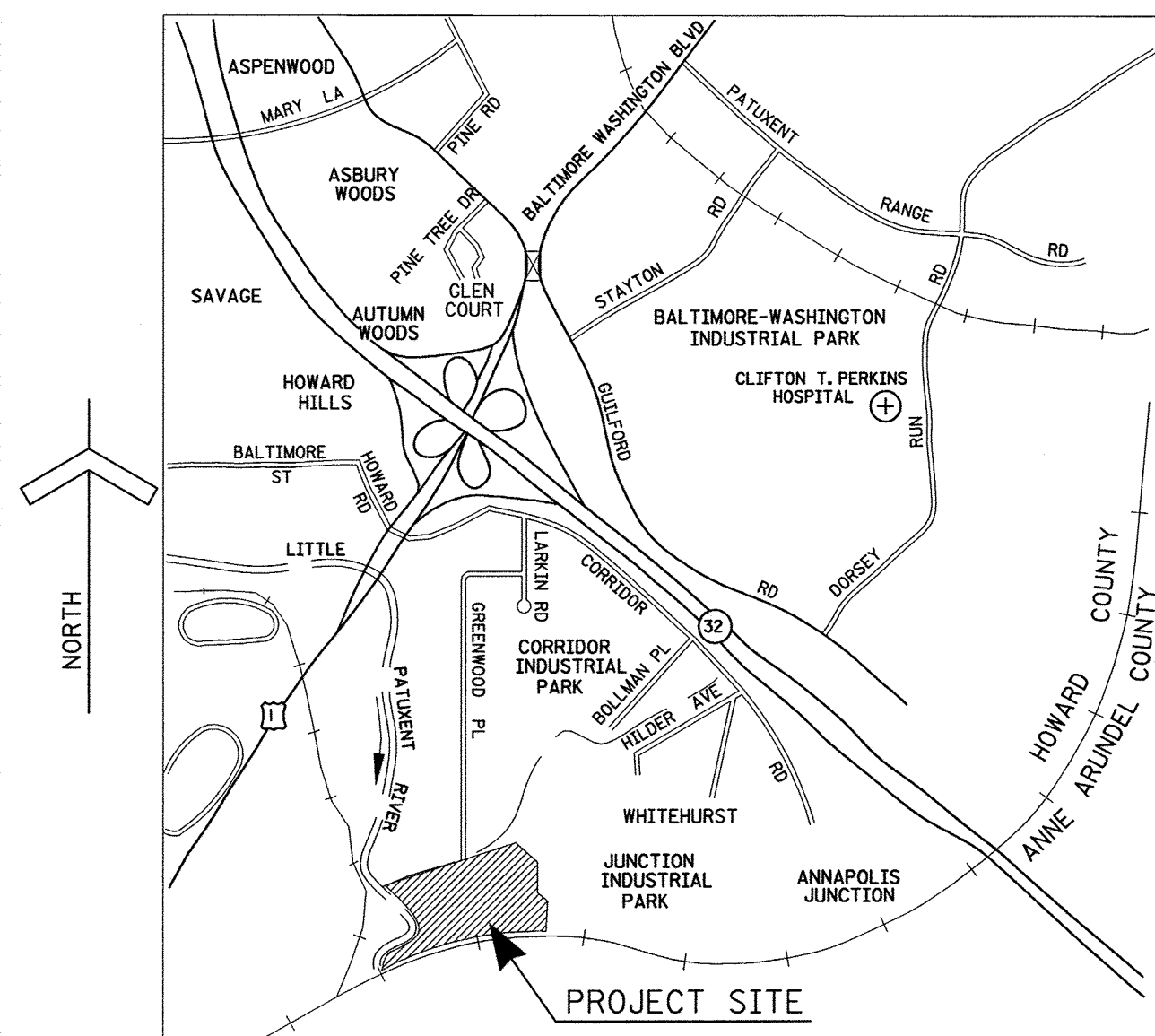
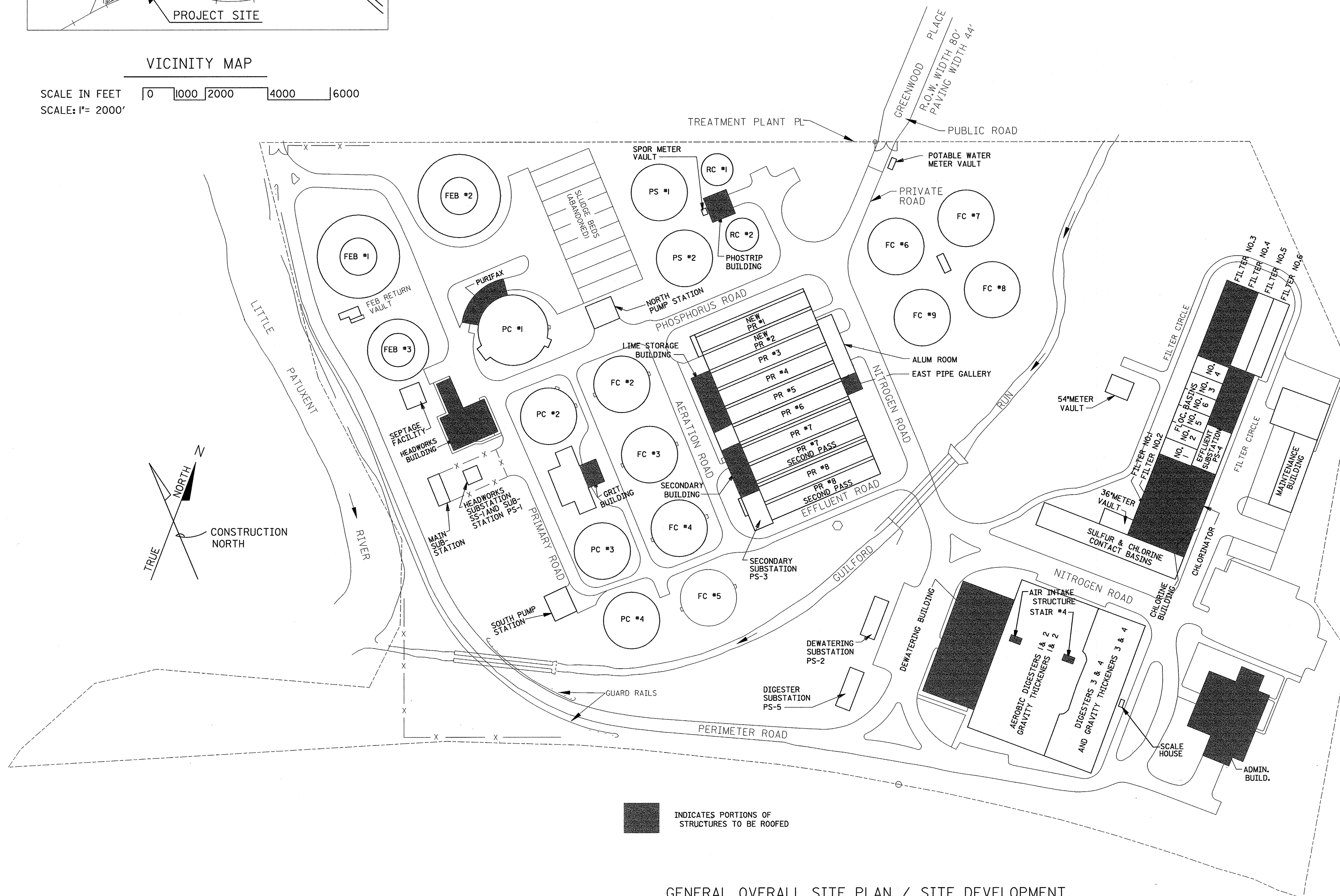


# LITTLE PATUXENT WATER RECLAMATION PLANT HOWARD COUNTY, MARYLAND REROOFING OF PLANT BUILDINGS



VICINITY MAP

SCALE IN FEET 0 1000 2000 4000 6000  
SCALE: 1" = 2000'



INDICATES PORTIONS OF STRUCTURES TO BE ROOFED

GENERAL OVERALL SITE PLAN / SITE DEVELOPMENT

SCALE IN FEET 0 50 100 200 300  
SCALE: 1" = 100'

DRAWING NUMBER	SHEET NUMBER	DRAWING TITLE
T-1	1 OF 9	TITLE SHEET
A-1	2 OF 9	DEWATERING BUILDING ROOF PLAN GENERAL NOTES
A-2	3 OF 9	ADMINISTRATION, GRIT, PHOSTRIP AND PURIFAX BUILDING ROOF PLANS
A-3	4 OF 9	FILTRATION AND DISINFECTION BUILDING ROOF PLANS
A-4	5 OF 9	HEADWORKS, AIR INTAKE STRUCTURE, STAIR #4, EAST PIPE GALLERY, LIME AND SECONDARY BUILDING ROOF PLANS
A-5	6 OF 9	ROOF DETAILS
A-6	7 OF 9	ROOF DETAILS
A-7	8 OF 9	ROOF DETAILS
A-8	9 OF 9	ROOF DETAILS

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

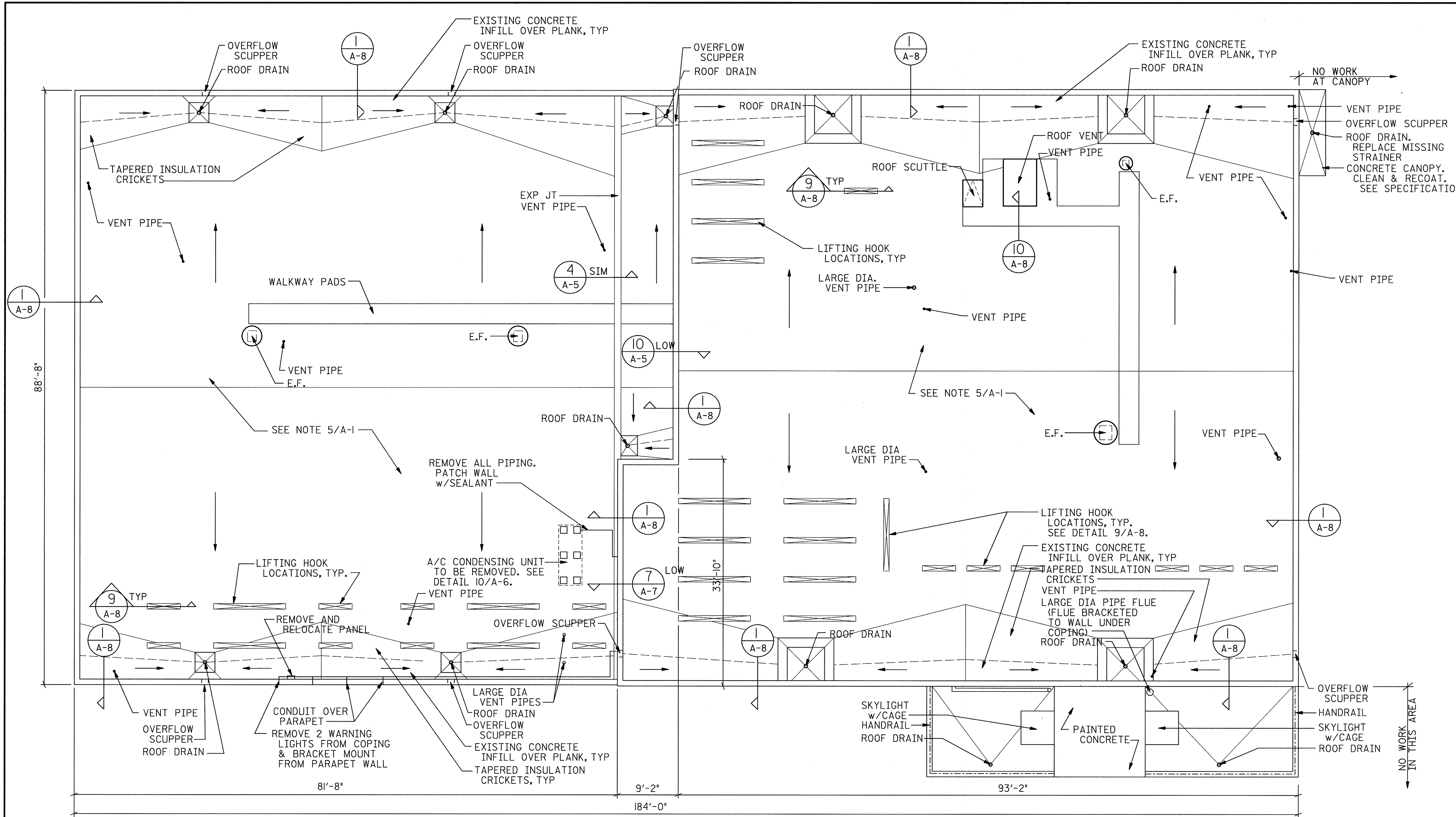


DES:					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

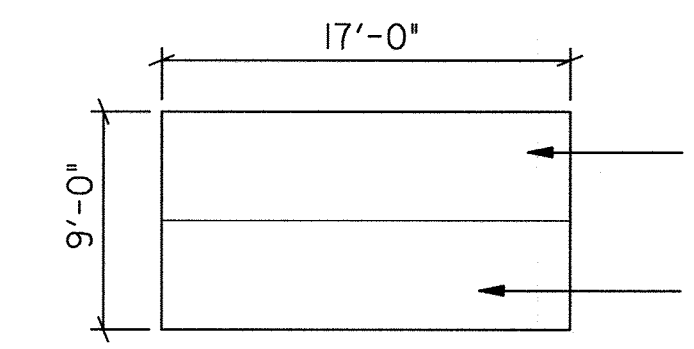
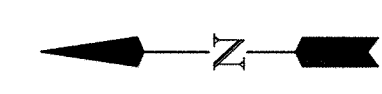
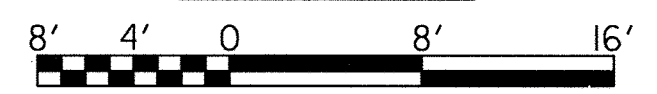
TITLE SHEET

LITTLE PATUXENT WATER RECLAMATION PLANT  
REROOFING OF PLANT BUILDINGS  
CAPITAL PROJECT  
CONTRACT NO. S6153.PI  
HOWARD COUNTY, MARYLAND

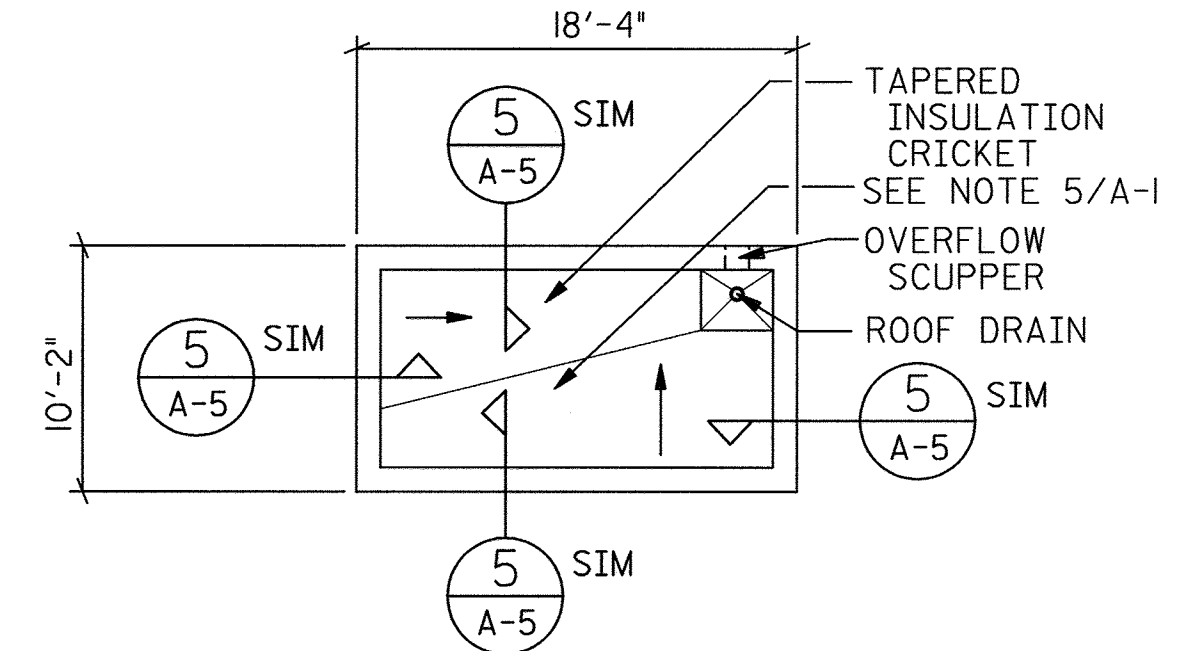
SCALE AS SHOWN  
SHEET 1 OF 9  
T-1



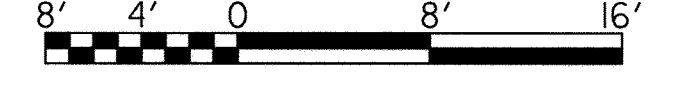
**DEWATERING BUILDING  
ROOF PLAN**



**AIR INTAKE STRUCTURE  
ROOF PLAN**



**STAIR #4 DEWATERING BLDG  
ROOF PLAN**



**GENERAL NOTES**

1. FOR TYPICAL ROOF DRAIN DETAIL, SEE DETAIL 1/A-5.
2. FOR TYPICAL PIPE PENETRATION DETAIL, SEE DETAIL 2/A-5.
3. FOR TYPICAL SKYLIGHT DETAIL, SEE DETAIL 9/A-5.
4. FOR TYPICAL VENT PIPE DETAIL, SEE DETAIL 2/A-5.
5. REMOVE EXISTING AGGREGATE SURFACED BUILT UP ROOFING OVER RIGID INSULATION OVER CONCRETE DECK, LEAVING DECK CLEAN AND FREE OF ALL FOREIGN MATERIAL. RE-ROOF W/MODIFIED BITUMEN CAP SHEET OVER 2 PLYS BUILT UP ROOFING OVER 1" RIGID PERLITE INSULATION.
6. ROOF W/MODIFIED BITUMEN CAP SHEET OVER 2 PLYS BUILT-UP ROOFING OVER 1" RIGID PERLITE INSULATION.
7. REMOVE EXISTING AGGREGATE SURFACED BUILT UP ROOFING OVER RIGID INSULATION OVER METAL DECK OVER STEEL STRUCTURE LEAVING DECK CLEAN AND FREE OF ALL FOREIGN MATERIAL. RE-ROOF W/MODIFIED BITUMEN CAP SHEET OVER 2 PLYS BUILT UP ROOFING OVER 1" PERLITE INSULATION OVER 1/2" POLY-ISOCYANURATE INSULATION.
8. DRAWINGS AND SPECIFICATIONS FOR THE ROOFING SYSTEMS ARE COMPLIMENTARY, THAT IS, THEY ARE TO BE USED TOGETHER AND NEITHER ARE TO BE TAKEN OUT OF THAT CONTEXT. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE DRAWINGS, SPECIFICATIONS, AND OTHER INSTRUCTIONS PRIOR TO SUBMITTING A BID FOR THE WORK.
9. REPLACE ALL EXISTING ROOF DRAIN STRAINERS, CLAMP RINGS, NUTS AND BOLTS. CLEAN AND UNOCLOG ALL DRAINS. REMOVE ASPHALT FROM DRAINS.
10. SUMP ALL ROOF DRAINS 4'-0" SQUARE AND 18" TAPERED EDGE STRIP AND CHAMFER ADJACENT INSULATION IN ACCORDANCE WITH DETAIL 1/A-5.
11. RAISE ALL SUPPORTS TO ACCOMMODATE NEW SYSTEMS OR AS REQUIRED BY THE INSPECTOR TO MAINTAIN 8" CLEAR ABOVE ROOF SURFACE TO TOP OF FLASHING.
12. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO SUBMITTING BID. THE CONTRACTOR SHALL FIELD VERIFY ALL QUANTITIES.
13. REPLACE ALL DOWNSPOUTS FROM GUTTERS.

