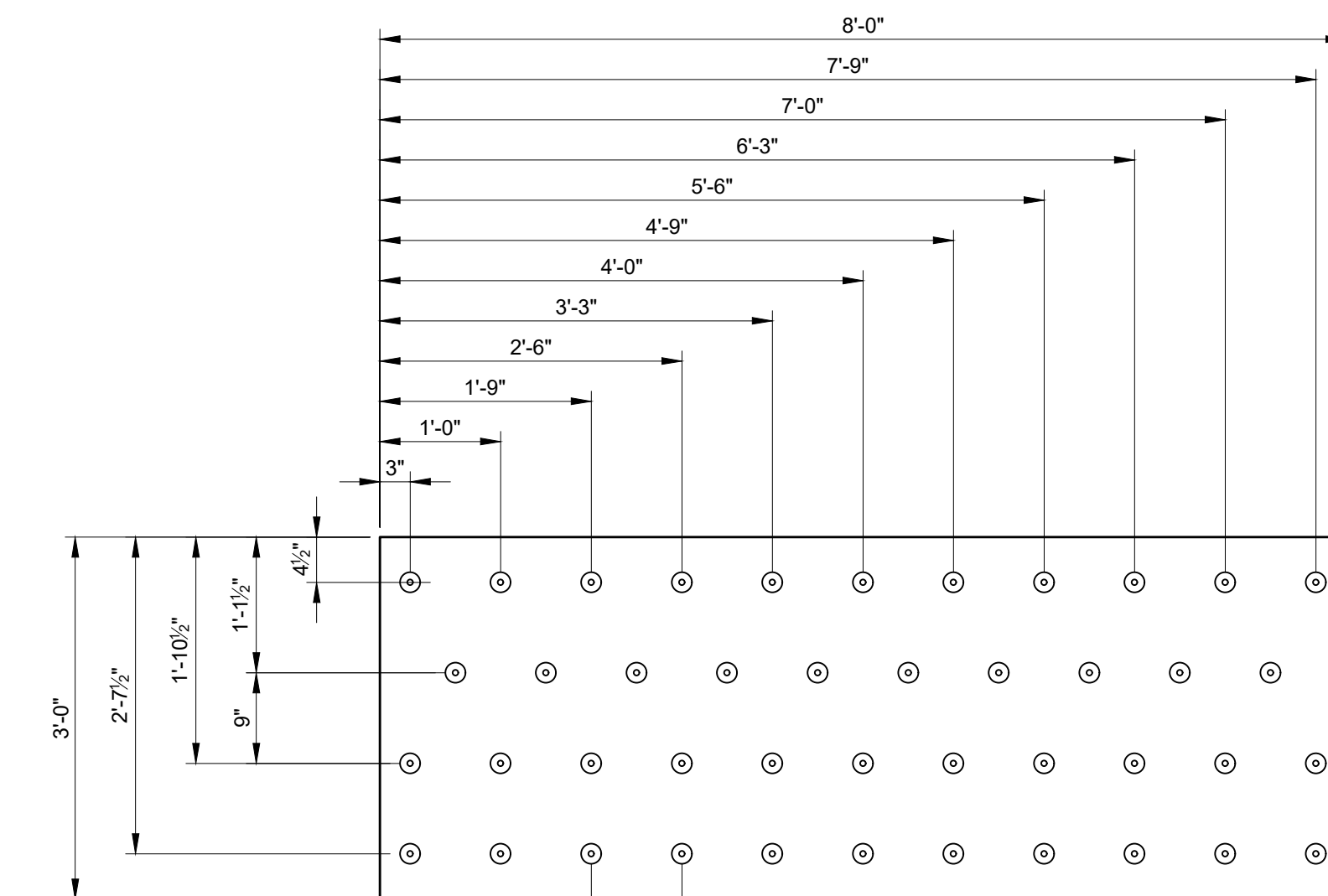
1. FIELD = - 26 PSF
2. PERIMETER = - 44 PSF
3. CORNER = - 66 PSF

BASE SHEET ATTACHMENT

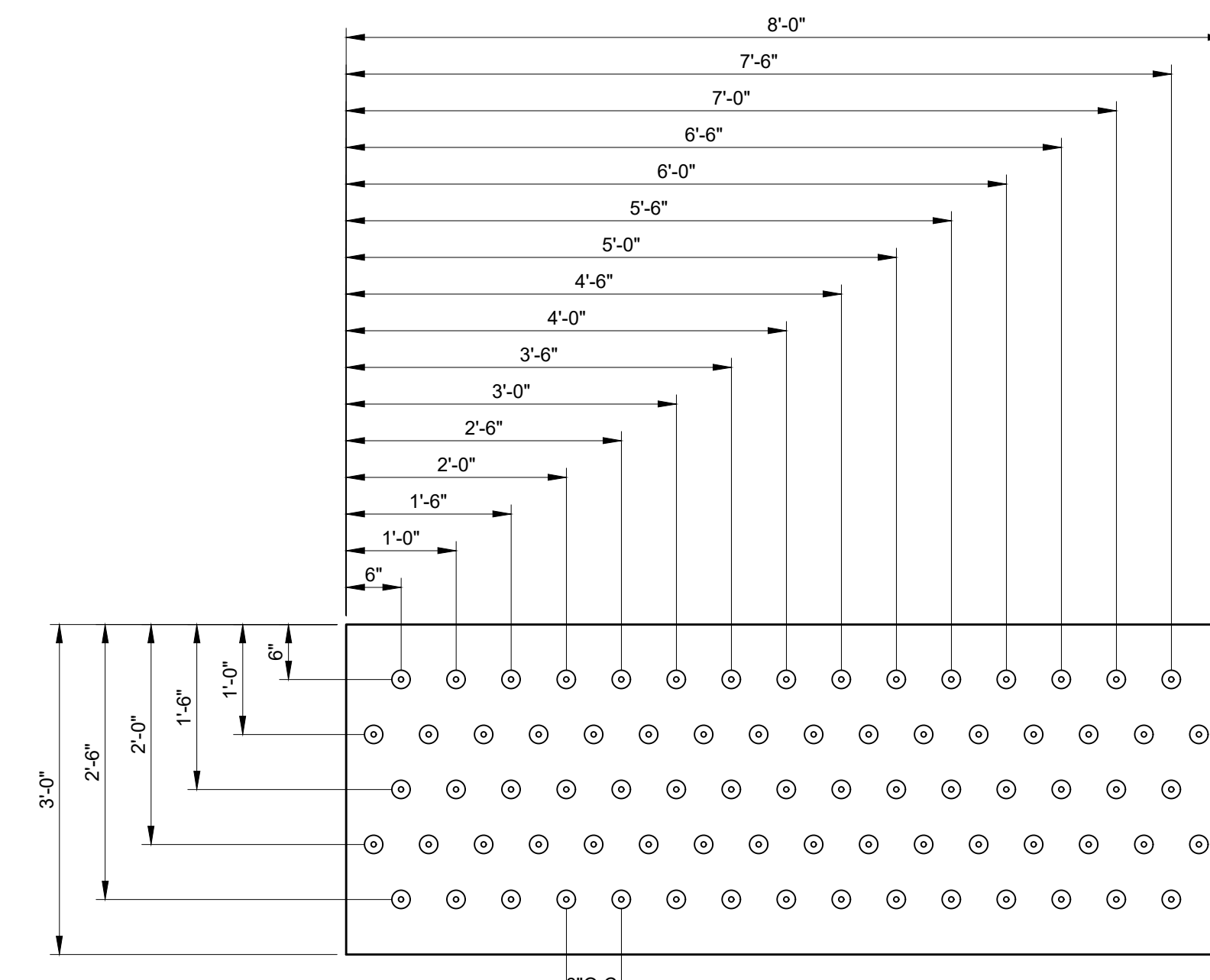
- A. CLEAN DECK SURFACES OF ALL DIRT, DUST AND OTHER FOREIGN MATTER.
- B. LAY ROSIN LOOSE WITHOUT FASTENING DIRECTLY. SECURE WITH FASTENERS USED TO FASTEN BASE SHEET.
- C. STARTING AT LOW POINTS IN ROOF, APPLY ONE PLY OF FIBER GLASS BASE SHEET PERPENDICULAR TO SLOPE, LAPPED AT LEAST 4 INCHES AT SIDES AND 6 INCHES AT ENDS.
- D. FASTEN BASE SHEET THROUGH CENTER OF SHEET IN TWO STAGGERED ROWS SPACED APPROXIMATELY 11 INCHES APART AND THROUGH LAPS WITH TWIN LOC FASTENERS. SPACE FASTENERS AS FOLLOWS:
 - 1. FIELD OF ROOF: 12 INCHES ON CENTER AT LAPS, 12 INCHES ON CENTER AT INTERMEDIATE ROWS. FIELD OF ROOF IS DEFINED AS ALL AREAS OF ROOF EXCEPT PERIMETER, CORNERS, AND EXTENDED CORNERS.
 - 2. PERIMETER: 9 INCHES ON CENTER AT LAPS, 9 INCHES ON CENTER AT INTERMEDIATE ROWS. PERIMETER OF ROOF IS DEFINED AS ALL EXTERIOR EDGES AND IS 8 FEET WIDE UNLESS INDICATED OTHERWISE ON DRAWINGS.
 - 3. CORNERS: 6 INCHES ON CENTER AT LAPS, 6 INCHES ON CENTER AT INTERMEDIATE ROWS. CORNERS OF ROOF OCCUR AT ALL PERIMETER LOCATIONS WHERE CHANGES IN DIRECTION OCCUR AND ARE 8' X 8' IN SIZE UNLESS INDICATED OTHERWISE ON DRAWINGS.
- E. TERMINATE BASE SHEET UP FACE OF ALL VERTICAL SURFACES.