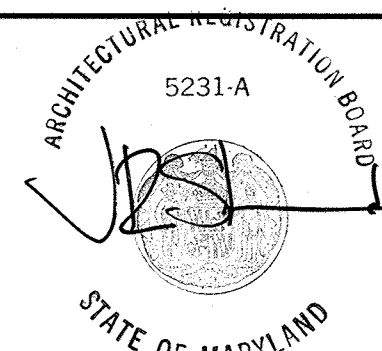
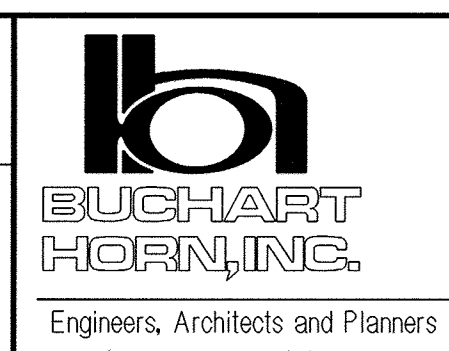
**LEGEND**

B.U.R.	BUILT UP ROOF	R.D.	ROOF DRAIN
C.O.	CLEAN OUT	S.B.	SPLASH BLOCK
DIA	DIAMETER	SC	SCUPPER
DS	DOWNSPOUT	SQ	SQUARE
E.C.	ELECTRICAL CONDUIT	SS	STAINLESS STEEL
E.F.	EXHAUST FAN	S.W.	STORM WATER
ELEV.	ELEVATION		
EQ	EQUAL		
EX	EXISTING		
EXP.JT.	EXPANSION JOINT		
GN	GOOSE NECK		
G.V.	GRAVITY VENT		
O.A.I.	OUTSIDE AIR INTAKE		
P.P.	PITCH POCKET		
P.R.V.	PRESSURE RELIEF VENTILATOR		
P.T.	PRESSURE TREATED		

**SYMBOLS**

- VENT PIPE, DIAMETERS VARY. SEE TYPICAL DETAIL 2/A-5.
- ◻ ROOF HATCH OR SCUTTLE. SEE TYPICAL DETAIL 5/A-7
- ⊞ EXHAUST FAN OR ROOF VENT. SEE TYPICAL DETAIL 8/A-5.
- ⊞ EXIST ROOF DRAIN W/SUMP AT PERLITE INSULATION. SEE TYPICAL DETAIL 1/A-5.
- ⊞ EXIST ROOF DRAIN W/SUMP AT POLYISO/PERLITE INSULATION. SEE TYPICAL DETAIL 1/A-5.
- SCUPPER ITALICIZED TEXT INDICATES EXISTING TO REMAIN (DETAIL SHEETS ONLY)
- SCUPPER STANDARD TEXT INDICATES NEW WORK (DETAIL SHEETS ONLY)

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

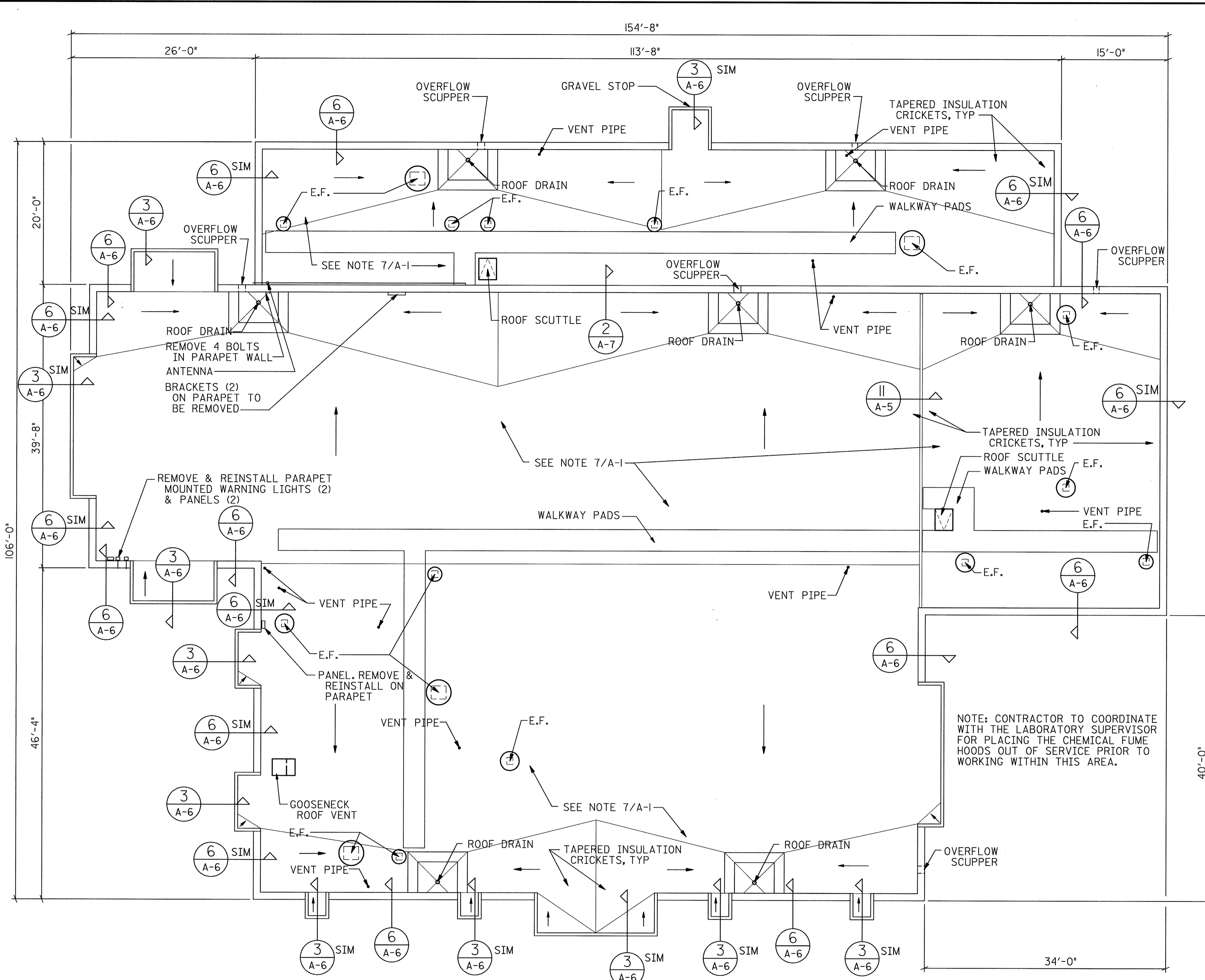


DES:	
DRN:	
CHK:	
DATE:	
BY NO.	
REVISION	
DATE	

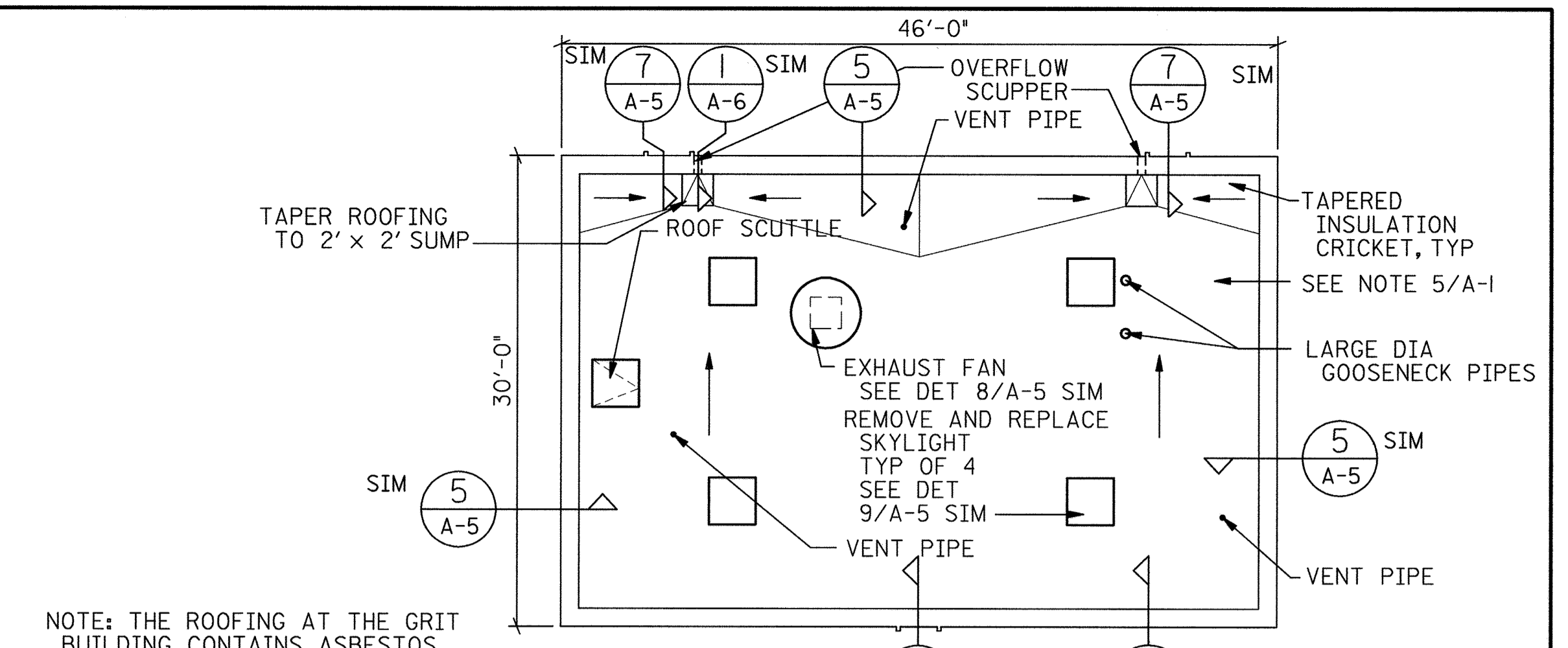
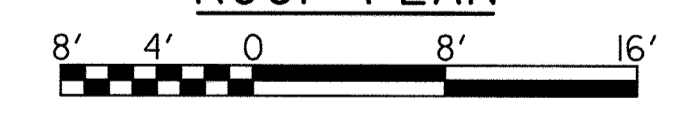
DEWATERING BUILDING  
ROOF PLAN  
GENERAL NOTES  
AIR INTAKE STRUCTURE  
STAIR # 4

LITTLE PATUXENT WATER RECLAMATION PLANT  
REROOFING OF PLANT BUILDINGS  
CAPITAL PROJECT  
CONTRACT NO. S6153.PI  
HOWARD COUNTY, MARYLAND

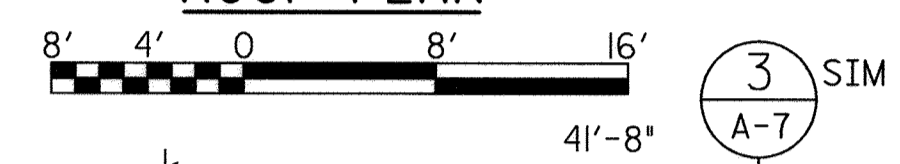
SCALE AS SHOWN  
SHEET 2 OF 9  
A-1



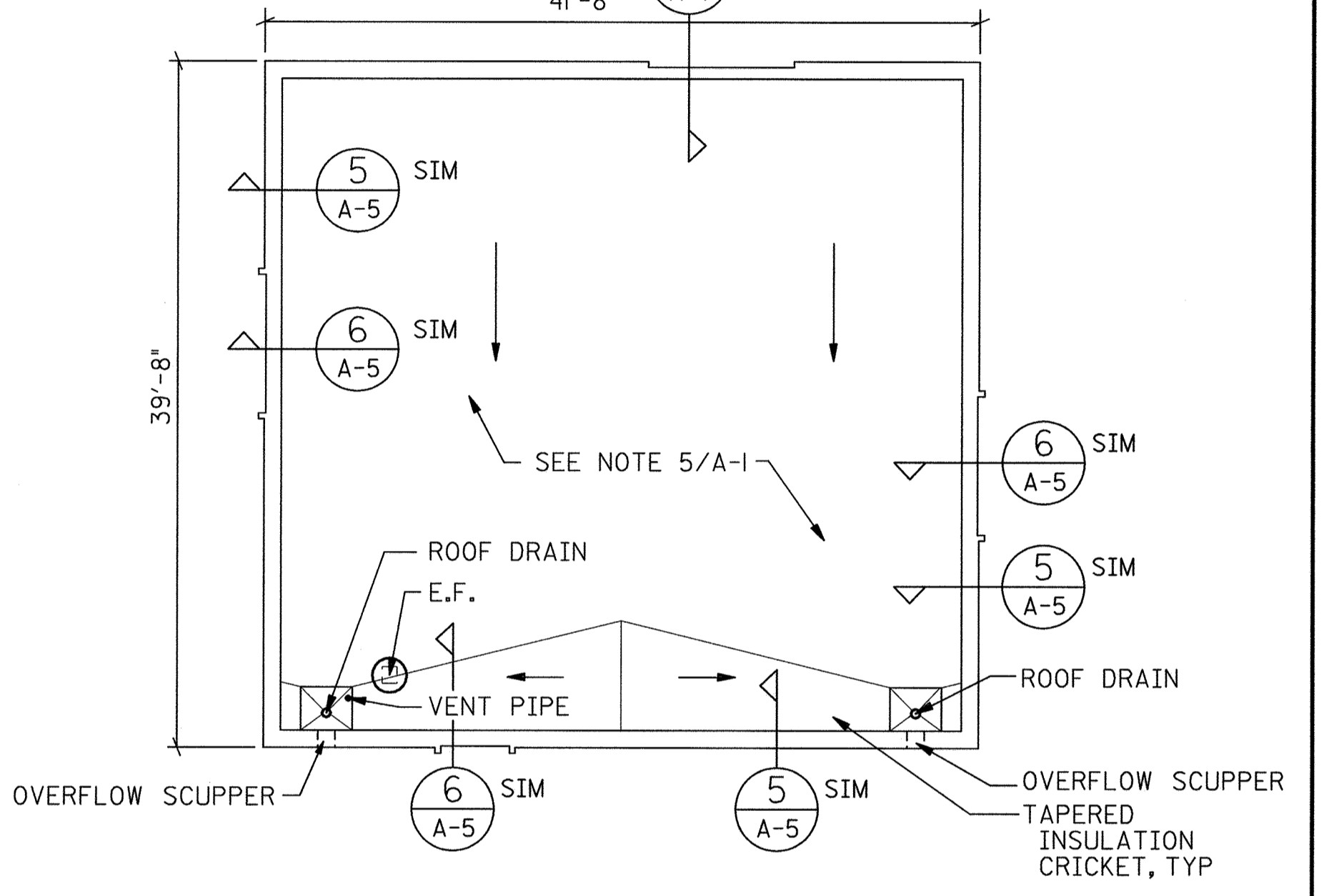
**ADMINISTRATION BUILDING  
ROOF PLAN**



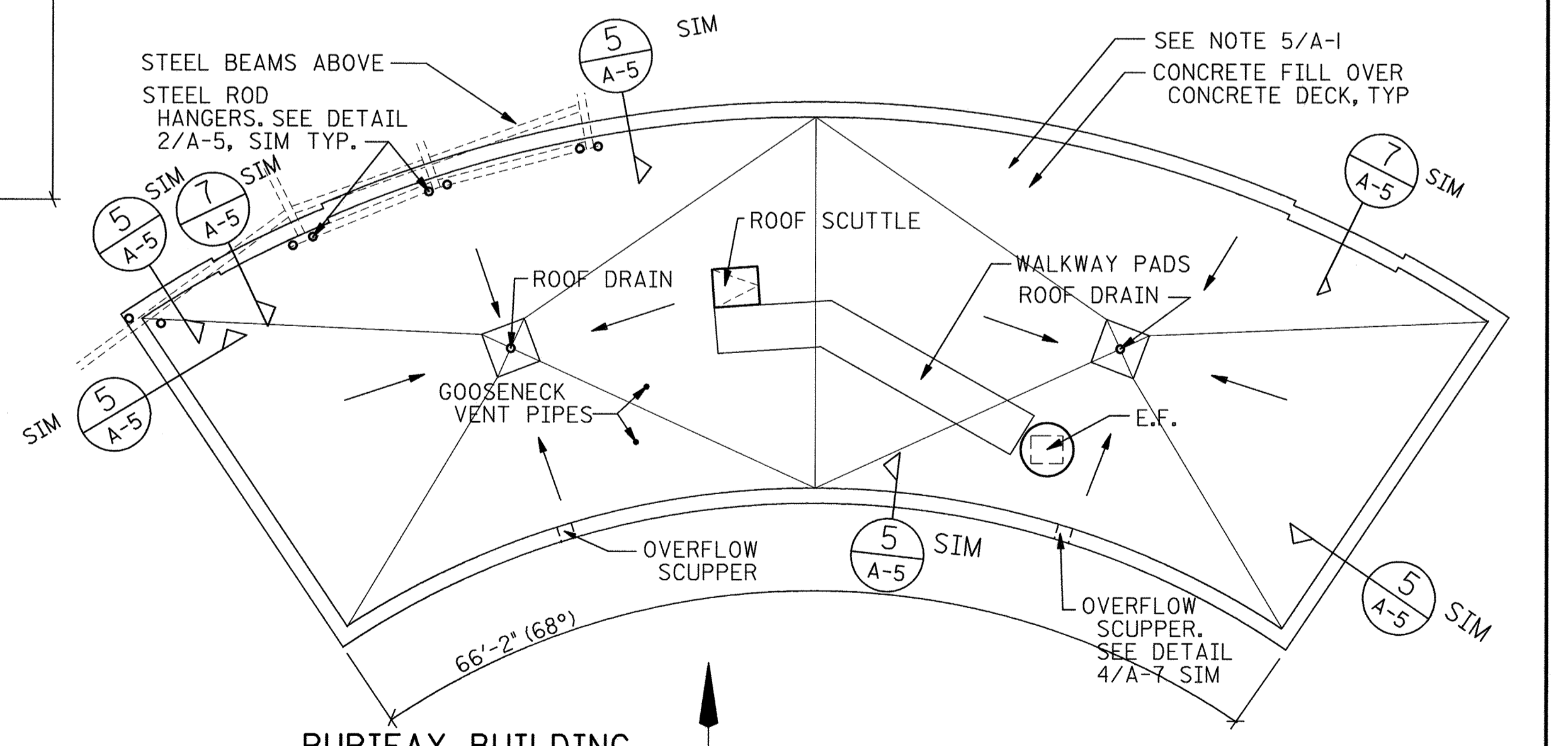
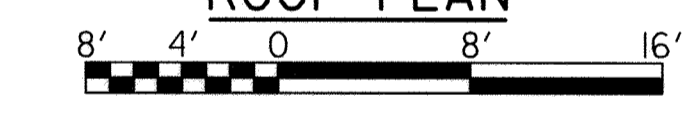
**GRIT BUILDING  
ROOF PLAN**



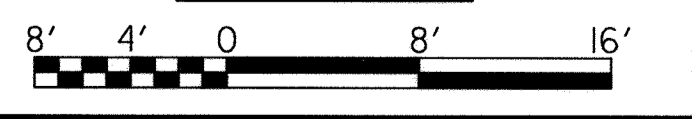
NOTE: THE ROOFING AT THE GRIT BUILDING CONTAINS ASBESTOS. SEE SPECIFICATIONS FOR HANDLING PROCEDURES



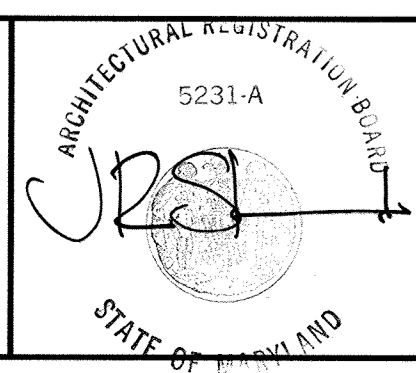
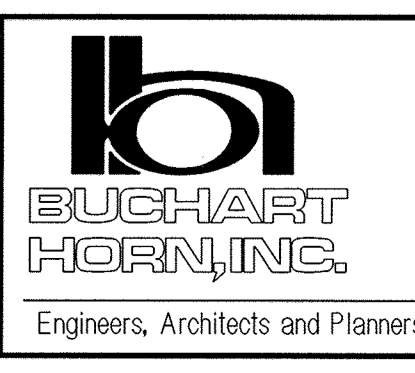
**PHOSTRIP BUILDING  
ROOF PLAN**



**PURIFAX BUILDING  
ROOF PLAN**



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

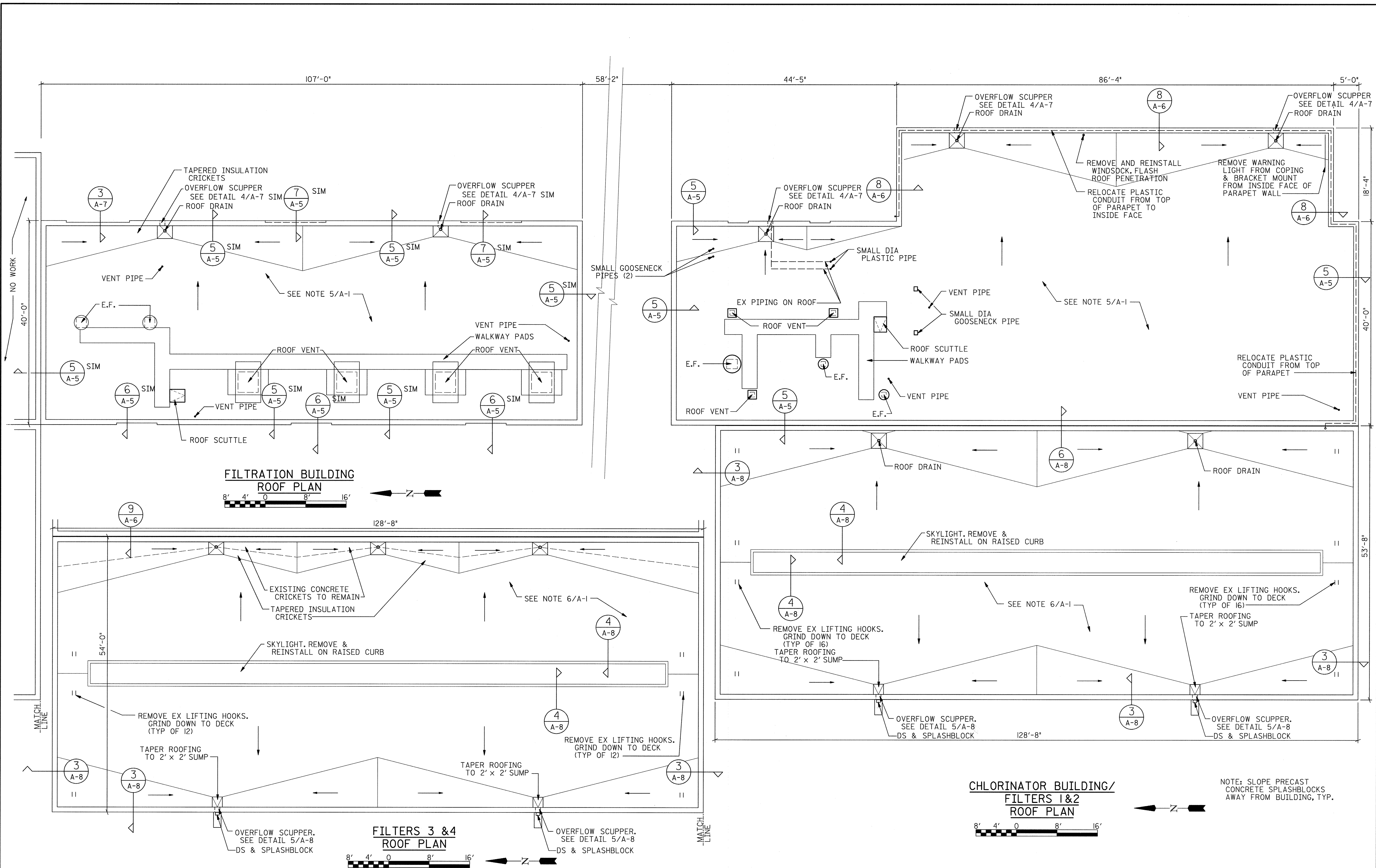


DES:				
DRN:				
CHK:				
DATE:	BY:	NO.	REVISION	DATE

ADMINISTRATION, GRIT  
PHOSTRIP, AND PURIFAX  
BUILDING ROOF PLANS

LITTLE PATUXENT WATER RECLAMATION PLANT  
REROOFING OF PLANT BUILDINGS  
CAPITAL PROJECT  
CONTRACT NO. S6153.PI  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 3 OF 9  
A-2



**FILTRATION BUILDING  
ROOF PLAN**

8' 4' 0 8' 16'

**FILTERS 3 & 4  
ROOF PLAN**

8' 4' 0 8' 16'

**CHLORINATOR BUILDING/  
FILTERS 1 & 2  
ROOF PLAN**

8' 4' 0 8' 16'

NOTE: SLOPE PRECAST  
CONCRETE SPLASHBLOCKS  
AWAY FROM BUILDING, TYP.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James P. Clark* 2/12/98 *Robert J. Berman* 2-12-98  
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF UTILITIES DATE

**BUCHART  
HORN, INC.**  
Engineers, Architects and Planners

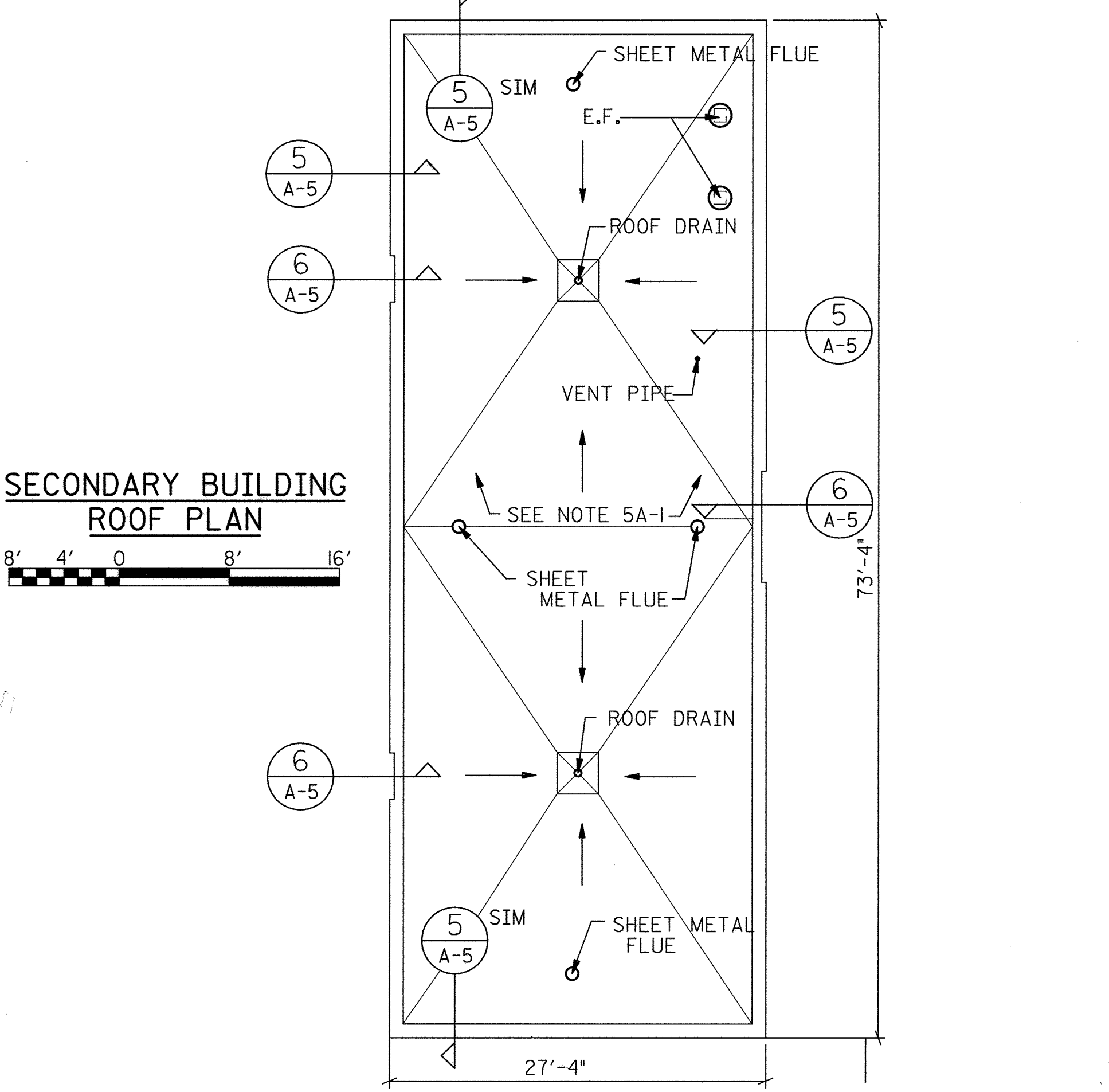
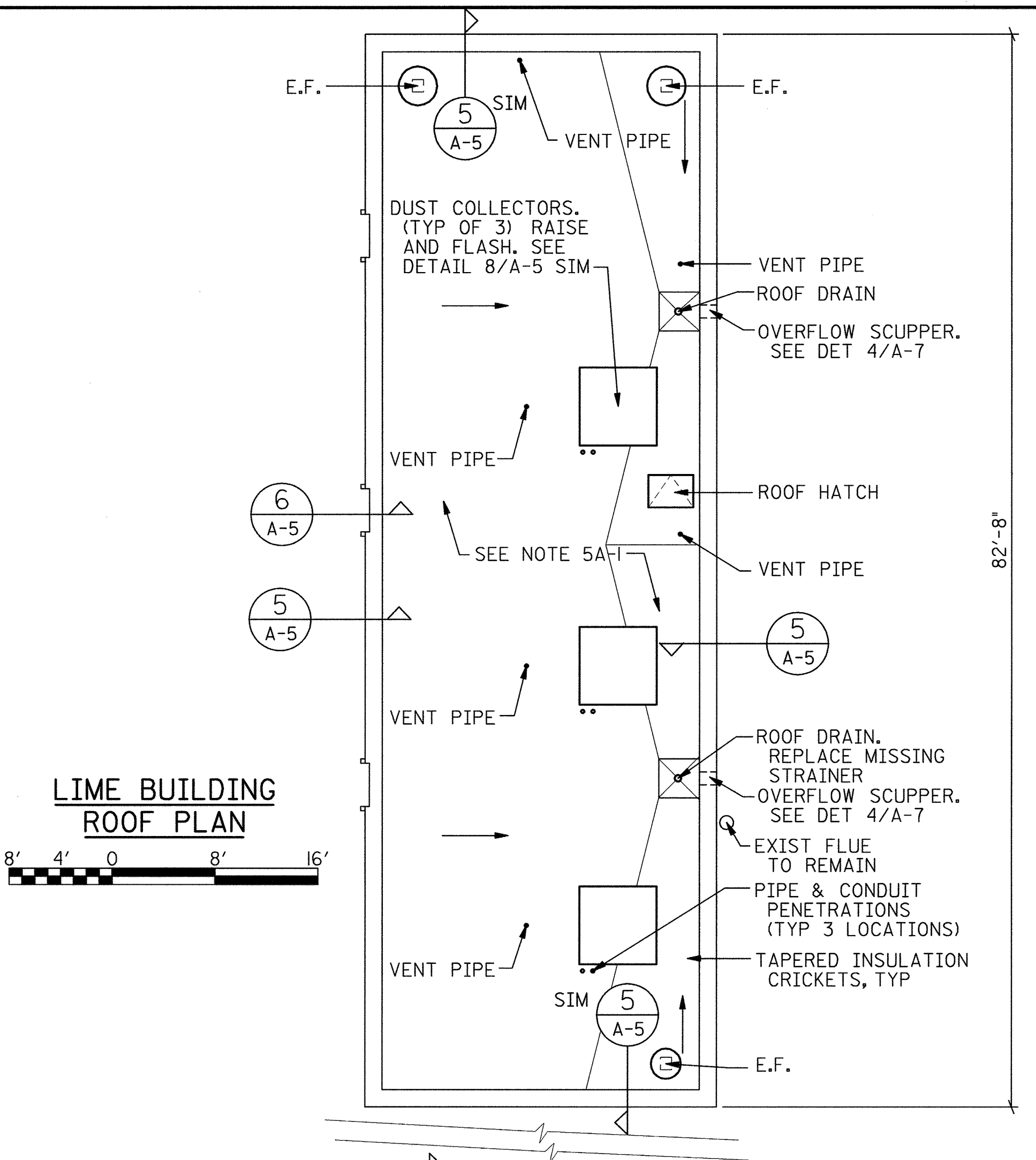
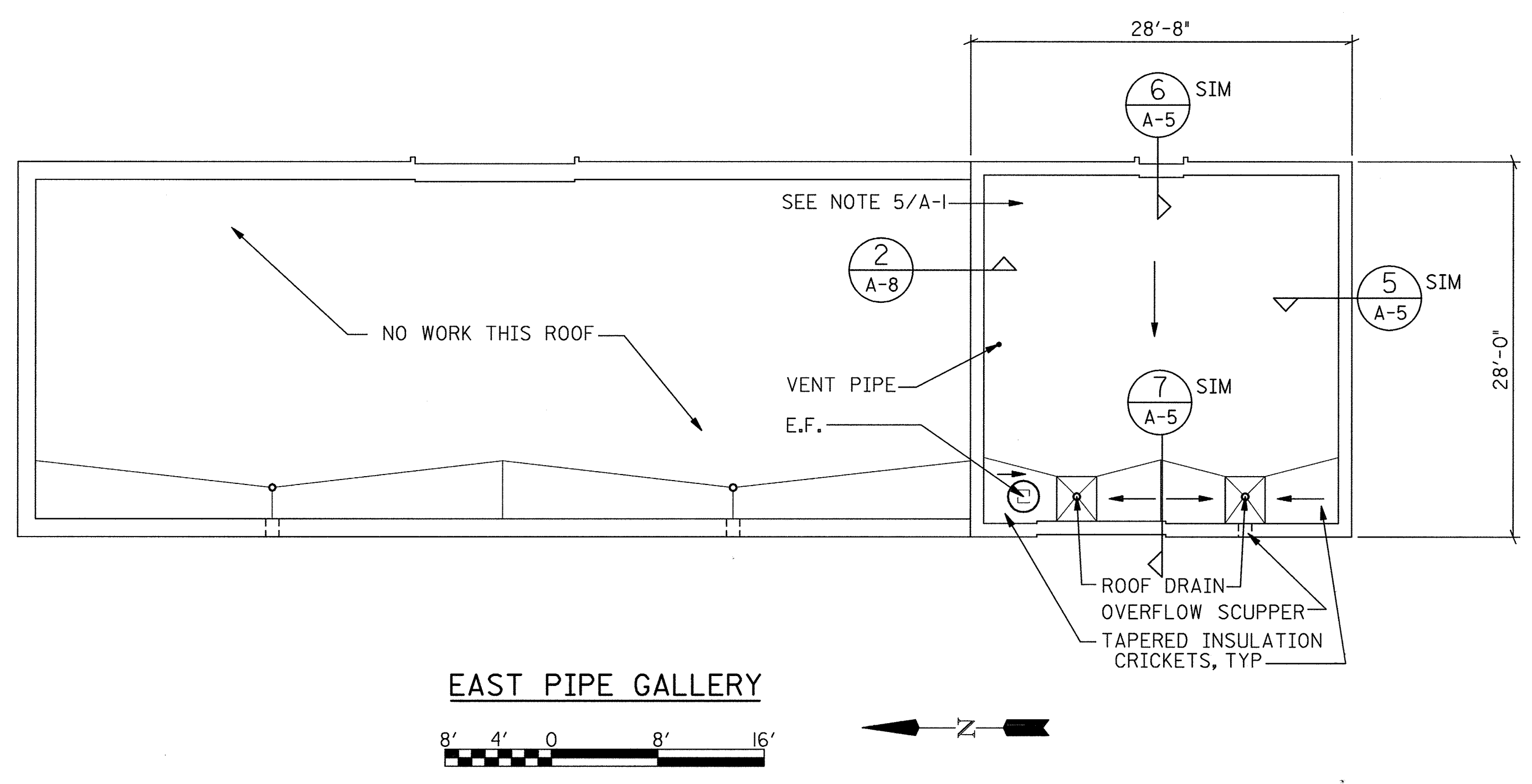
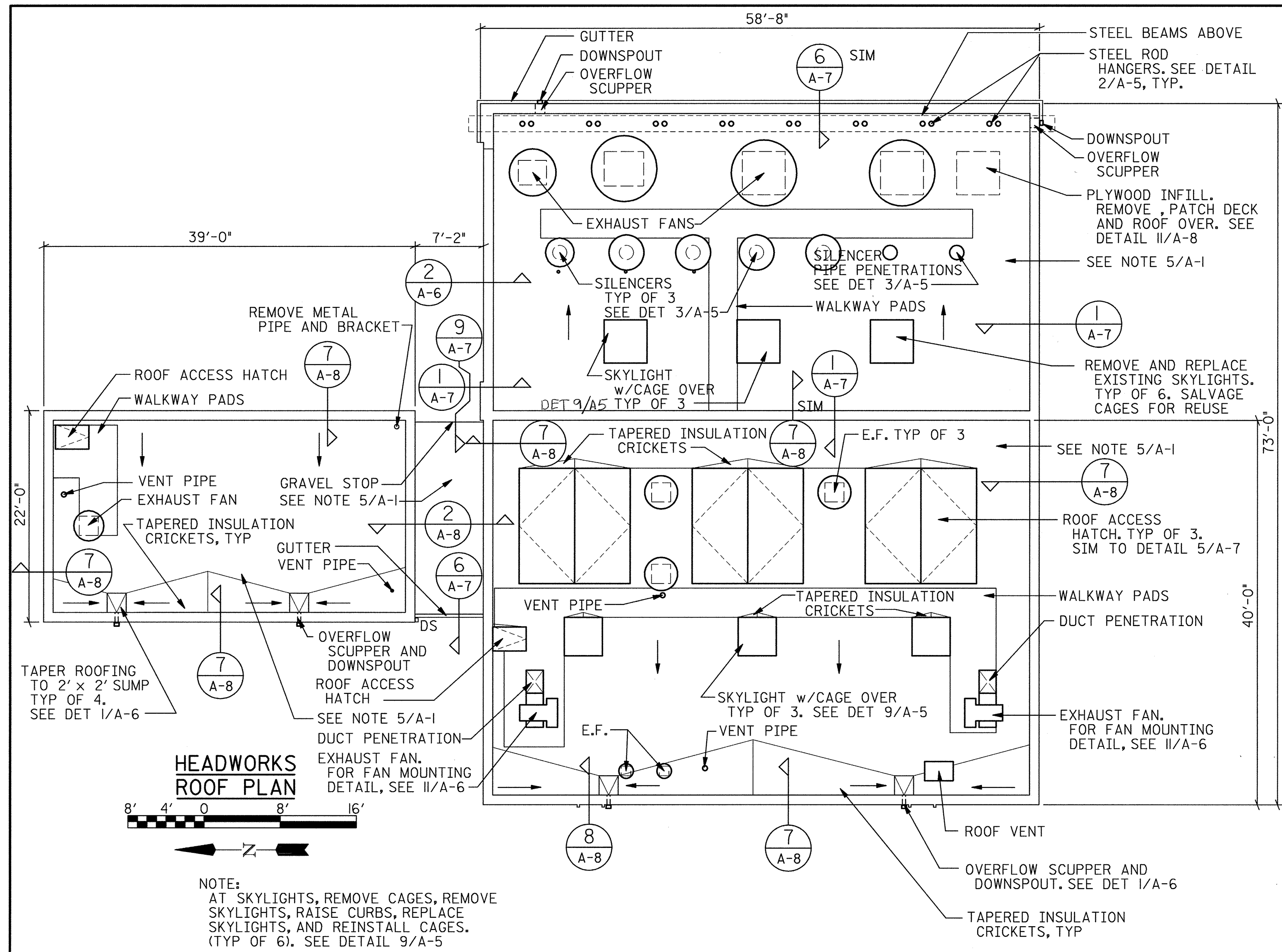
ARCHITECTURAL REGISTRATION BOARD  
5231-A  
*[Signature]*  
STATE OF MARYLAND