FIELD FASTENER PATTERN



PERIMETER FASTENER PATTERN



CORNER FASTENER PATTERN



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ENGINEER STATE LICENSE SEAL

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WIND ZONES

REVISIONS:

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3		
4		

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DESIGNED BY: TL

DRAWN BY: EGM

APPROVED BY: LTH

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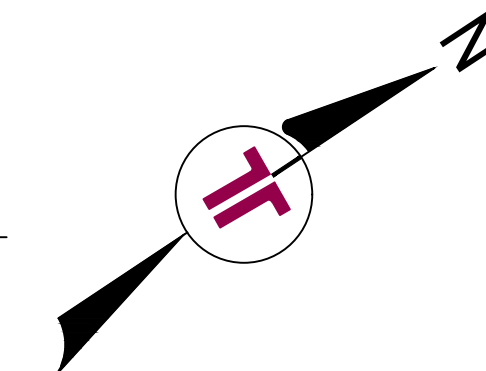
SHEET NUMBER

A-100

01

EAST MECKLENBURG HIGH SCHOOL WIND ZONES: ROOF AREAS I1, I2, I3 & I4

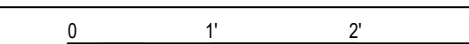
NOT TO SCALE



02

AREAS I1, I2, I3 & I4 BASE SHEET FASTENING PATTERN

3/4" = 1'-0"



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ENLARGED ROOF PLAN: AREA L1

LEGEND

SYMBOL	DESCRIPTION
—	PERIMETER ROOF EDGE
SP ○	SANITARY PIPE
PP ○	PIPE PENETRATION
RD ⊙	ROOF DRAIN
—	EXPANSION JOINT COVER
⊠	EQUIPMENT UNIT ON SLEEPER
⊠	EQUIPMENT UNIT
⊠	VENTILATOR
CC	CAPPED CURB
↗	STRUCTURAL SLOPE
↘	TAPERED SLOPE
←	DIRECTIONAL SLOPE
---	TAPERED INSULATION
⊠	CRICKET
▨	NEW WALL DIVIDER
⊠	ROOF LADDER

GENERAL NOTES

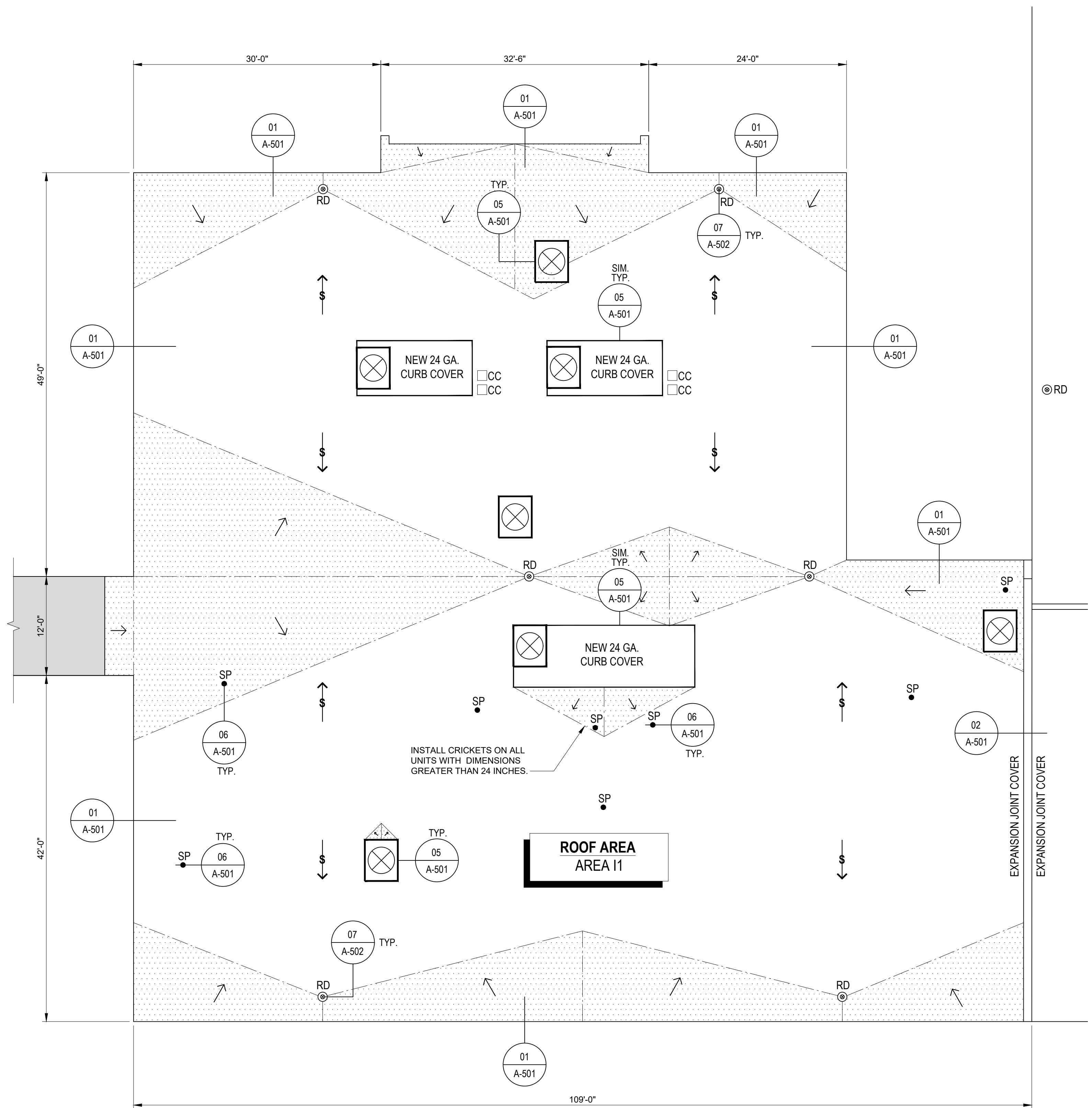
- CONTRACTOR TO FIELD VERIFY ALL PLAN INFORMATION, DIMENSIONS, QUANTITIES, ETC.
- SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- INSTALL CRICKETS ON ALL PENETRATIONS WITH DIMENSIONS GREATER THAN 24 INCHES.
- INSTALL NEW 24 GAUGE CURB COVER AT EXISTING CAPPED CURBS.

ROOF AREAS

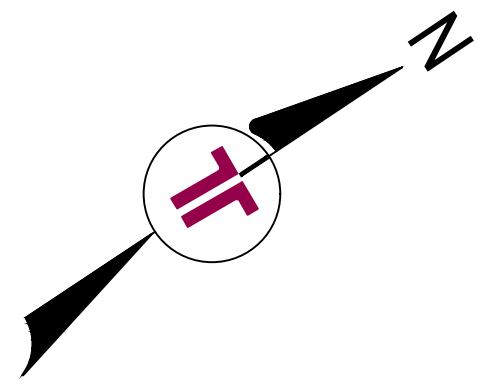
ROOF AREAS	EAVE/PARAPET (APPROXIMATE)	SIZE OF ROOF (APPROXIMATE)
I1	+/- 10'	+/- 10,300 Sq. Ft.
I2	+/- 10'	+/- 25,900 Sq. Ft.
I3	+/- 14'	+/- 3,020 Sq. Ft.
I4	+/- 10'	+/- 5,300 Sq. Ft.
TOTAL:		+/- 44,520 Sq. Ft.

KEY PLAN

SYMBOL	DESCRIPTION
▨	NOT IN SCOPE OF WORK
▩	IN SCOPE OF WORK



01 EAST MECKLENBURG HIGH SCHOOL ENLARGED ROOF PLAN: AREA I1



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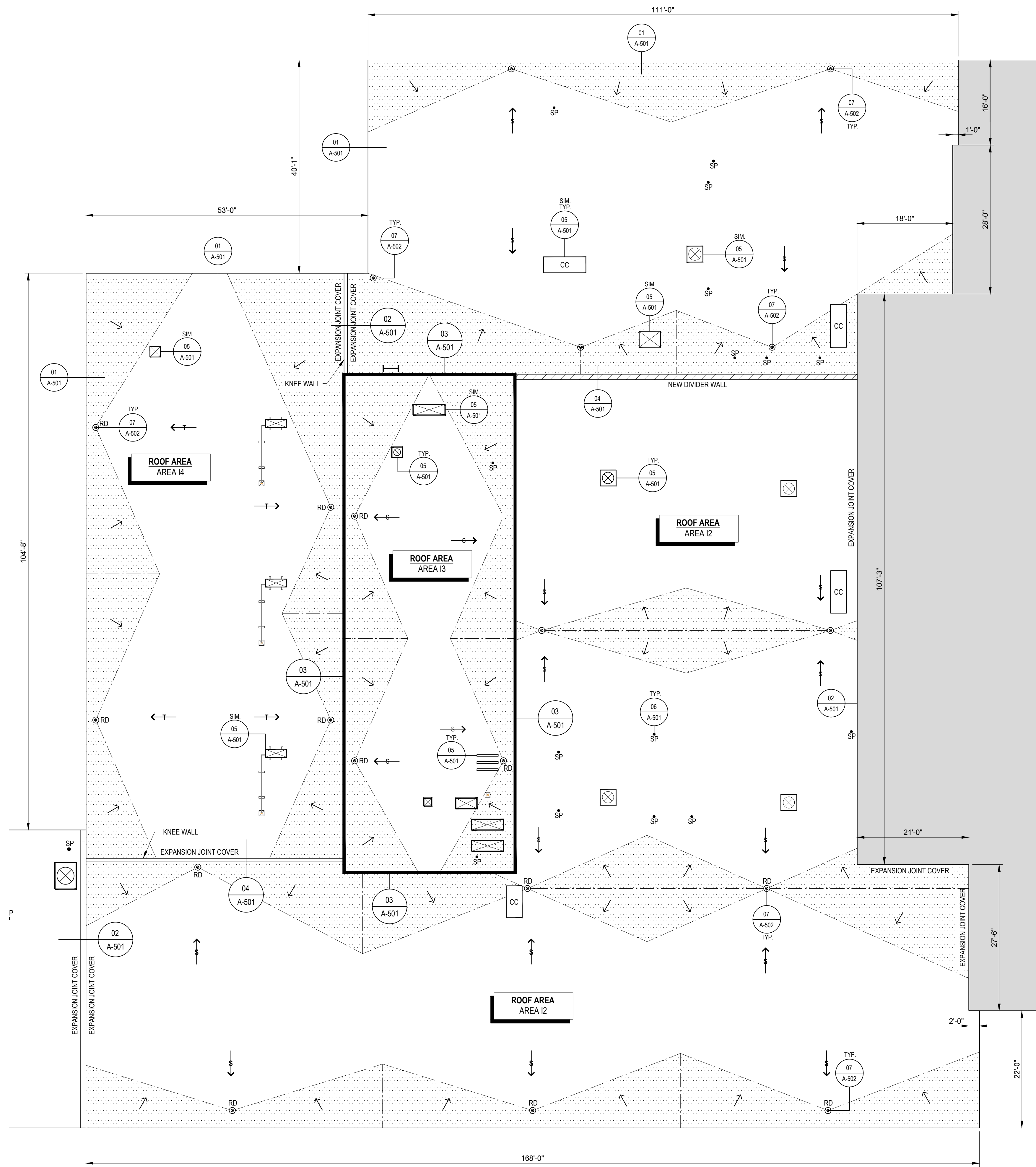
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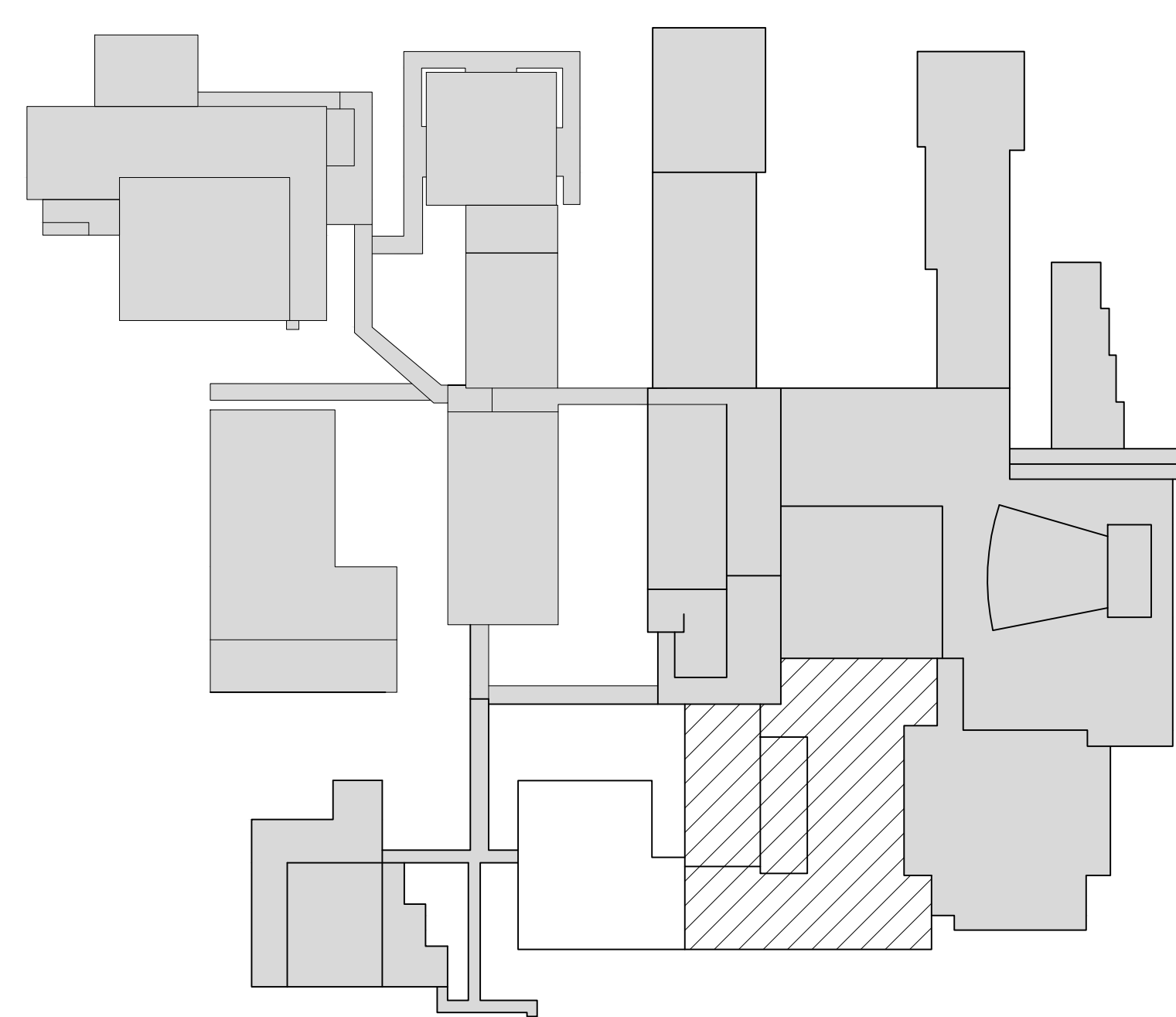