DES:	
DRN:	
CHK:	
DATE:	
BY NO.	
REVISION	
DATE	

FILTRATION AND  
DISINFECTION BUILDING  
ROOF PLANS

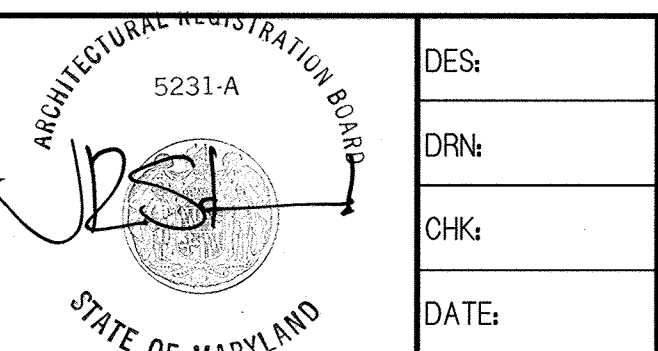
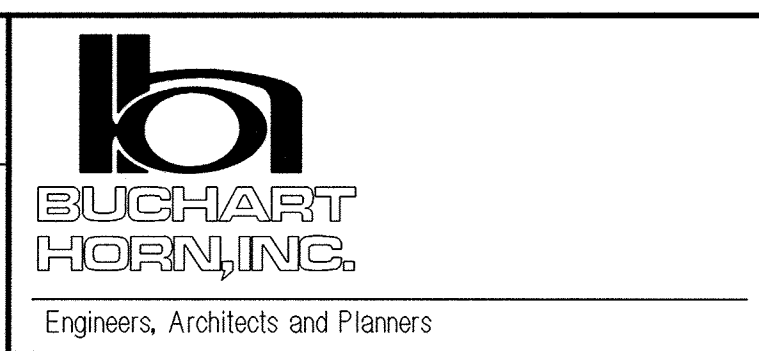
LITTLE PATUXENT WATER RECLAMATION PLANT  
REROOFING OF PLANT BUILDINGS  
CAPITAL PROJECT  
CONTRACT NO. S6153.PI  
HOWARD COUNTY, MARYLAND

SCALE  
AS  
SHOWN  
SHEET  
4 OF 9  
A-3



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James P. Lee* 2/16/98 *Robert J. Dunbar* 2-12-98  
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF UTILITIES DATE

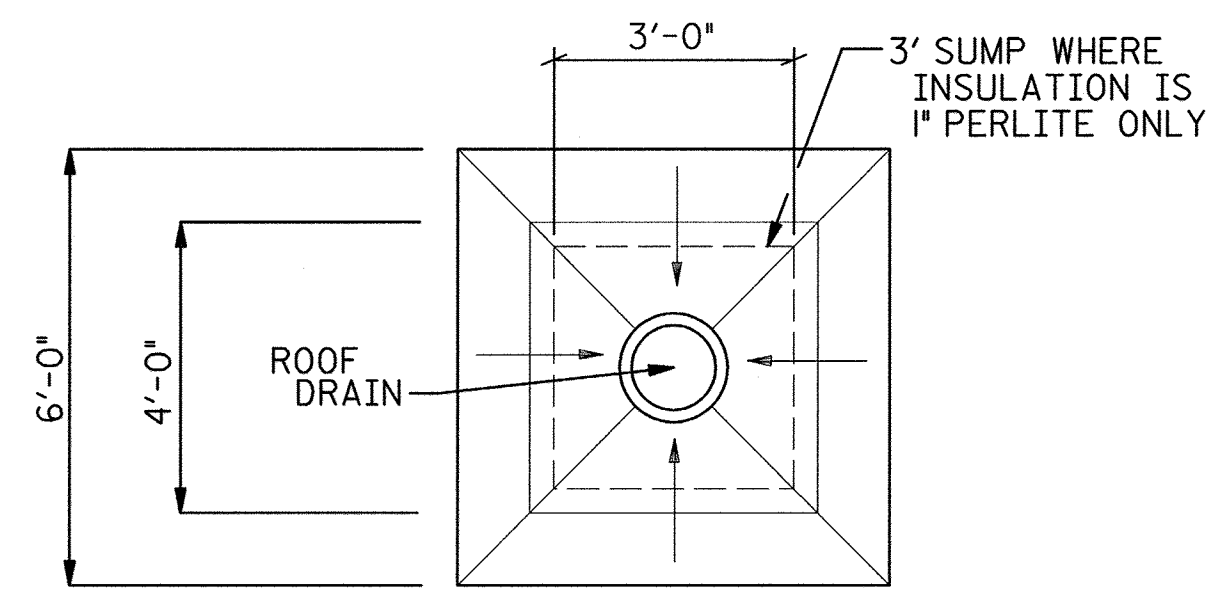


DES:				
DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

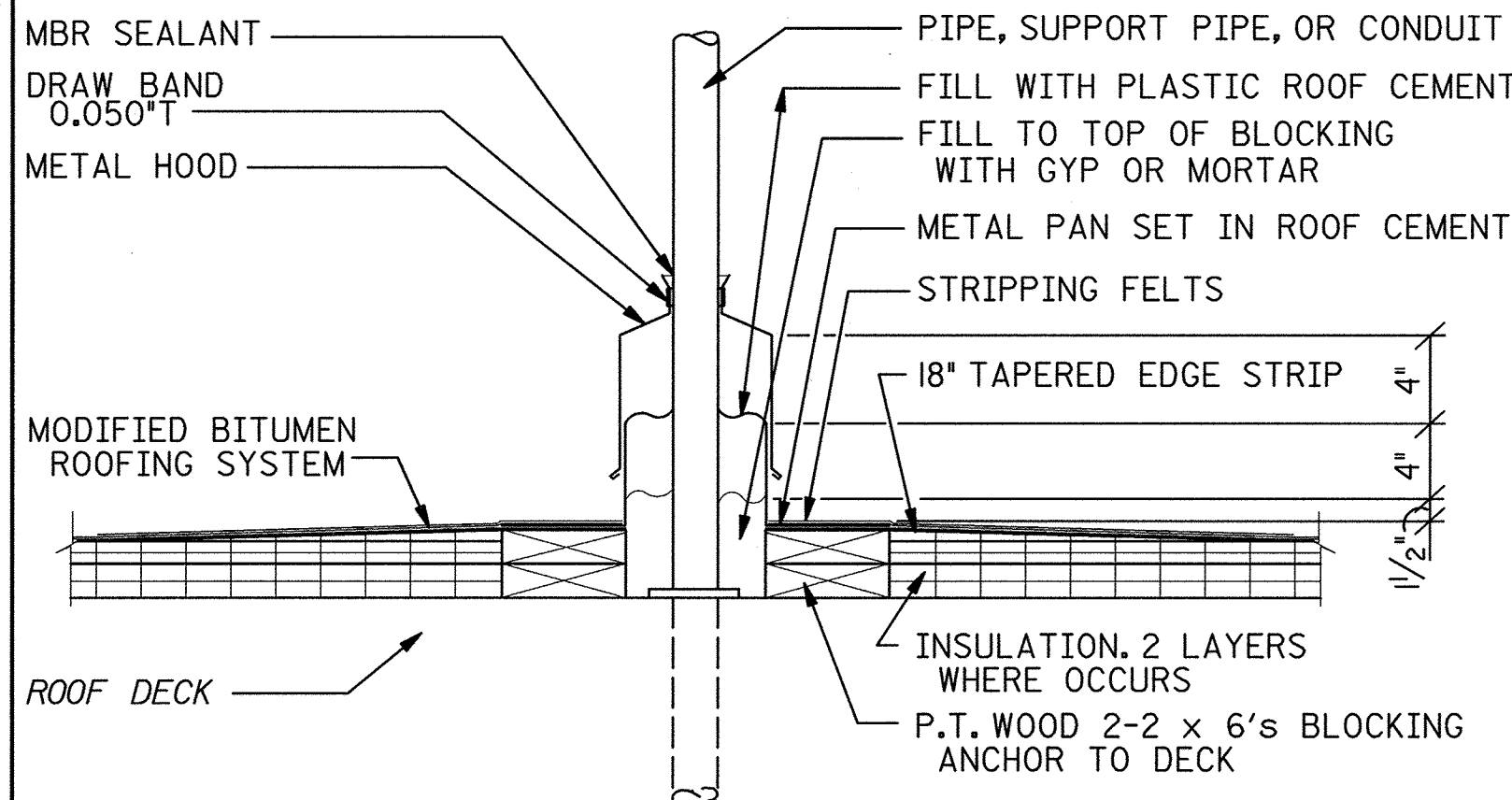
HEADWORKS, AIR INTAKE STRUCTURE, STAIR #2, EAST PIPE GALLERY, LIME AND SECONDARY BUILDING ROOF PLANS

LITTLE PATUXENT WATER RECLAMATION PLANT  
REROOFING OF PLANT BUILDINGS  
CAPITAL PROJECT  
CONTRACT NO. S6153.PI  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 5 OF 9  
A-4