LEGEND	
SYMBOL	DESCRIPTION
—	PERIMETER ROOF EDGE
SP ○	SANITARY PIPE
PP ○	PIPE PENETRATION
RD ⊙	ROOF DRAIN
— —	EXPANSION JOINT COVER
⊠	EQUIPMENT UNIT ON SLEEPER
⊠	EQUIPMENT UNIT
⊠	VENTILATOR
CC	CAPPED CURB
→	STRUCTURAL SLOPE
→	TAPERED SLOPE
←	DIRECTIONAL SLOPE
---	TAPERED INSULATION
⊠	CRICKET
— —	NEW WALL DIVIDER
⊠	ROOF LADDER

- GENERAL NOTES**
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 - INSTALL NEW 24 GAUGE CURB COVER AT EXISTING CAPPED CURBS.

ROOF AREAS		
ROOF AREAS	EAVE/PARAPET (APPROXIMATE)	SIZE OF ROOF (APPROXIMATE)
11	+/- 10'	+/- 10,300 Sq. Ft.
12	+/- 10'	+/- 25,900 Sq. Ft.
13	+/- 14'	+/- 3,020 Sq. Ft.
14	+/- 10'	+/- 5,300 Sq. Ft.
TOTAL:		+/- 44,520 Sq. Ft.

KEY PLAN	
SYMBOL	DESCRIPTION
■	NOT IN SCOPE OF WORK
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ENLARGED ROOF PLAN: AREAS 12, 13, 14

REVISIONS:		
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1		
2		
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DRAWN BY: EGM

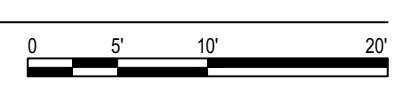
APPROVED BY: LTH

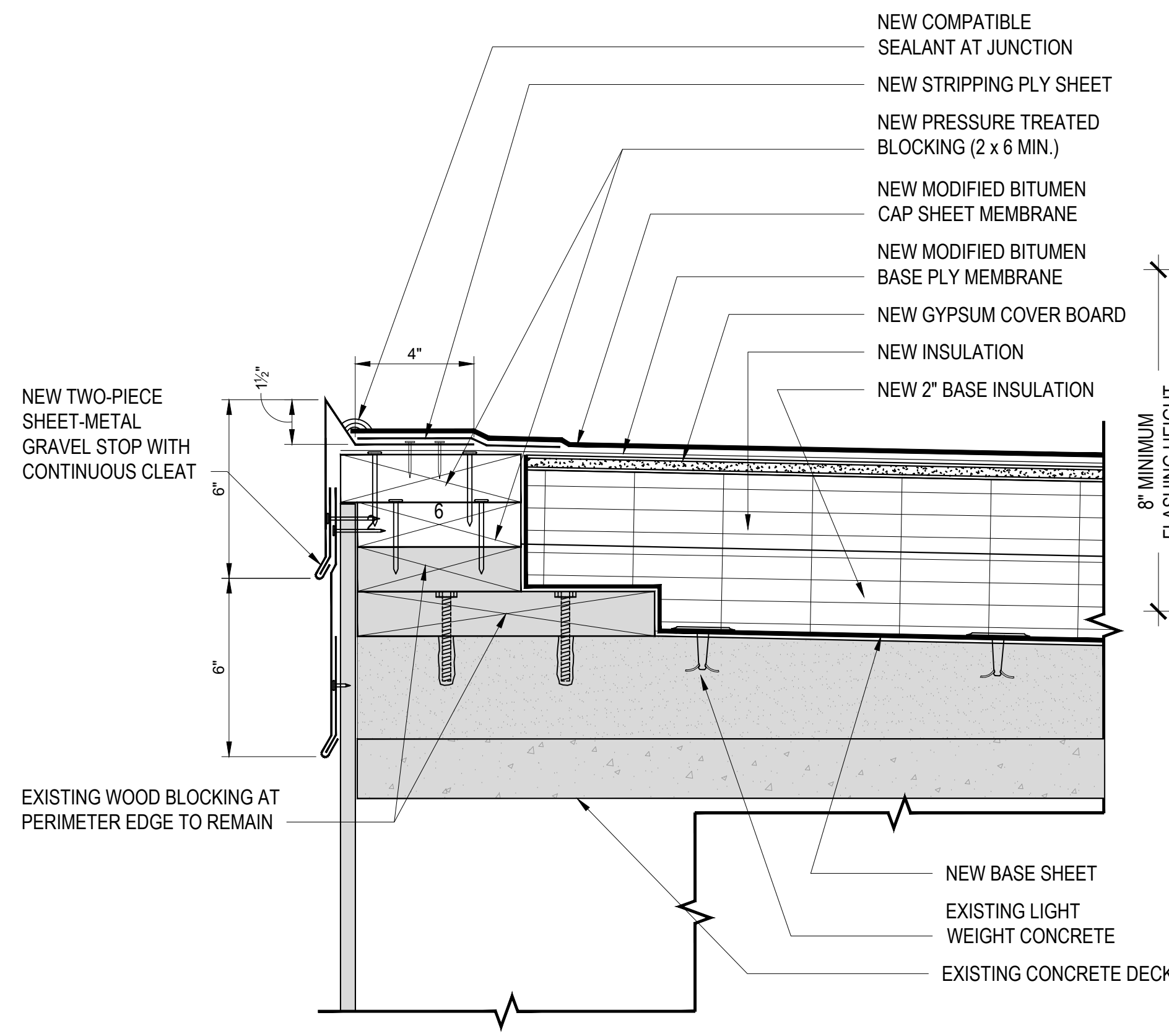
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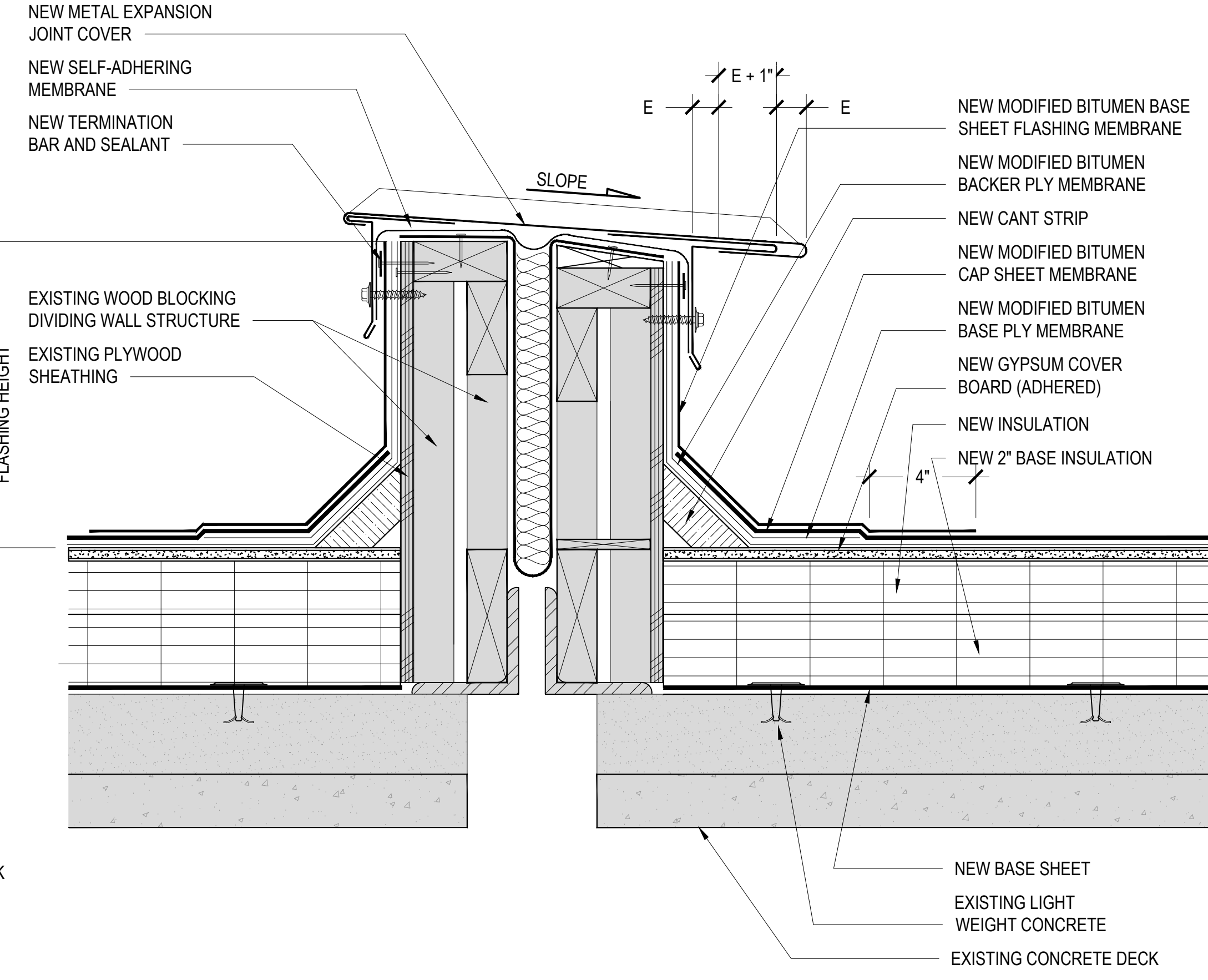
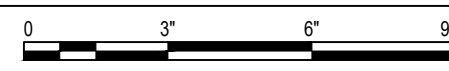
SHEET NUMBER
A-102

01 EAST MECKLENBURG HIGH SCHOOL ENLARGED ROOF PLAN: AREA 12 & 13
 3/32" = 1'-0"

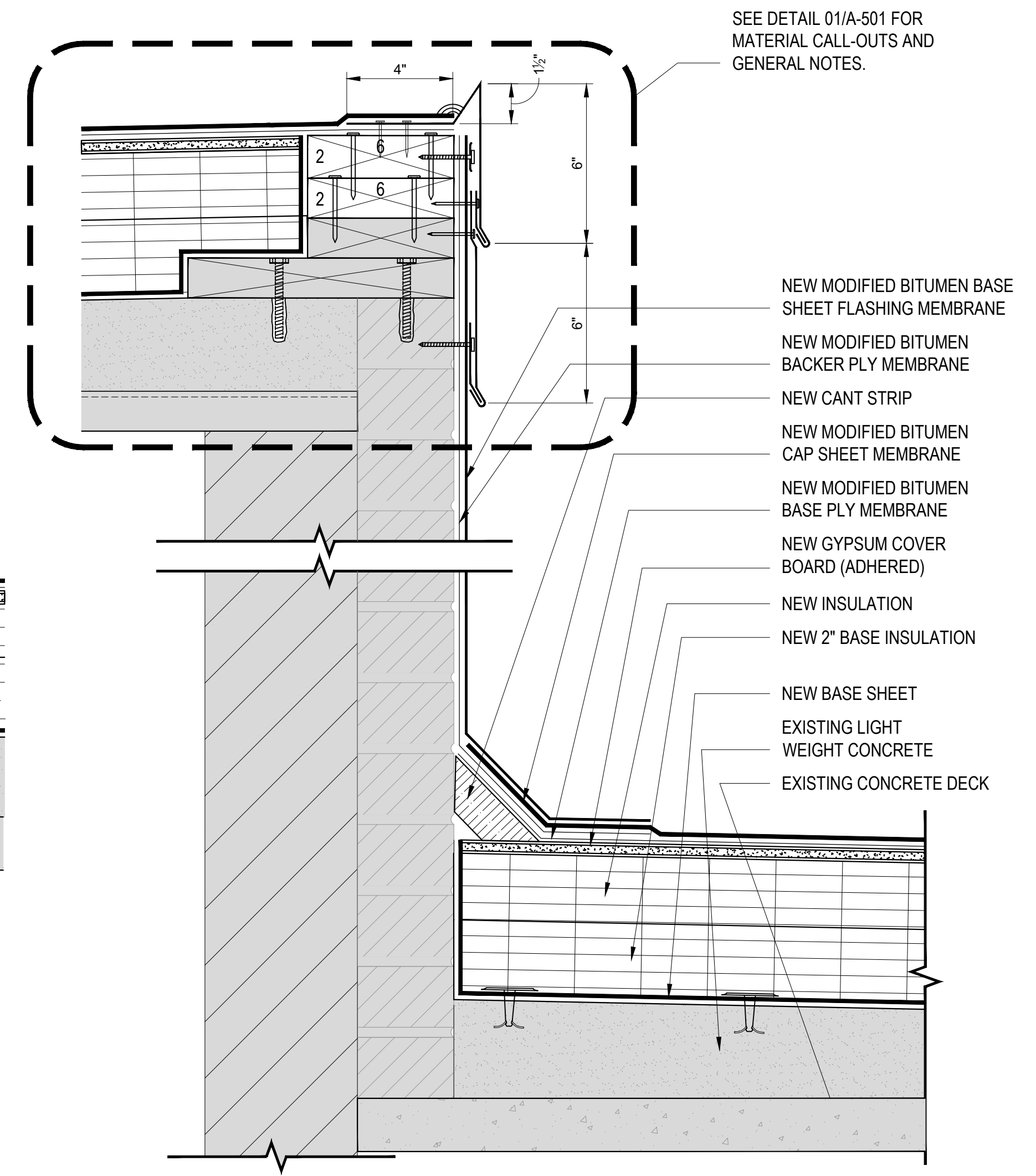
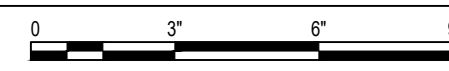