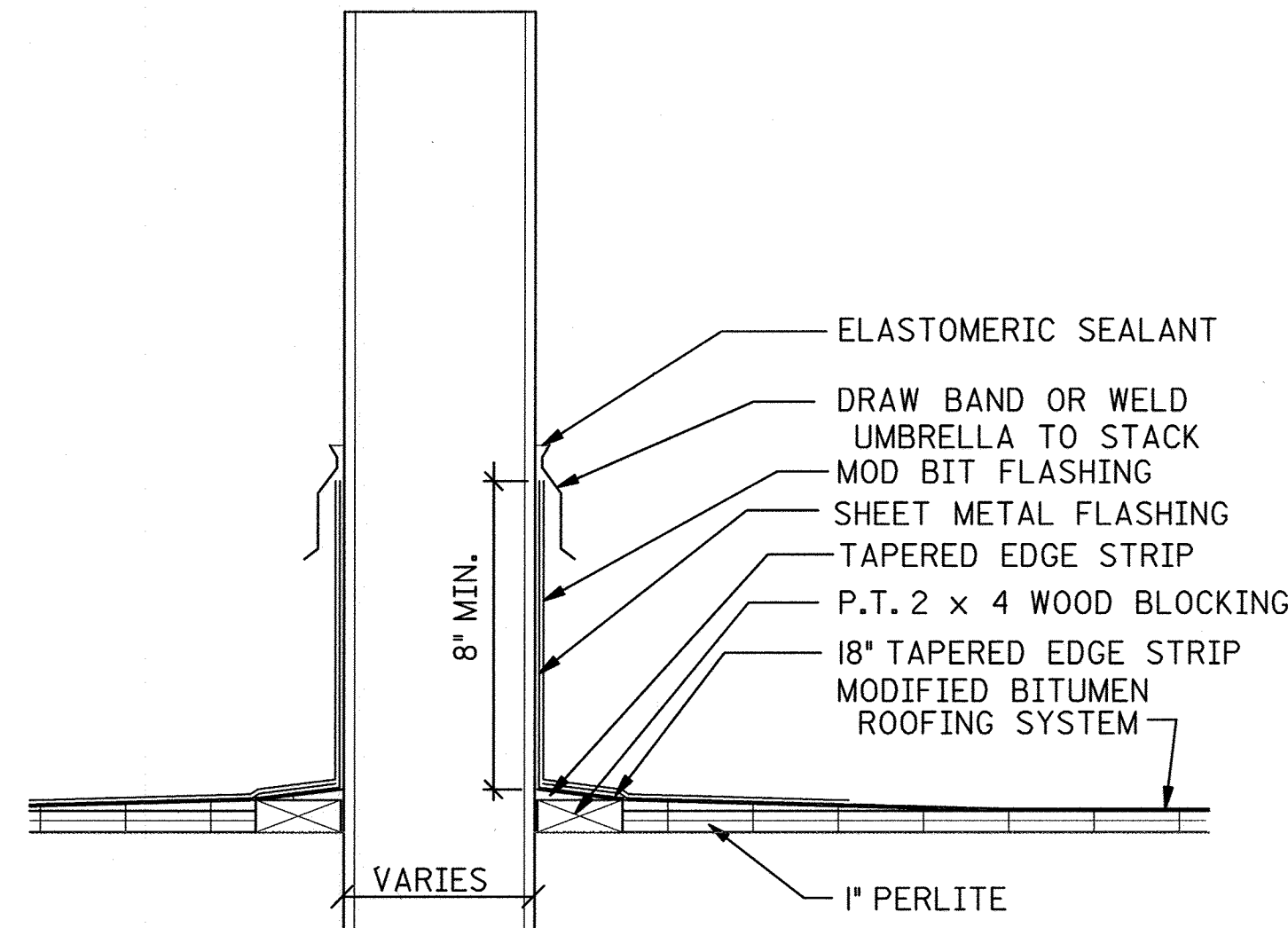
**ROOF DRAIN PLAN**



**PIPE OR ROD PENETRATION OR SUPPORT DETAIL**

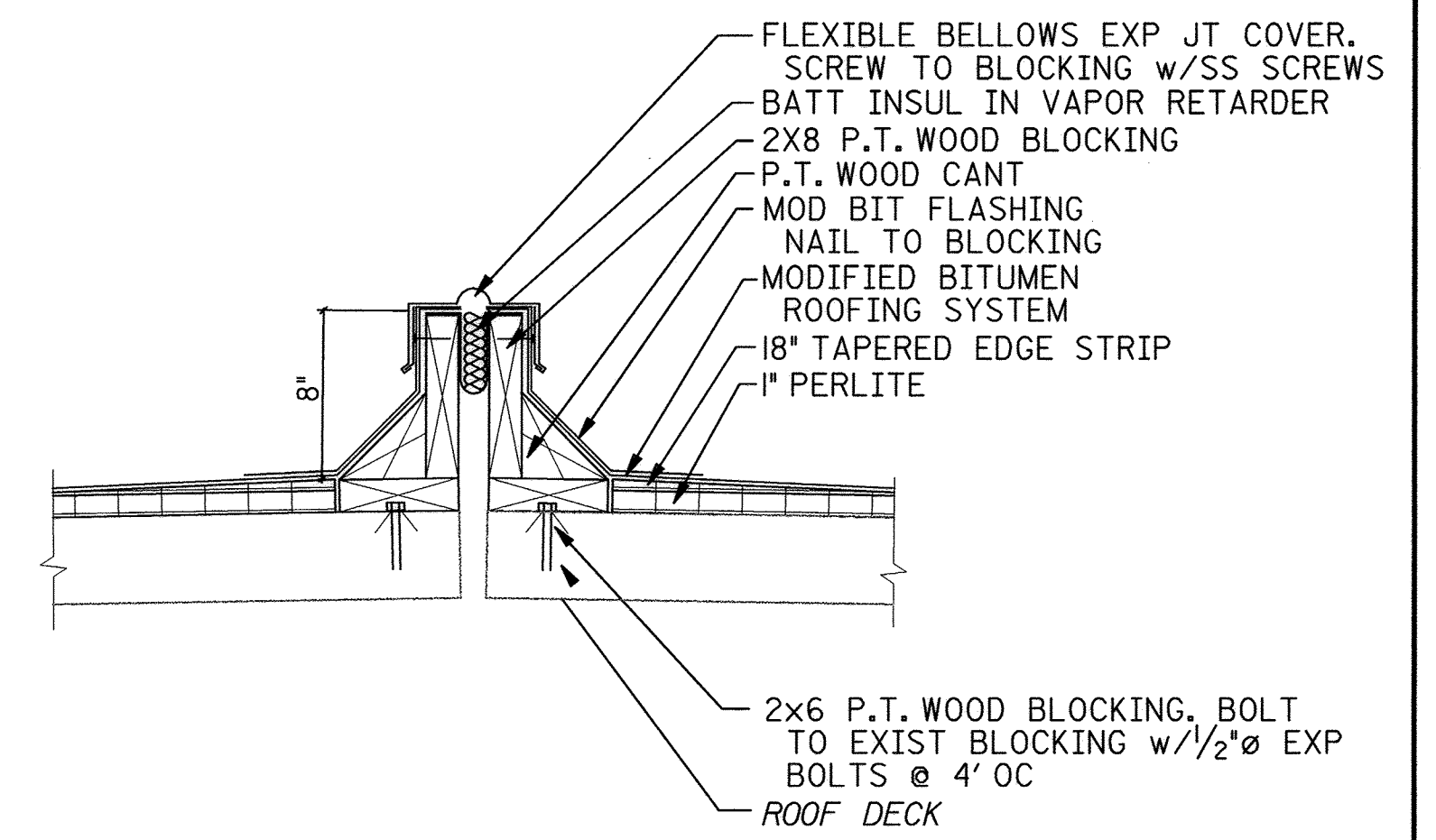
2  
A-1  
A-2  
A-4

NOTE: WHERE INSULATION IS 1" PERLITE ONLY, DELETE 1-2x6 WOOD BLOCKING



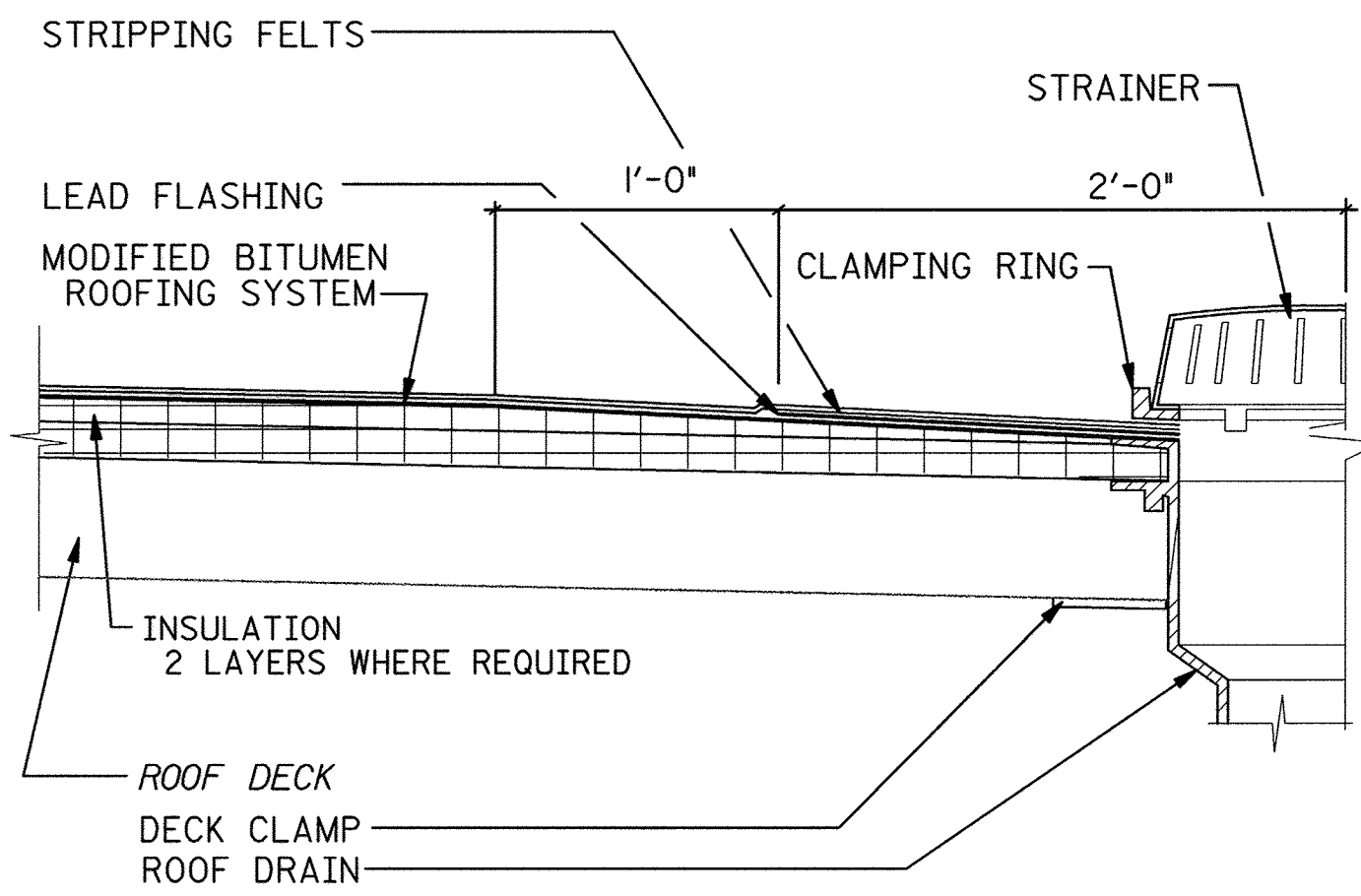
**SILENCER FLASHING DETAIL**

3  
A-1  
A-4



**EXPANSION JOINT DETAIL**

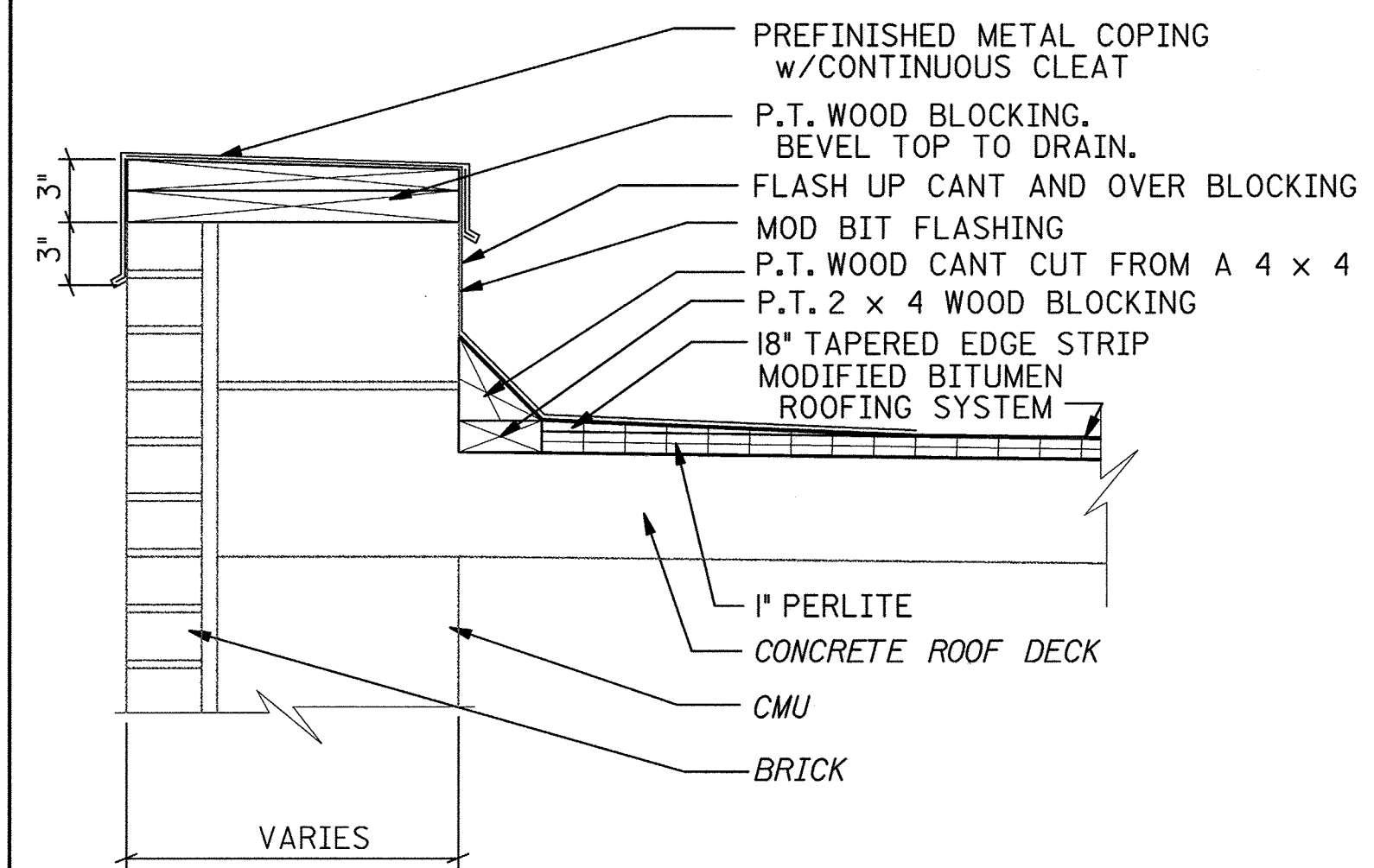
4  
A-1



**ROOF DRAIN DETAIL**

1  
A-1

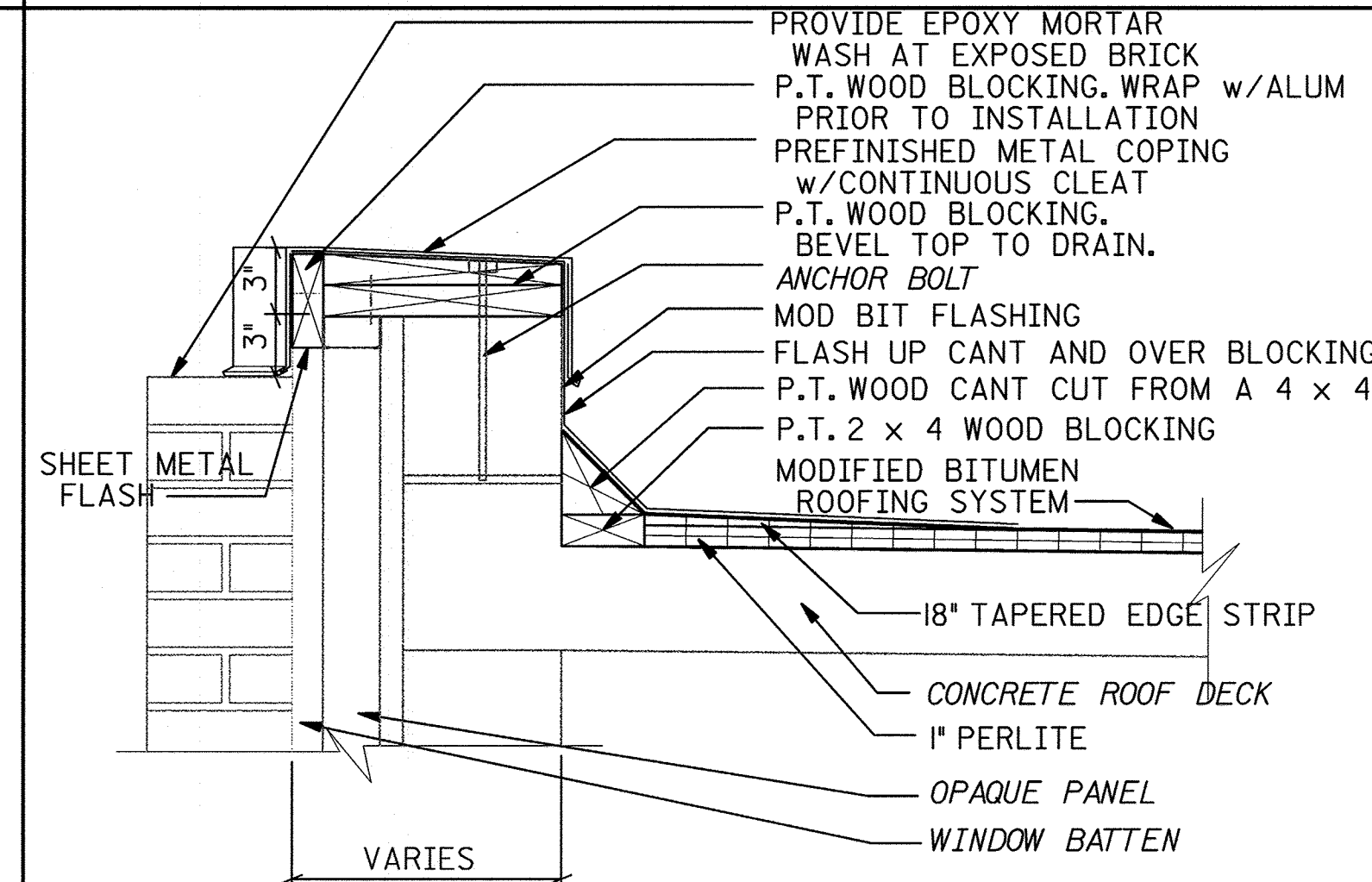
NOTE: WHERE ROOF DRAIN OCCURS IN DECKS INSULATED BY PERLITE ONLY, SUMP DRAINS IN AN AREA 3' x 3', TAPER PERLITE TO DRAIN.