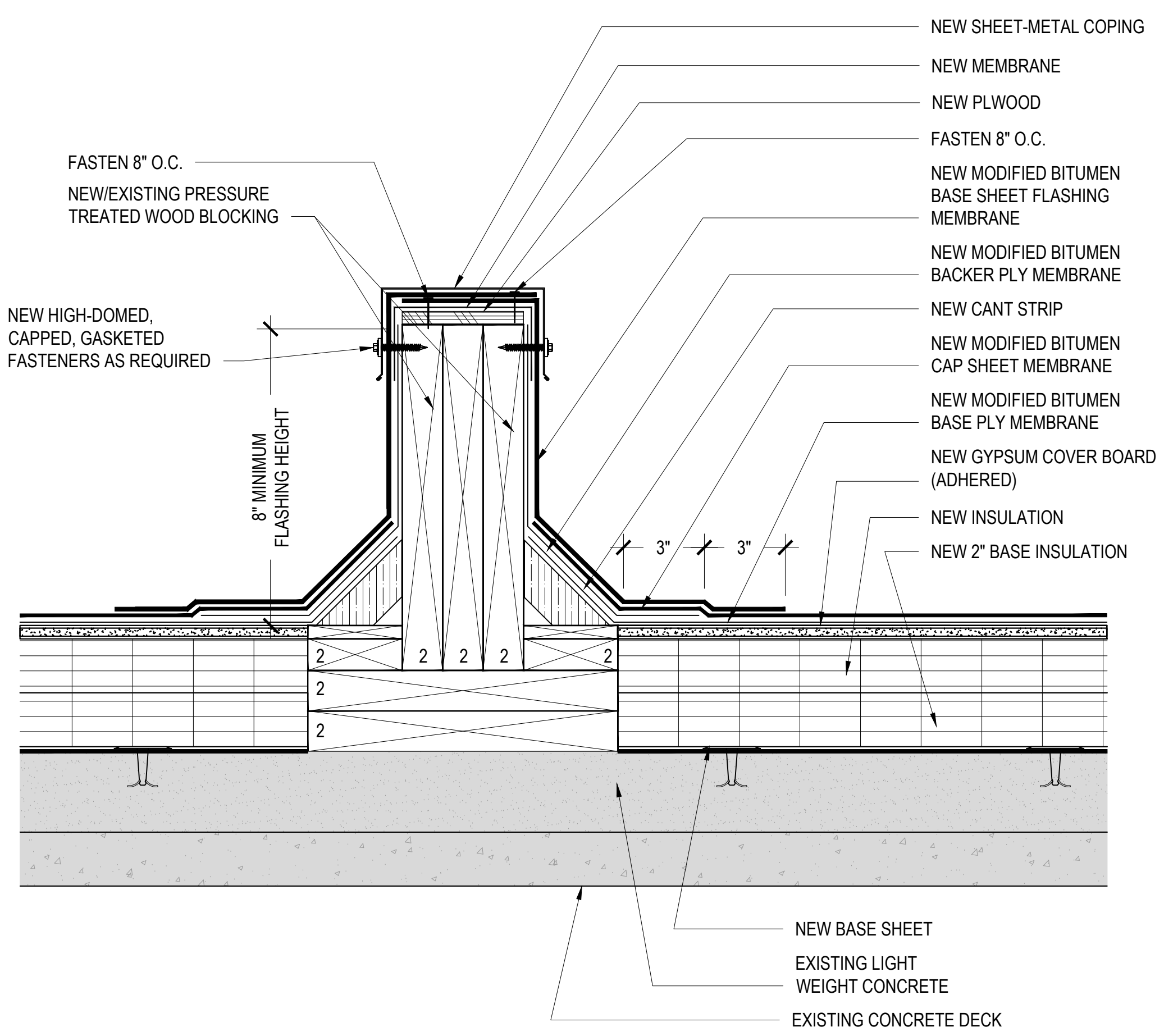
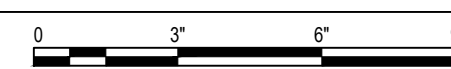
01 PERIMETER EDGE DETAIL
 3"=1'-0"