**PARAPET DETAIL**

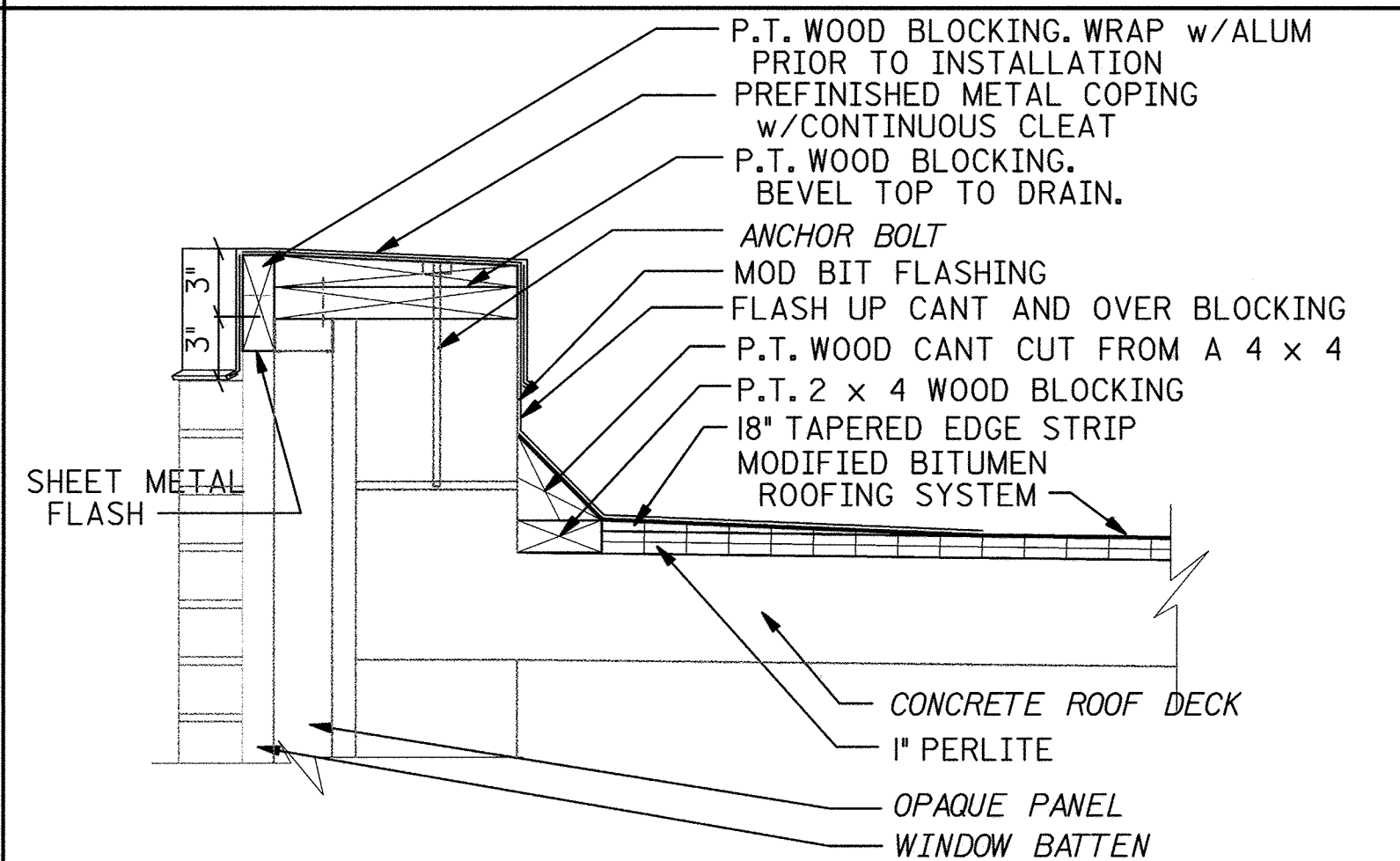
5  
A-4  
A-3  
A-2  
A-1

NOTE: AT HEADWORKS BUILDING PROVIDE 2-2x4 P.T. BLOCKING BELOW CANT



**PARAPET DETAIL**

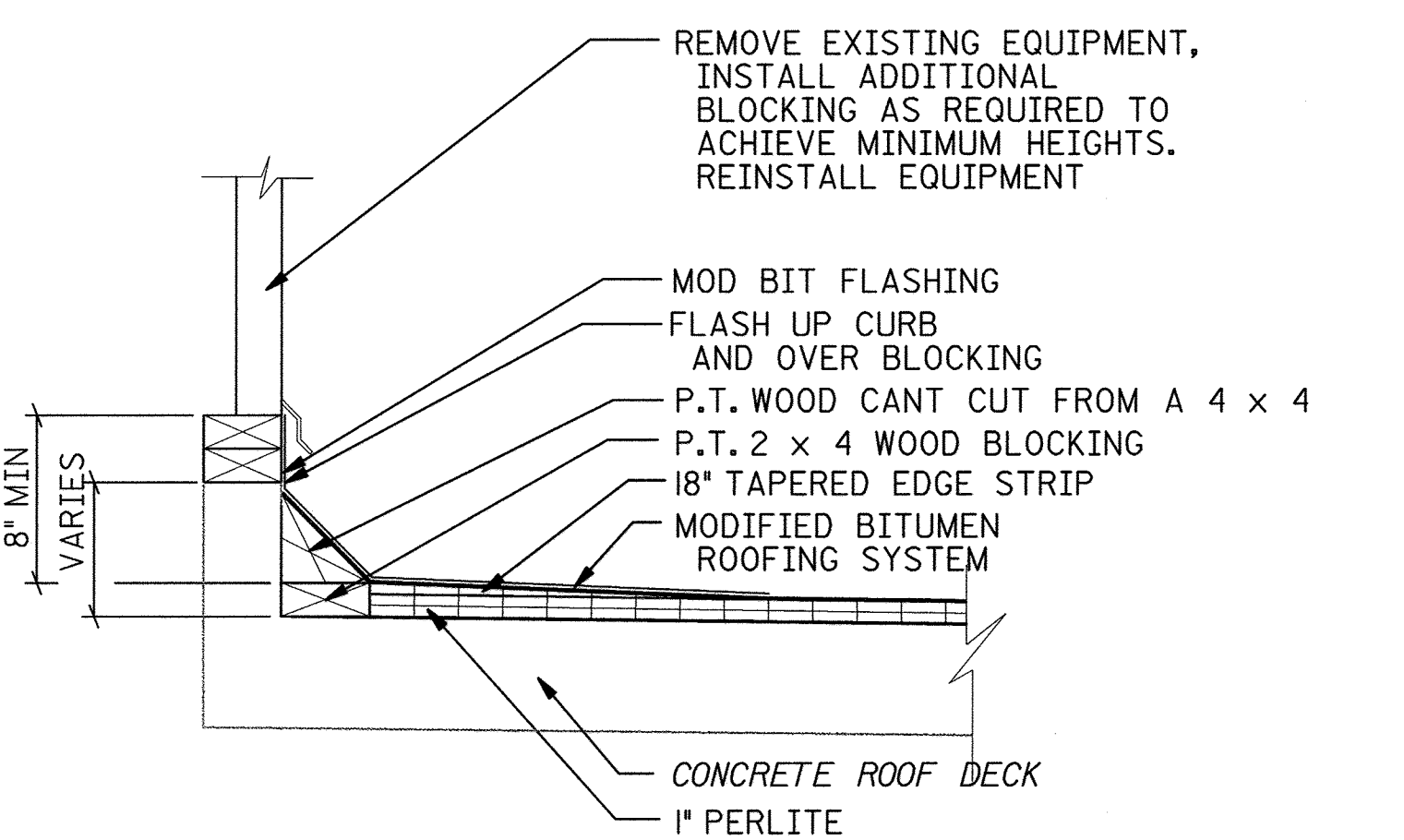
6  
A-4  
A-2  
A-3



**PARAPET DETAIL**

7  
A-4  
A-2  
A-3

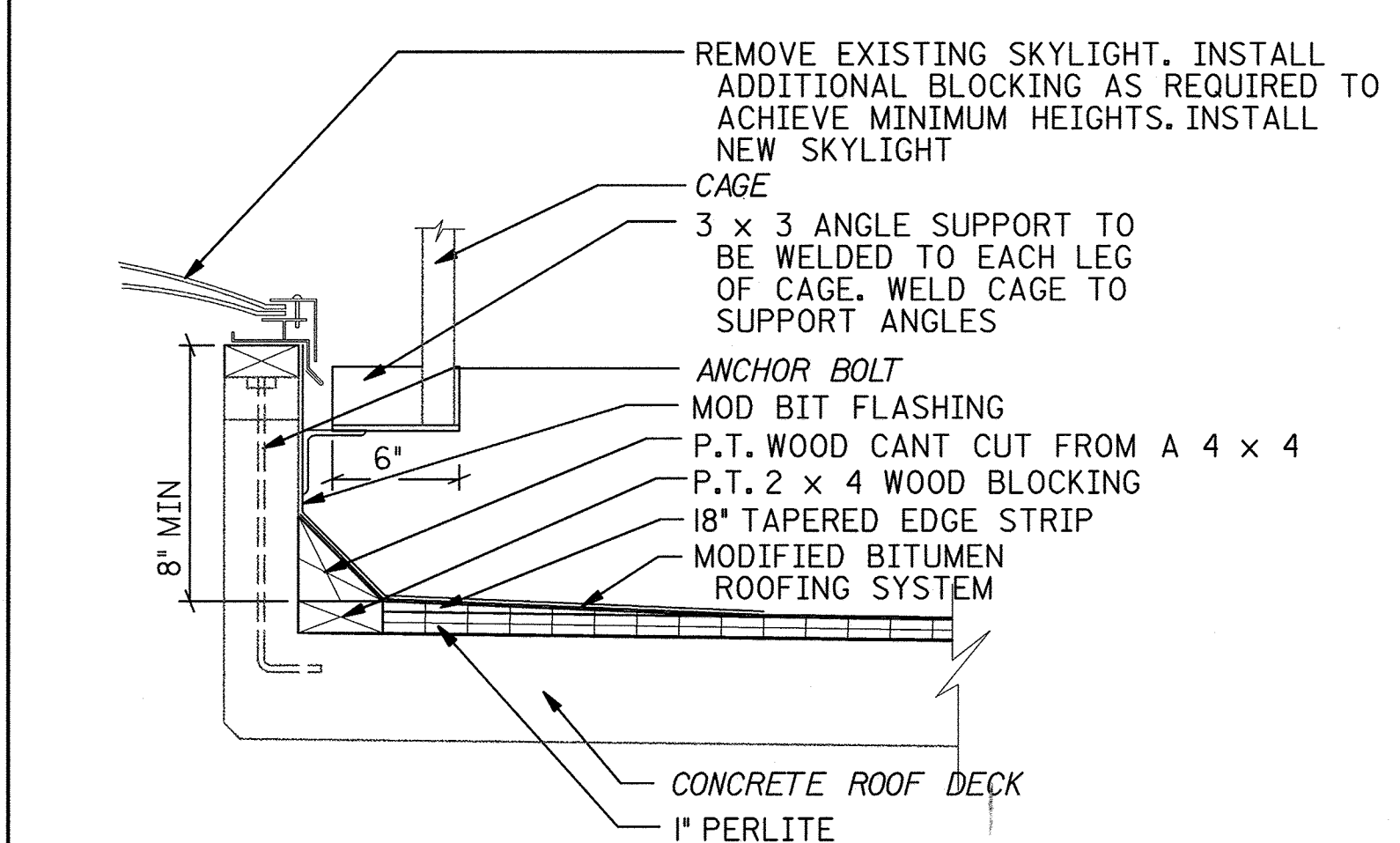
NOTE: SIMILAR CONDITION OCCURS AT PURIFAX BUILDING AT METAL WALL PANELS



**EQUIPMENT FLASHING DETAIL**

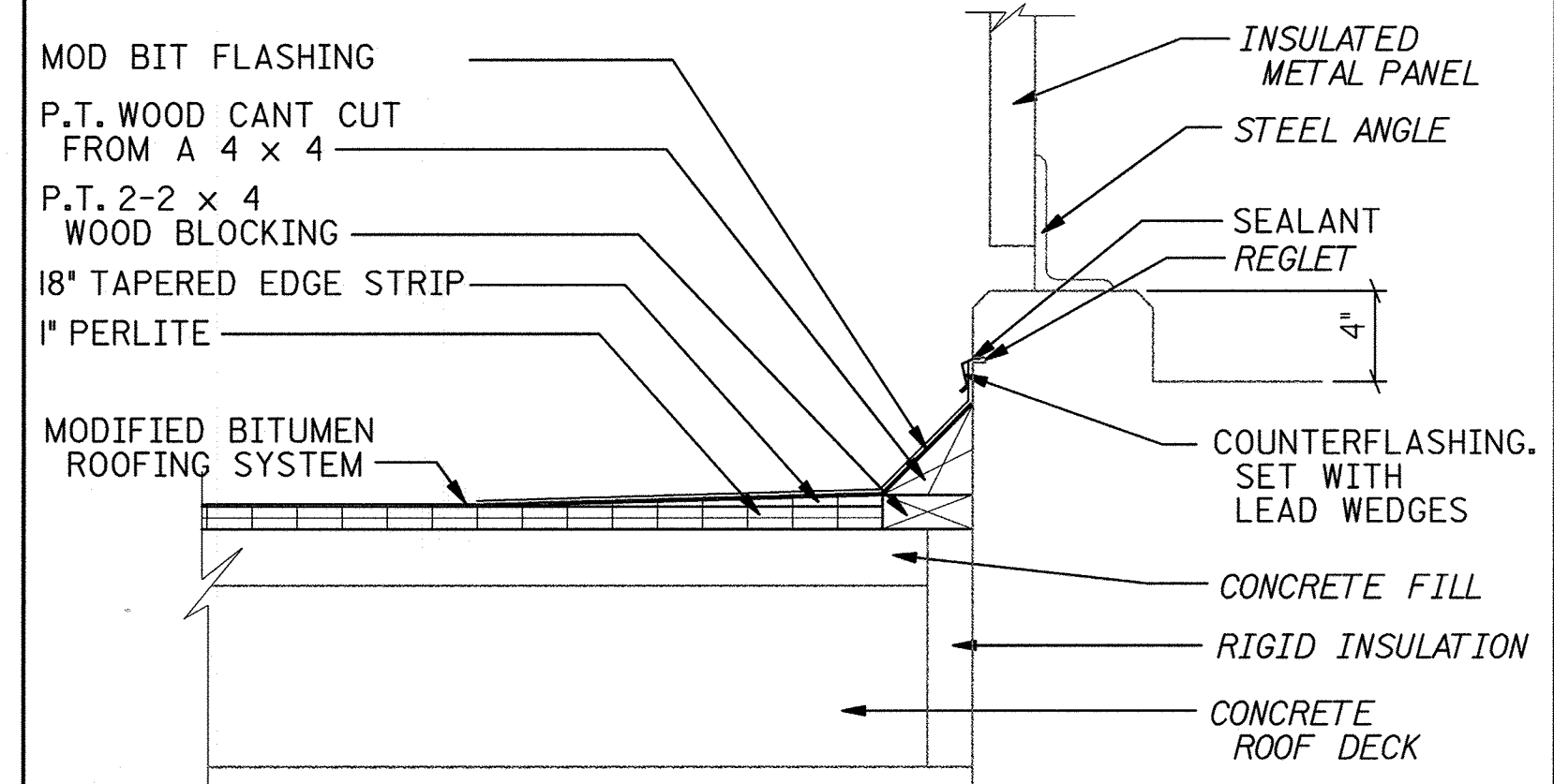
8  
A-1  
A-2  
A-4

NOTE: WHERE THIS DETAIL EXISTS AT AREA WHERE POLYISO INSULATION IS SPECIFIED, ADD 1-2x4 P.T. BLOCKING ALL AROUND



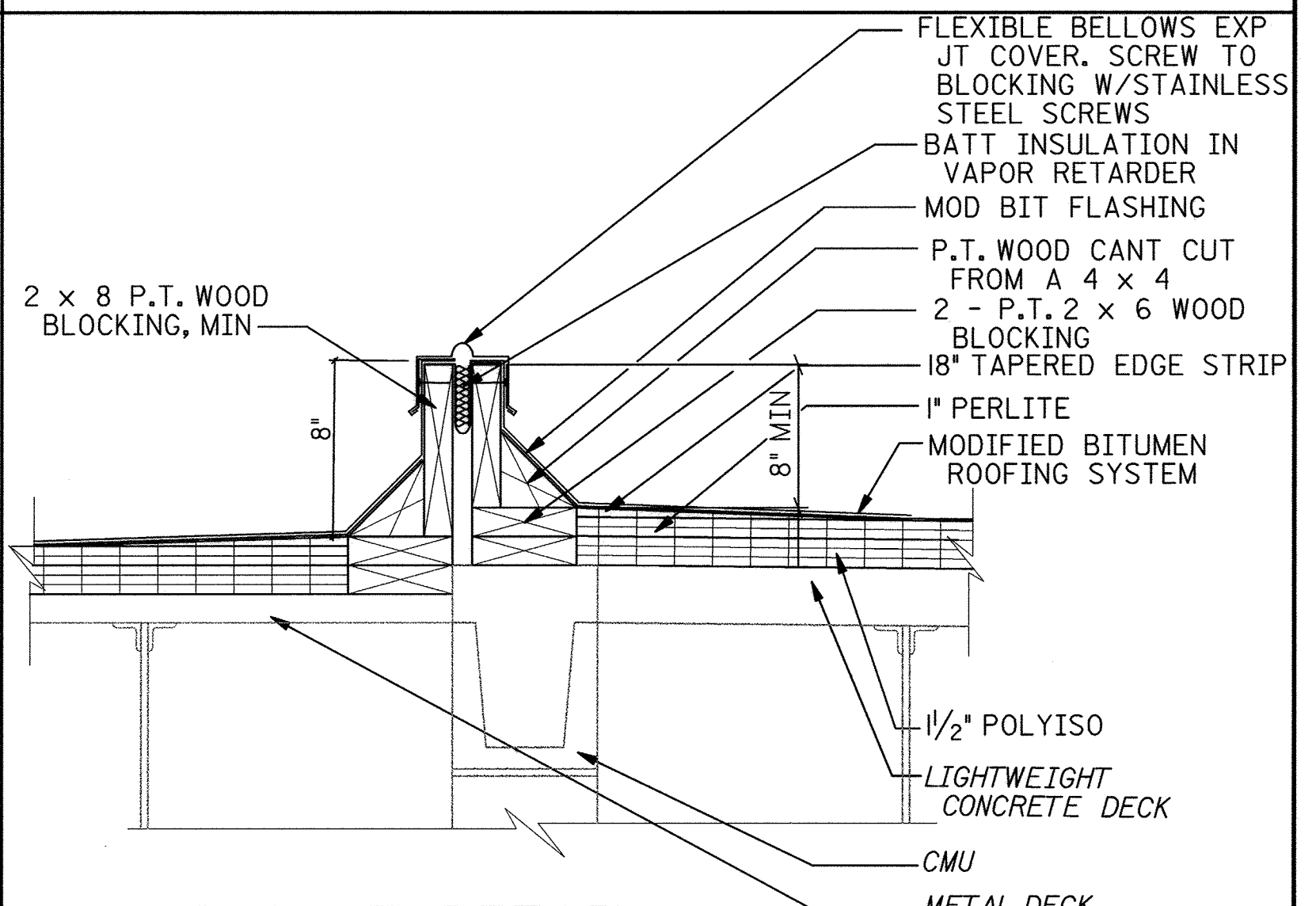