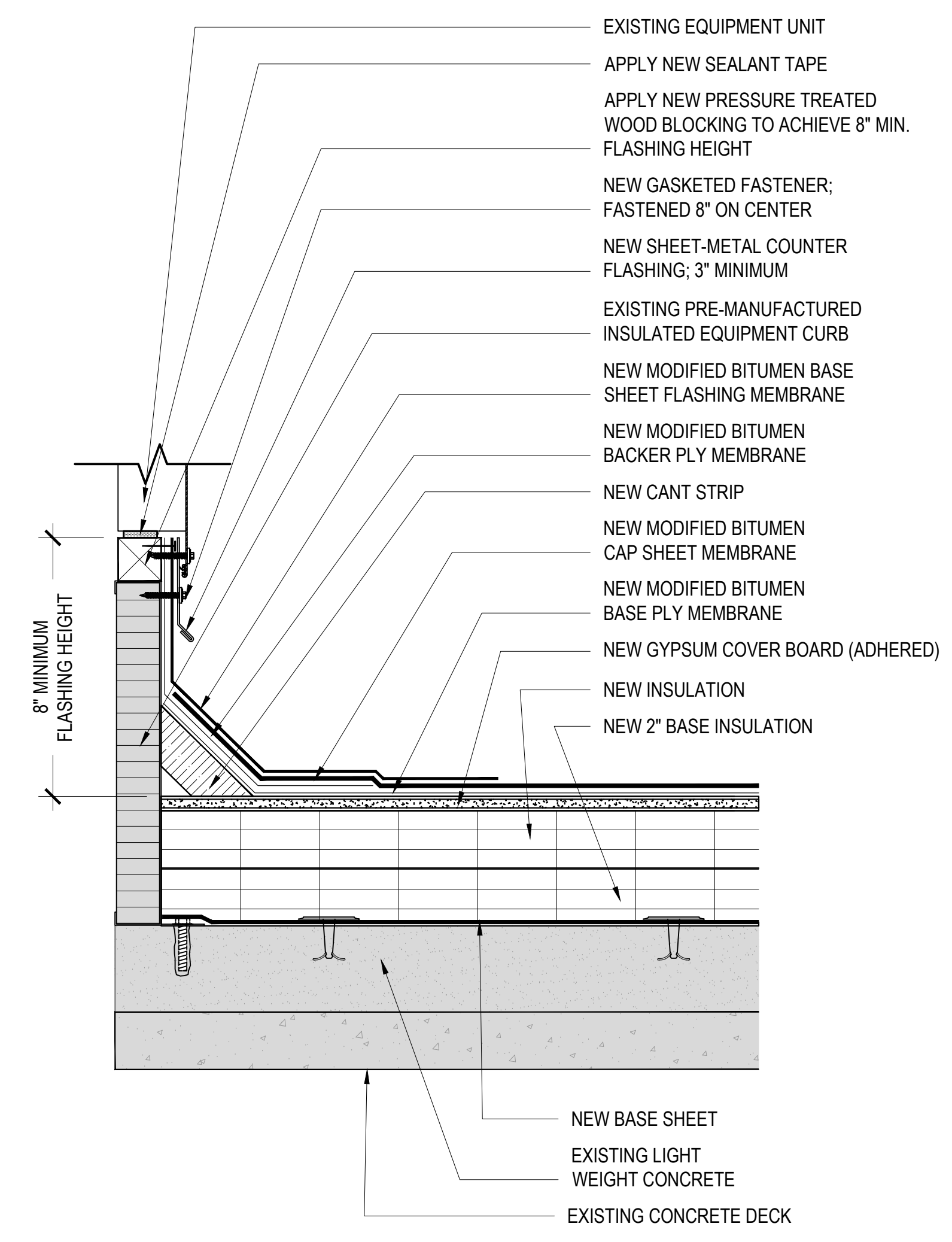
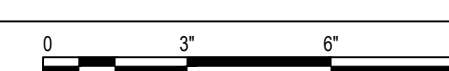
02 EXPANSION JOINT DETAIL
 3"=1'-0"



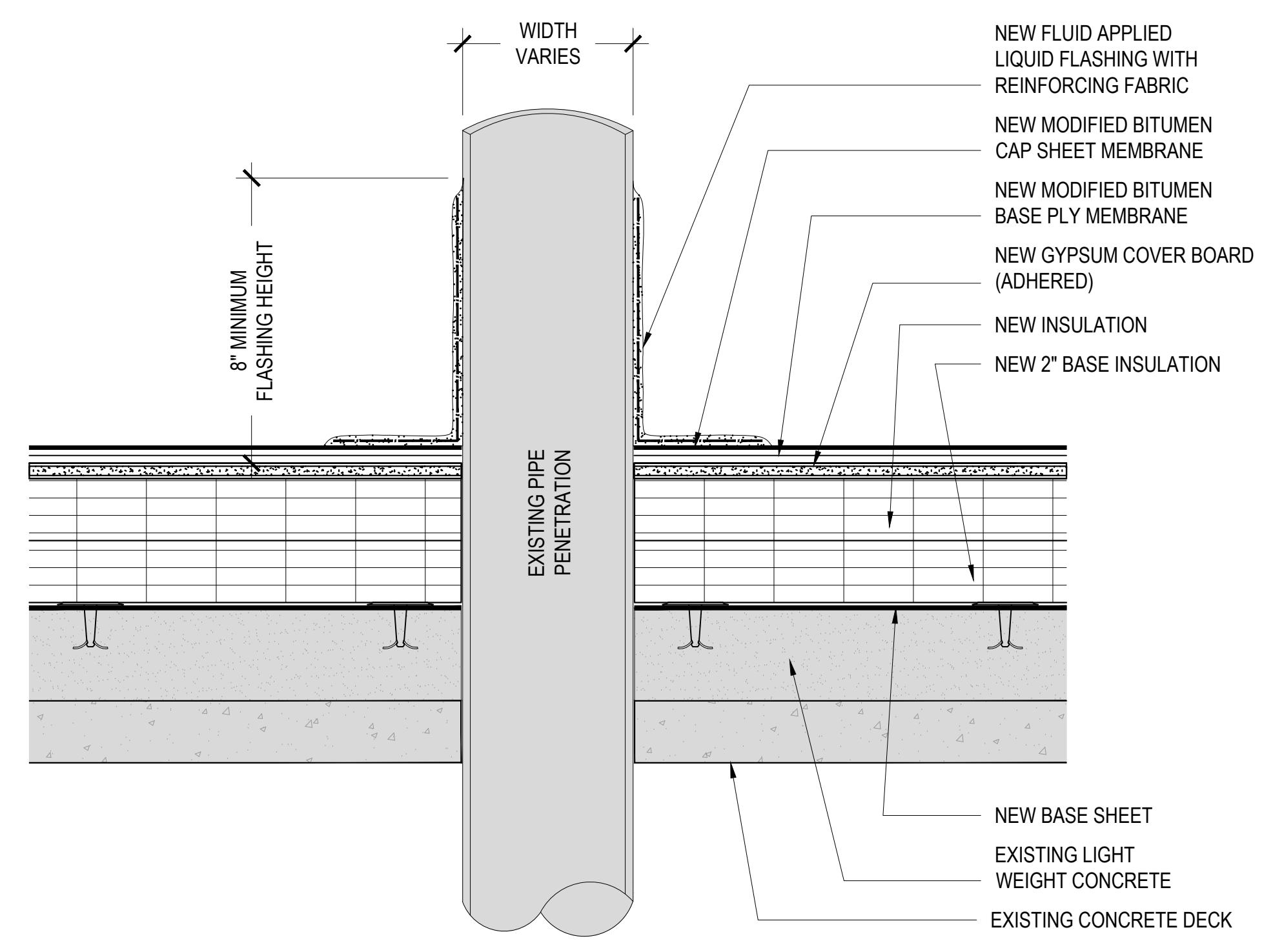
03 WALL ABOVE ROOF FLASHING DETAIL
 3"=1'-0"