**TYPICAL SKYLIGHT DETAIL**

9  
A-1  
A-2  
A-4



**VERTICAL WALL DETAIL**

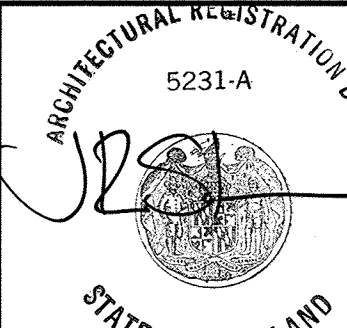
10  
A-1



**EXP JT DETAIL**

11  
A-2

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

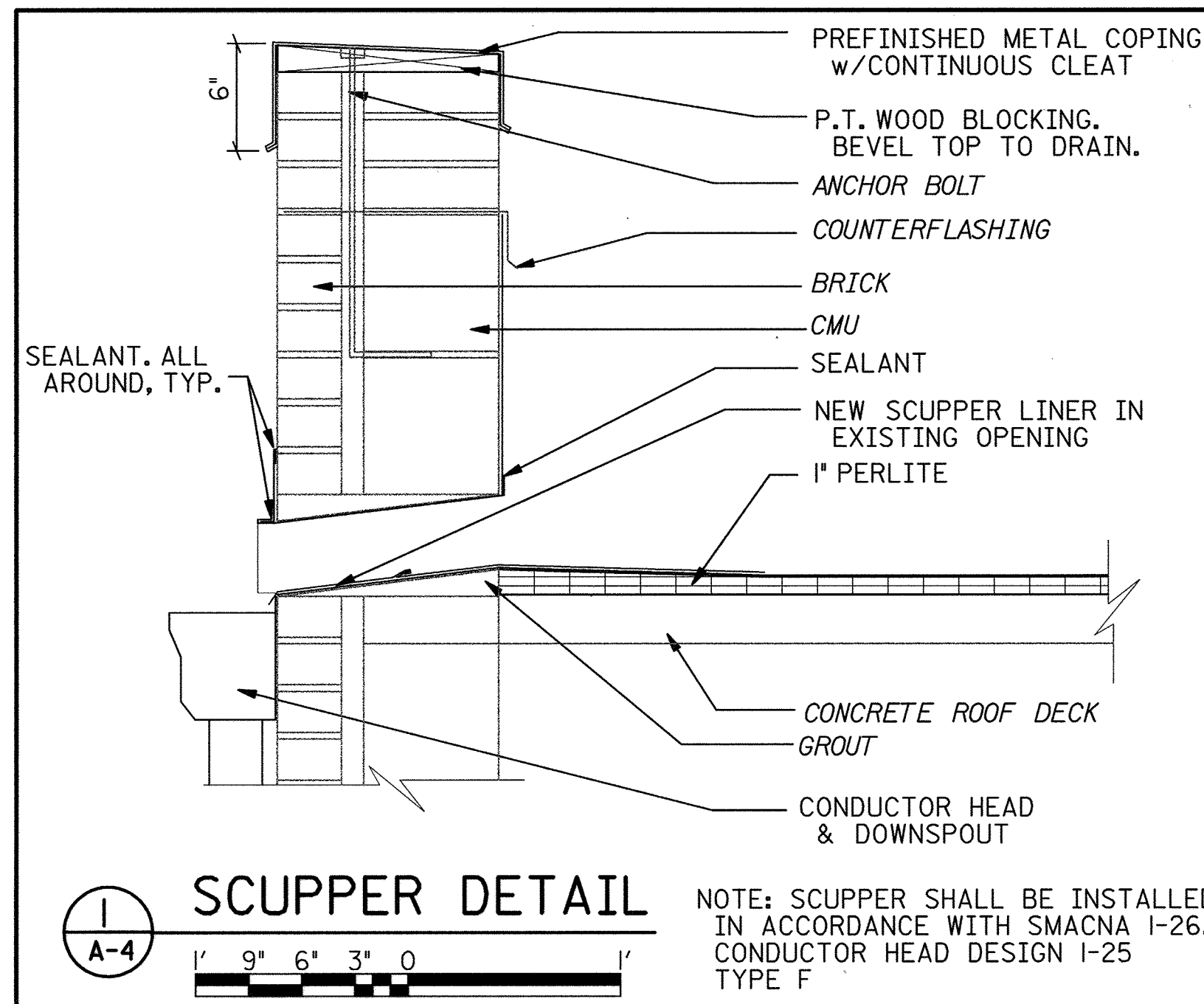


DES:	
DRN:	
CHK:	
DATE:	
BY:	NO.
REVISION:	DATE

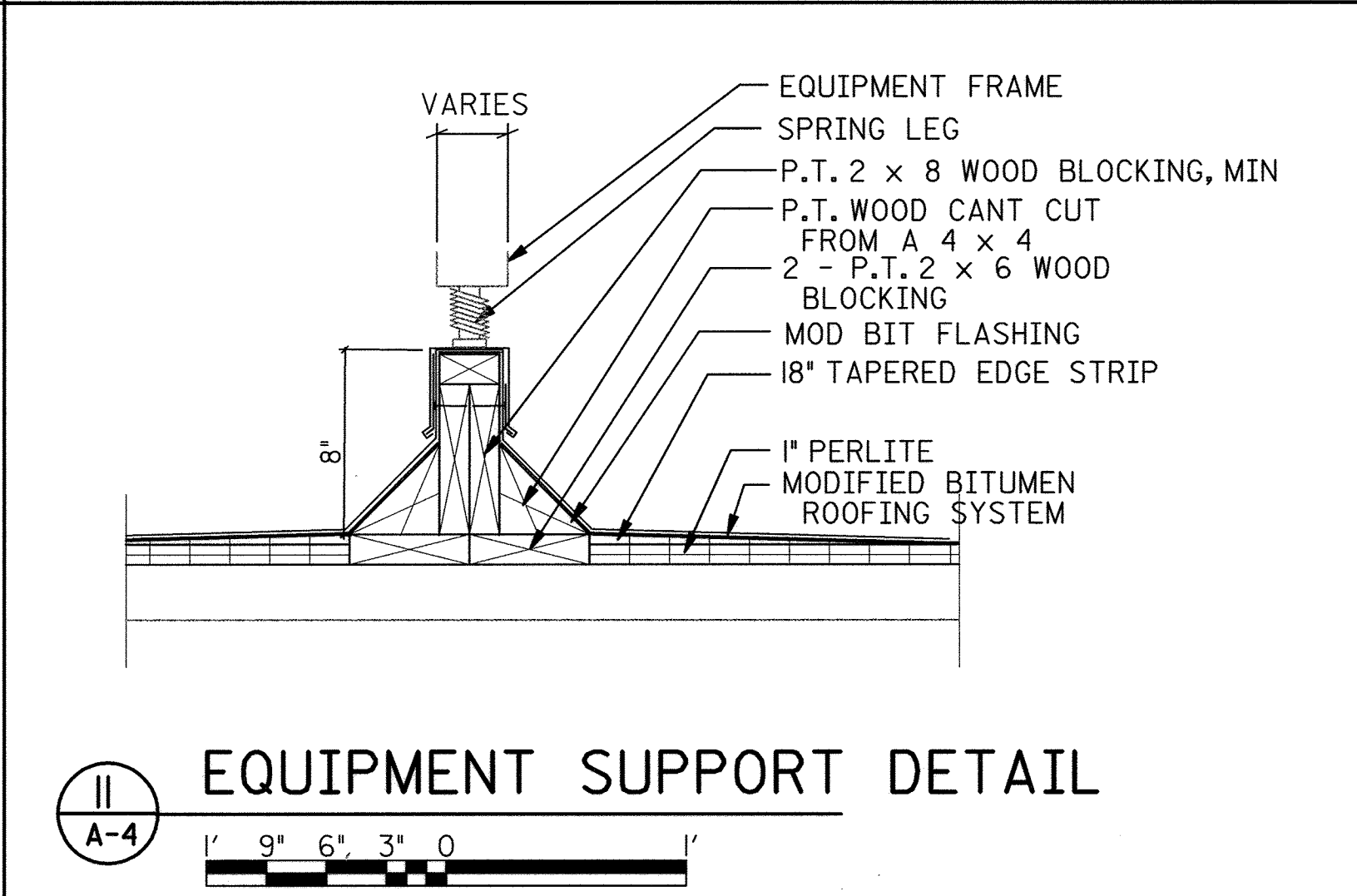
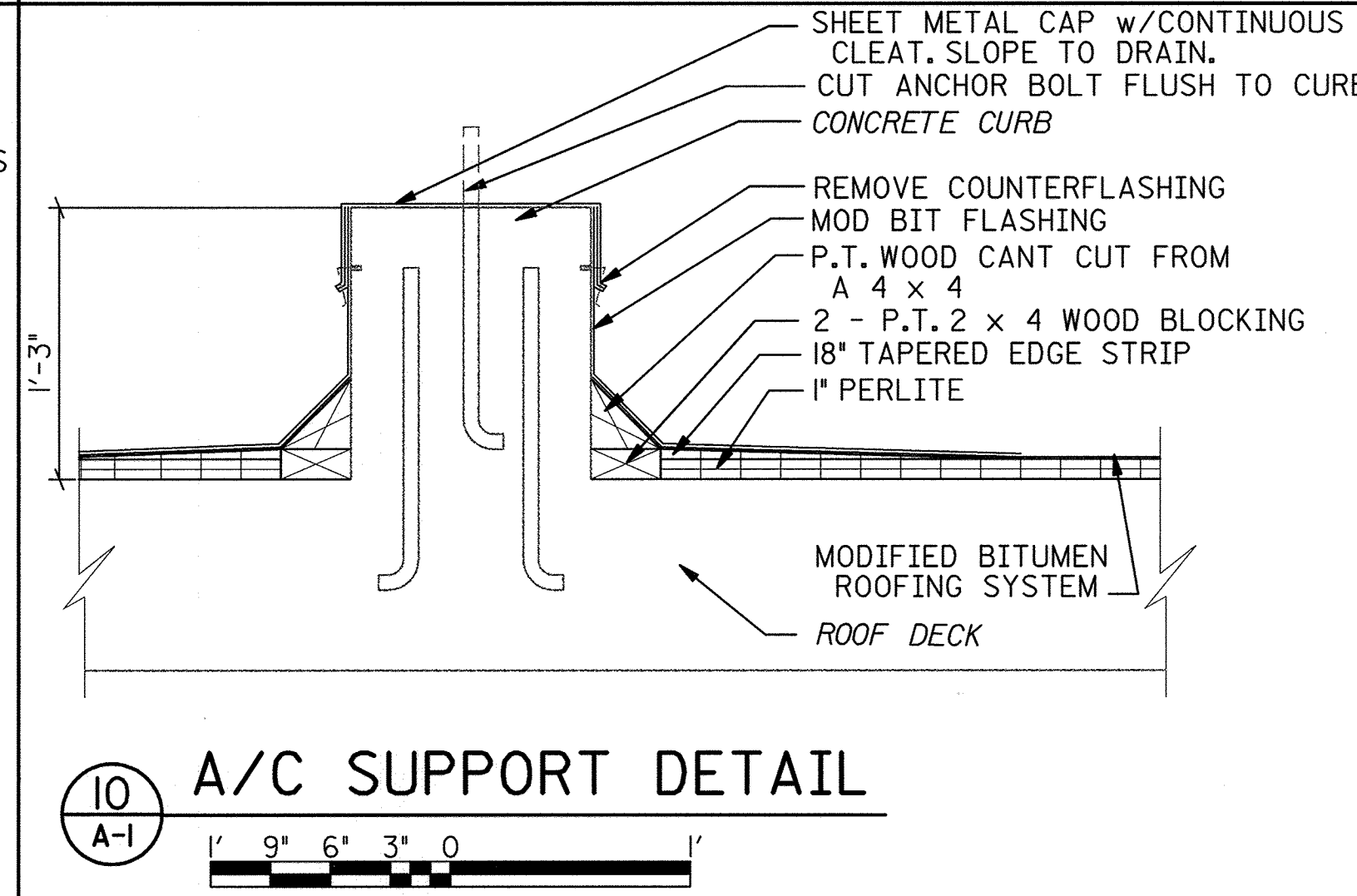
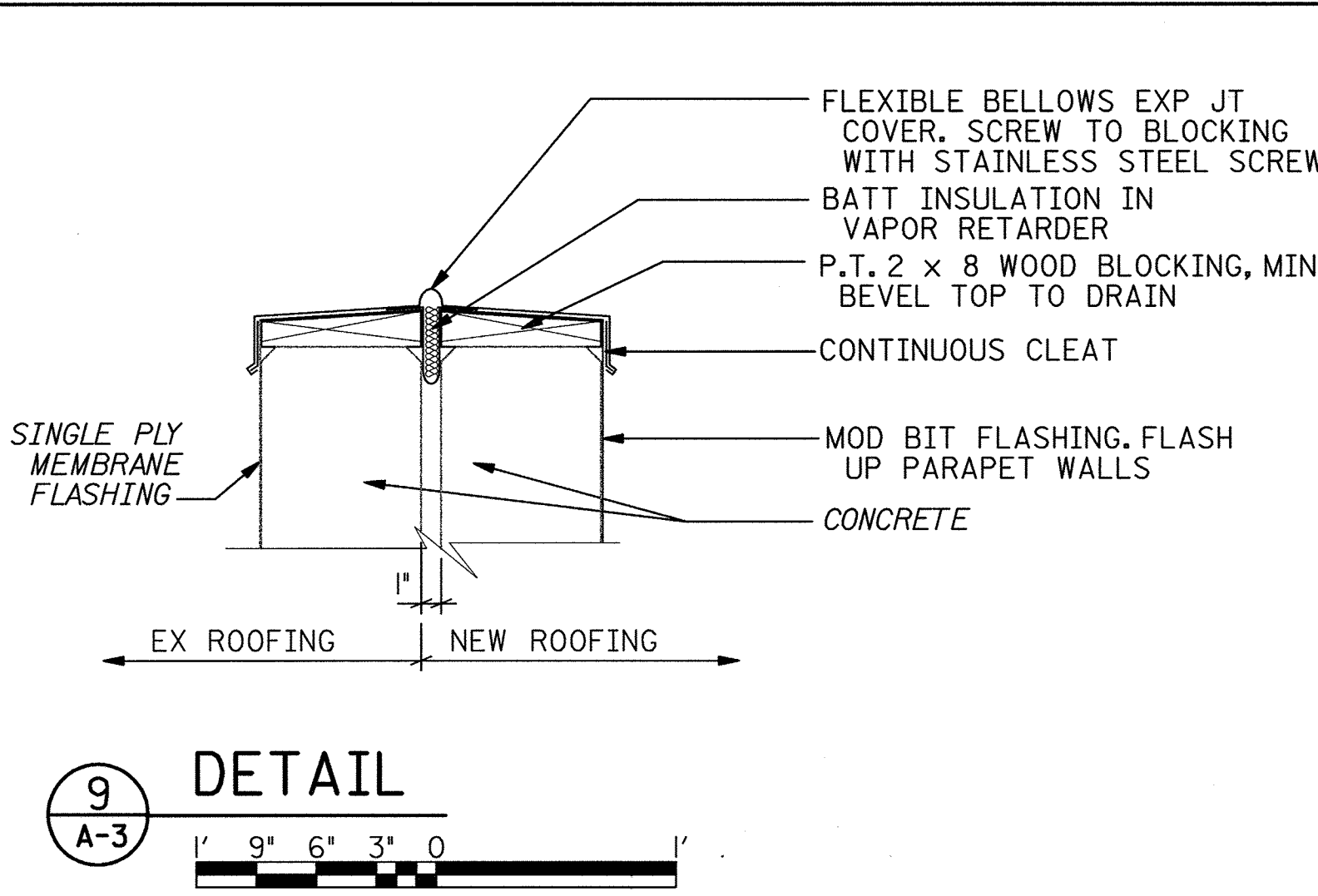
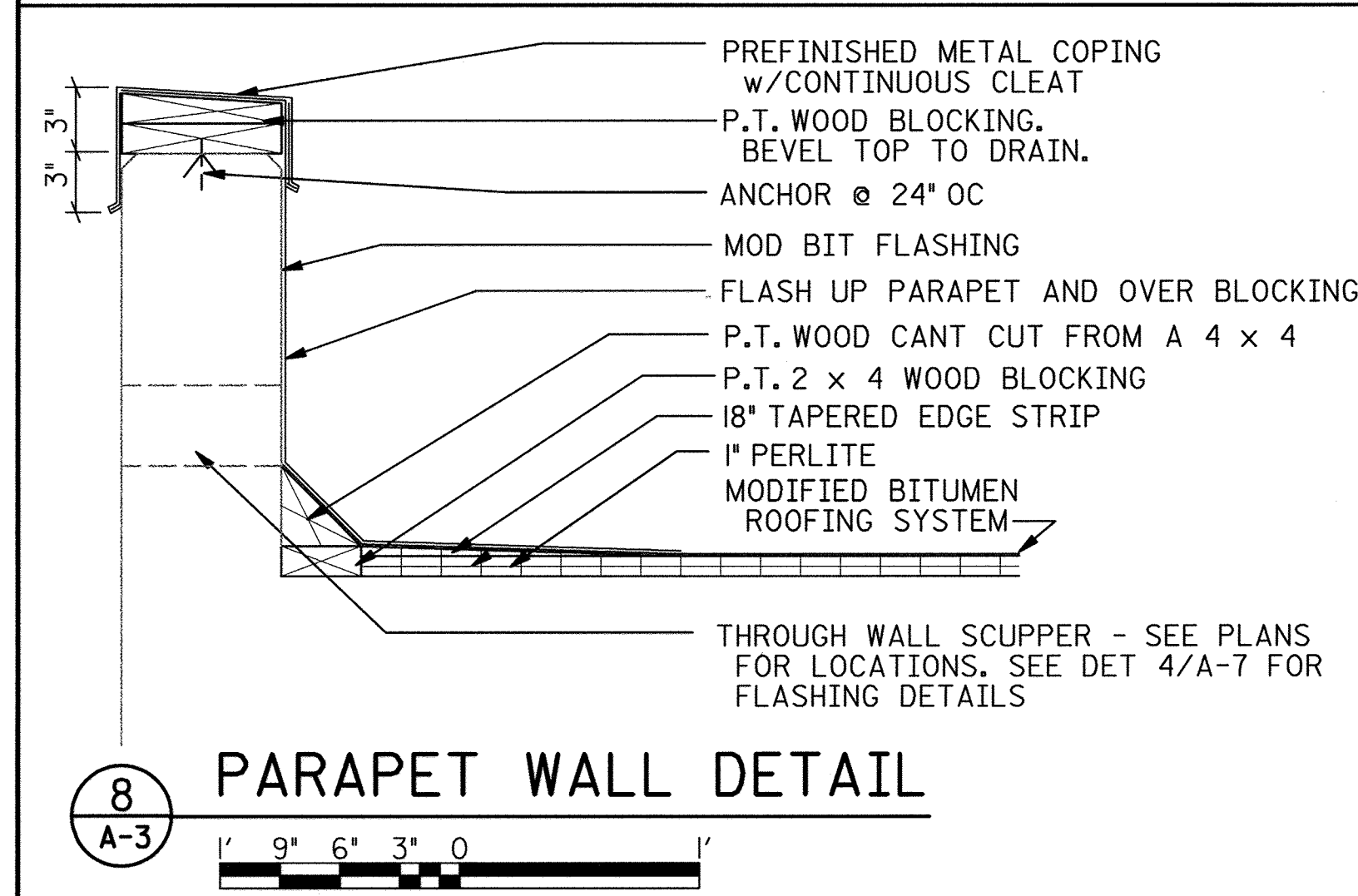
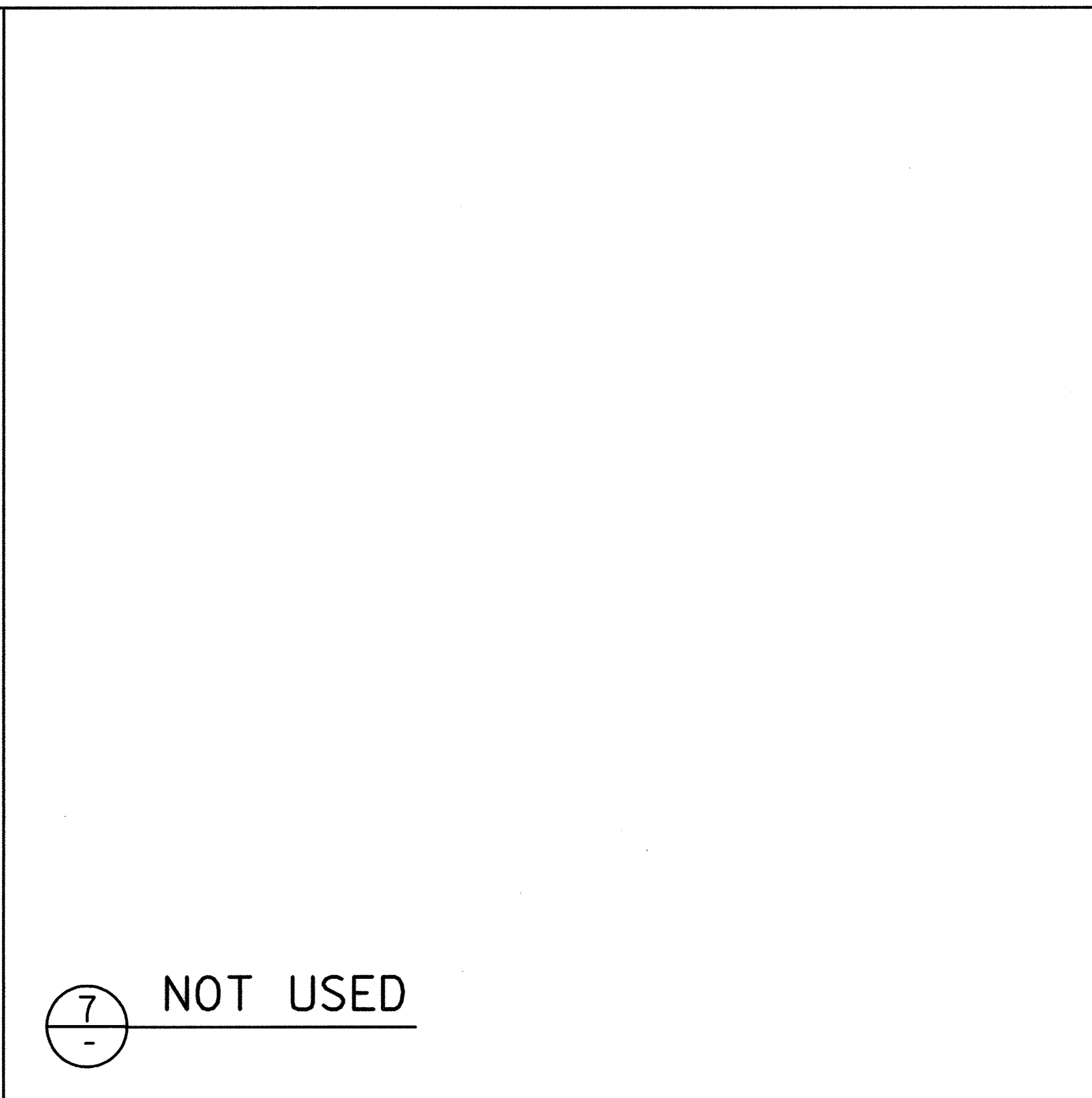
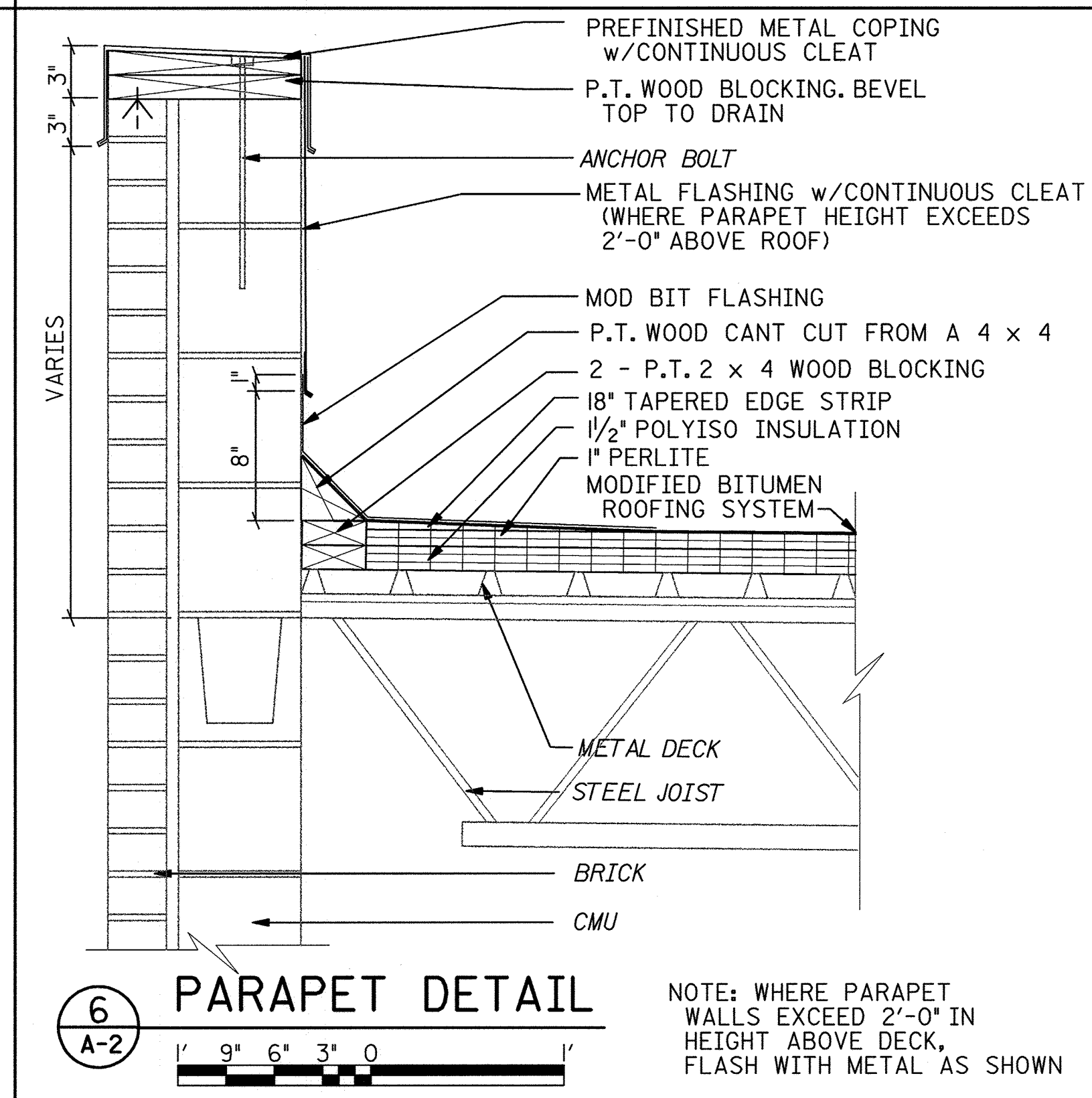
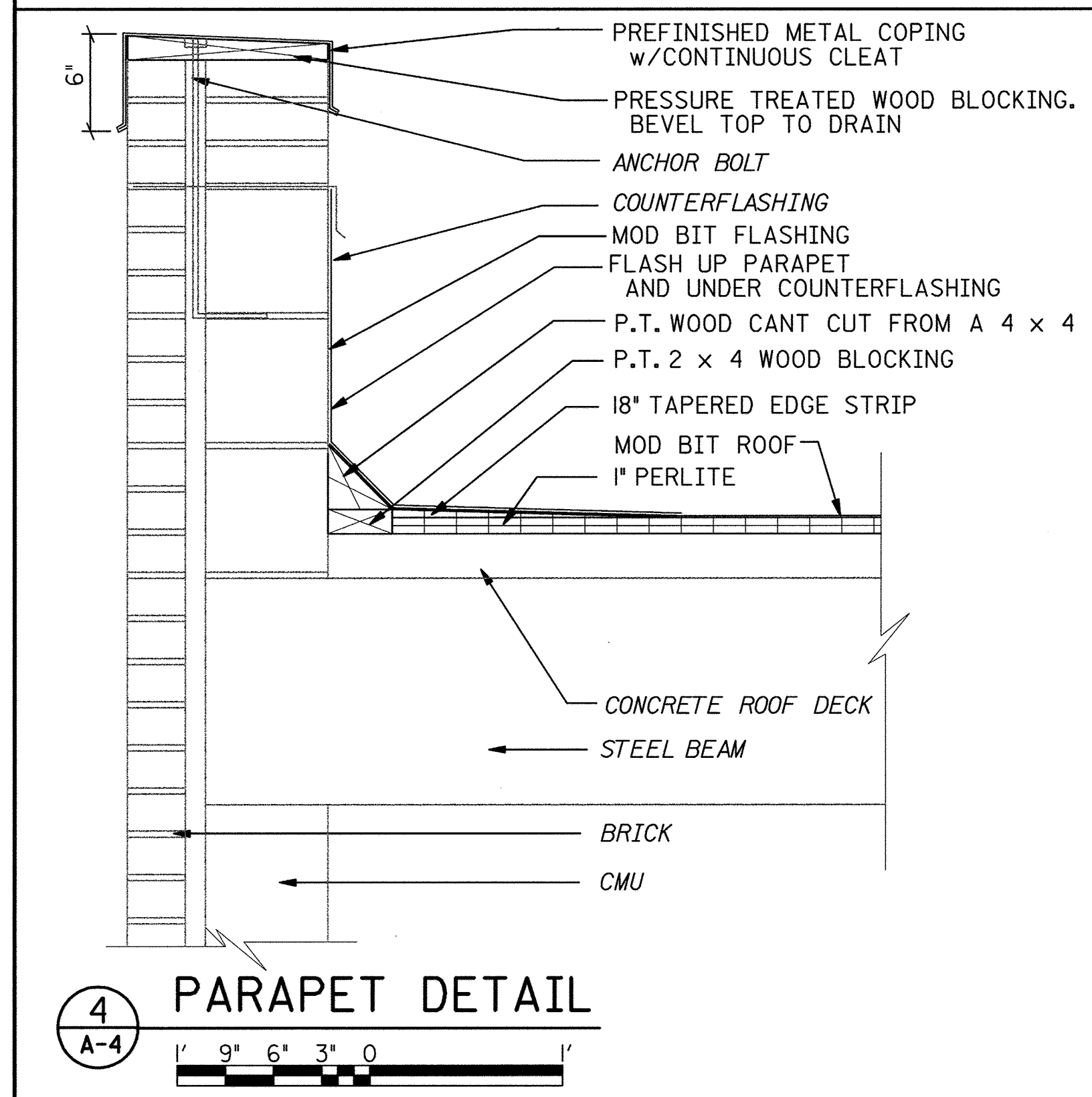
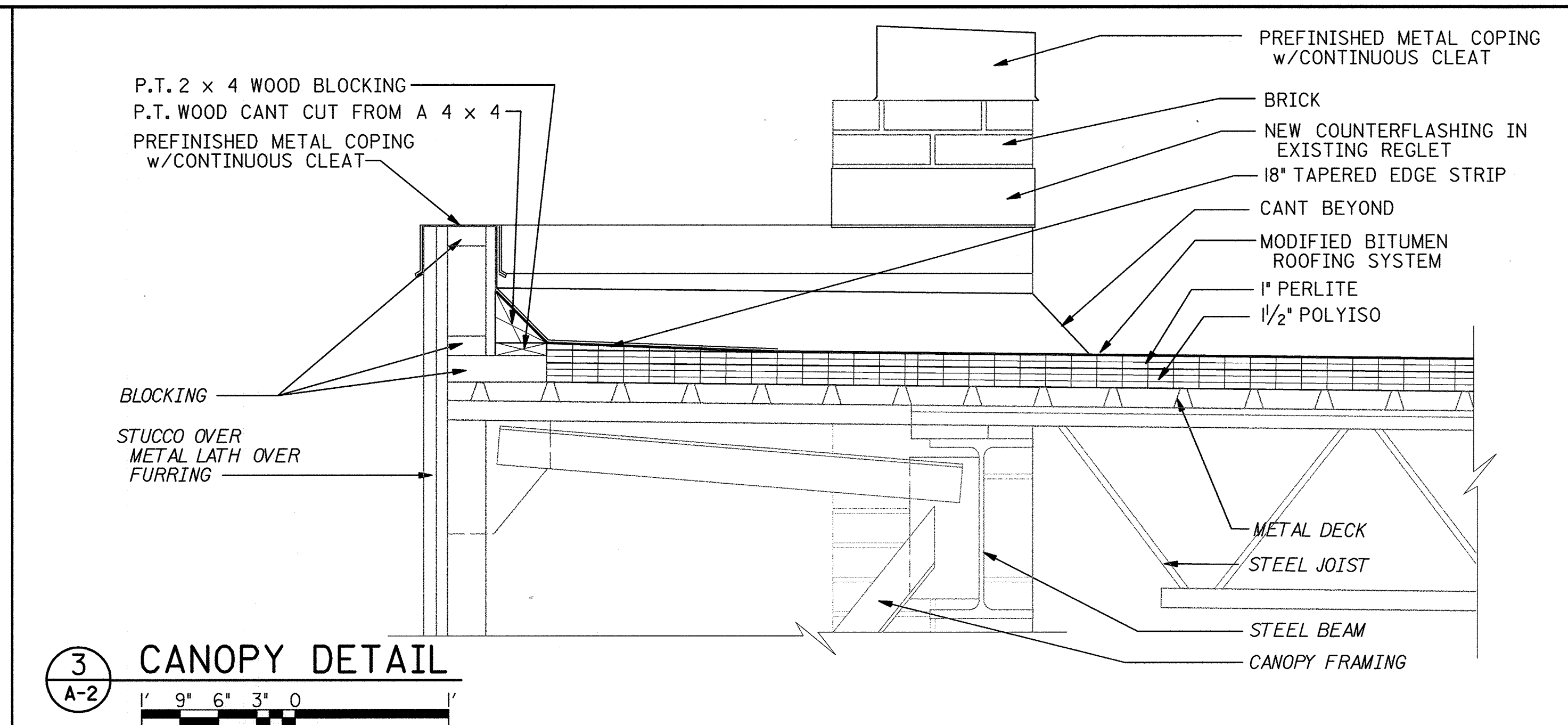