04 ROOF DIVIDER DETAIL
 3"=1'-0"



05 EQUIPMENT CURB DETAIL
 3"=1'-0"



06 PIPE PENETRATION FLASHING DETAIL
 3"=1'-0"



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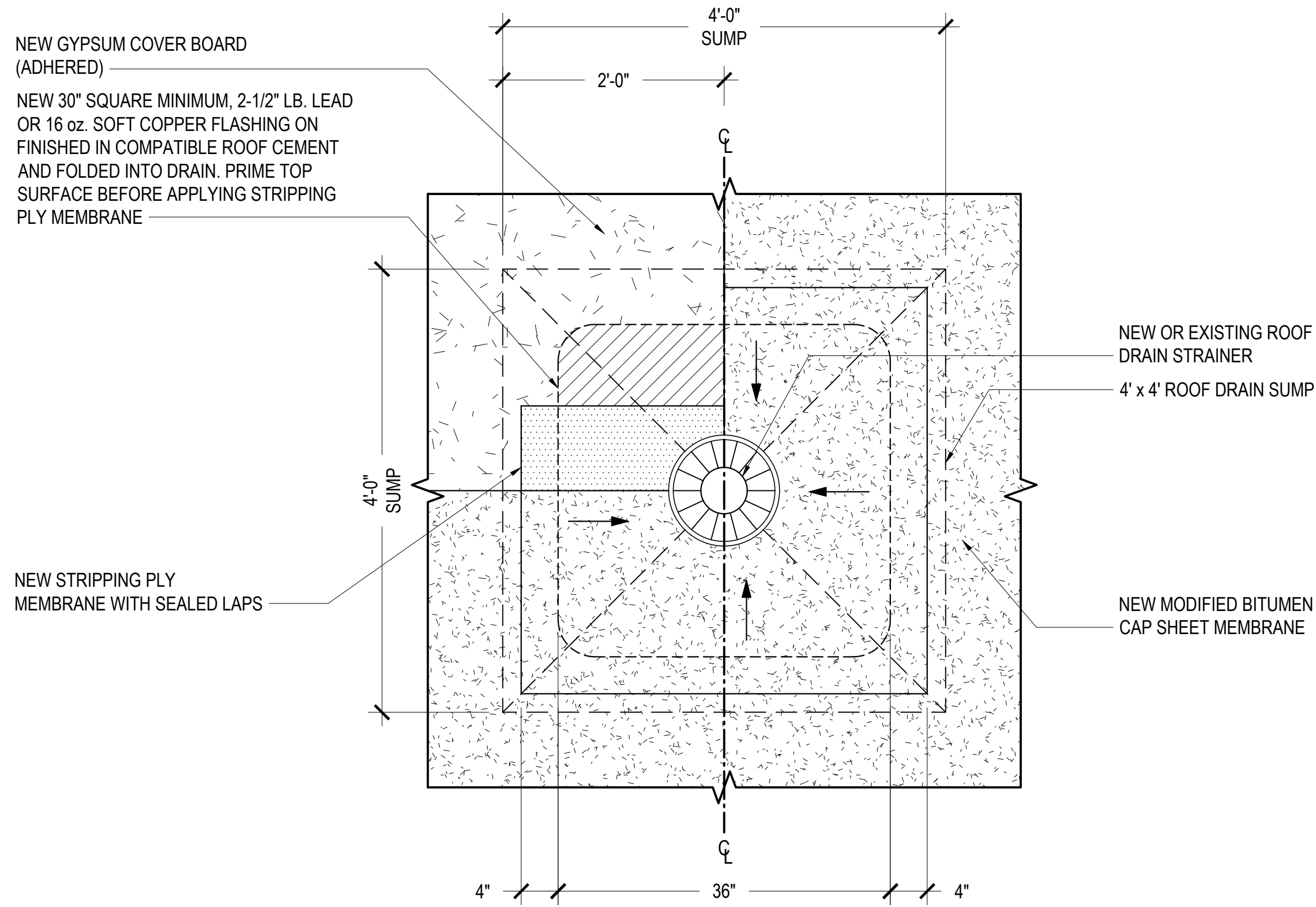
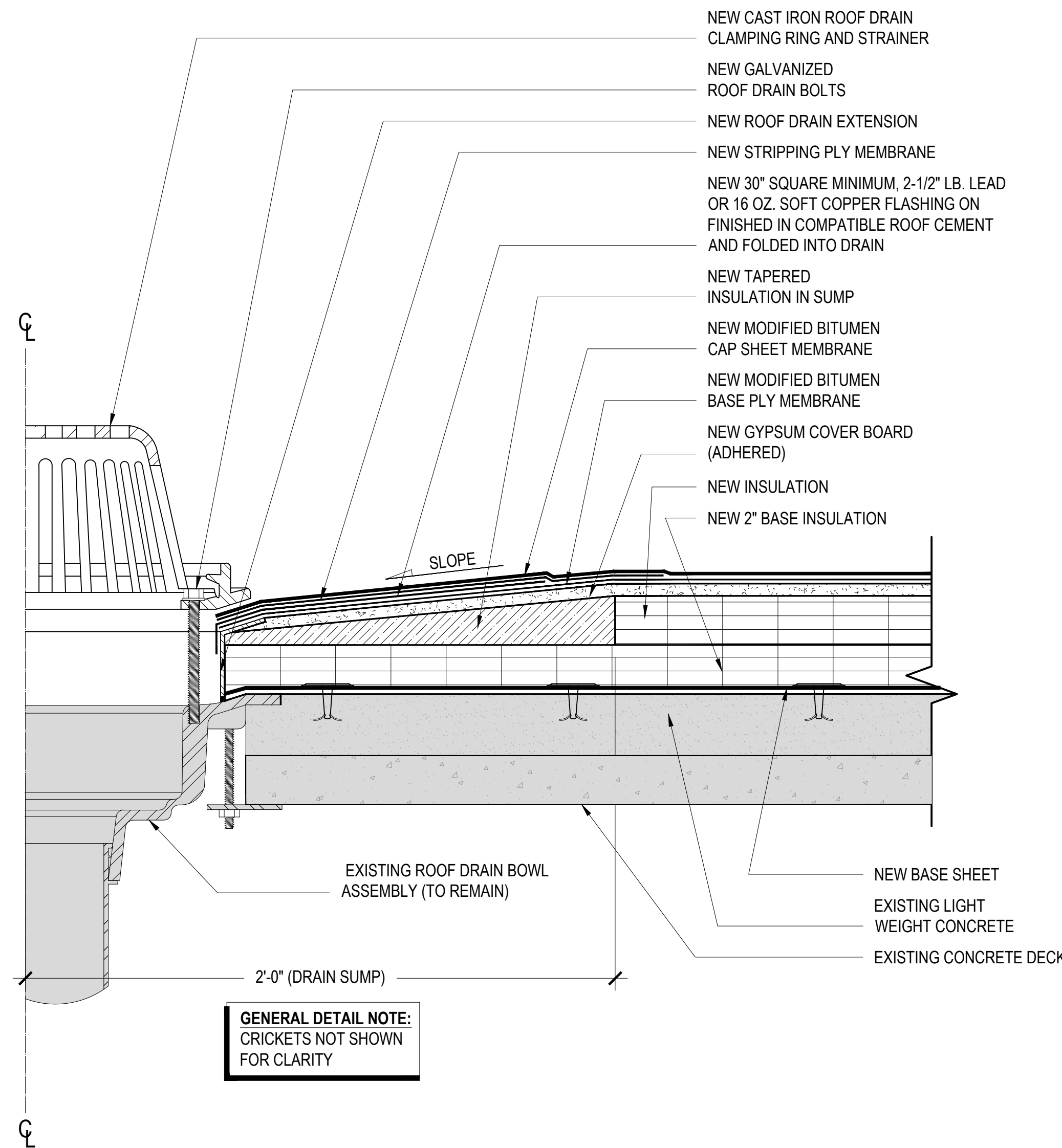
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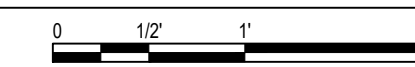
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A-501

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ROOFING DETAILS



07A PLAN VIEW OF ROOF DRAIN
1"=1'-0"



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



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