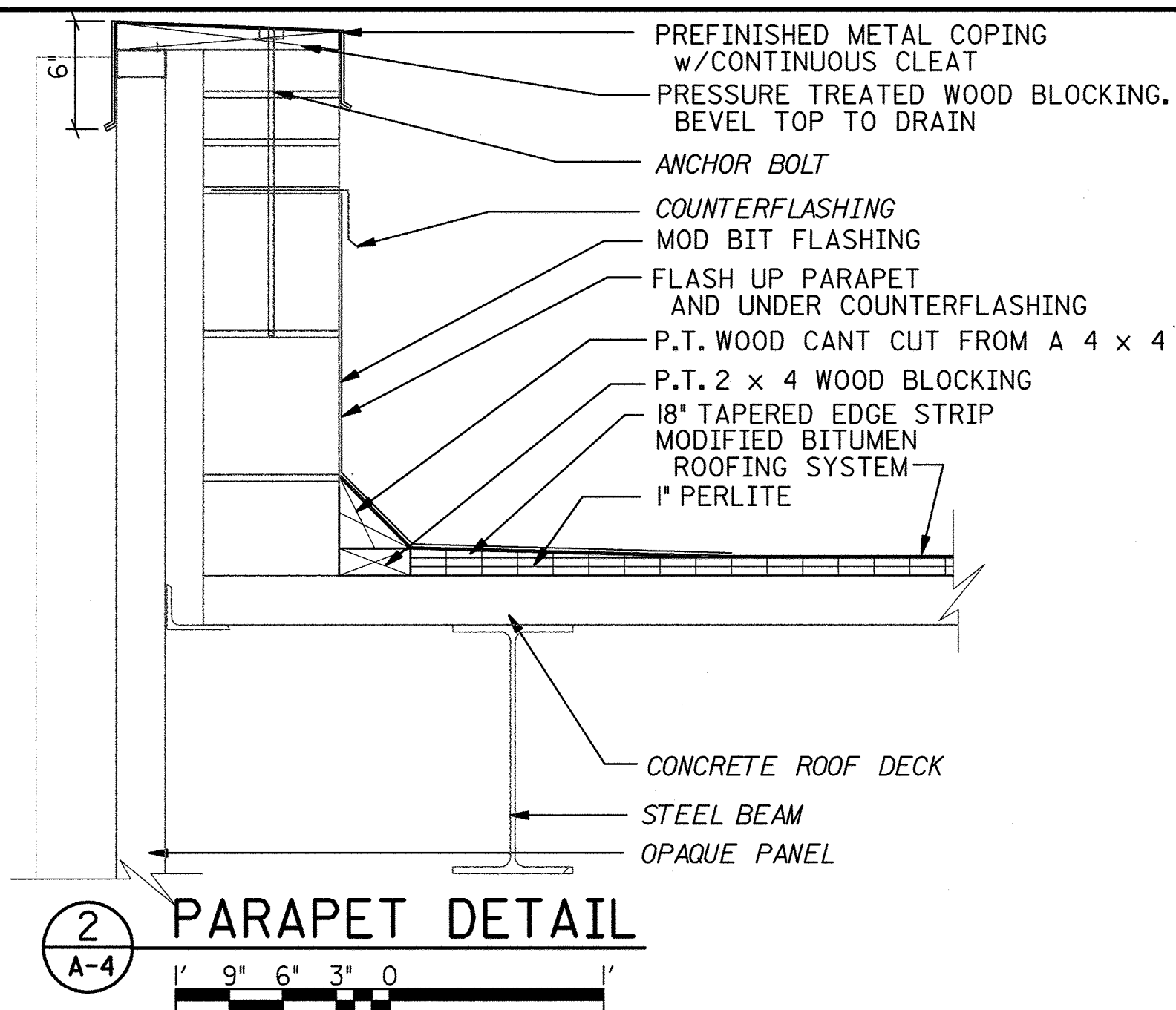
DETAILS

LITTLE PATUXENT WATER RECLAMATION PLANT  
REROOFING OF PLANT BUILDINGS  
CAPITAL PROJECT  
CONTRACT NO. S6153.PI  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 6 OF 9  
A-5



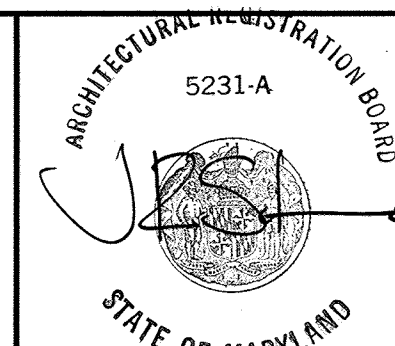
NOTE: SCUPPER SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA I-26. CONDUCTOR HEAD DESIGN I-25 TYPE F



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James L. ...* 2/18/98 *Robert ...* 2-12-98  
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF UTILITIES DATE

**b**  
**BUCHART HORN, INC.**  
Engineers, Architects and Planners

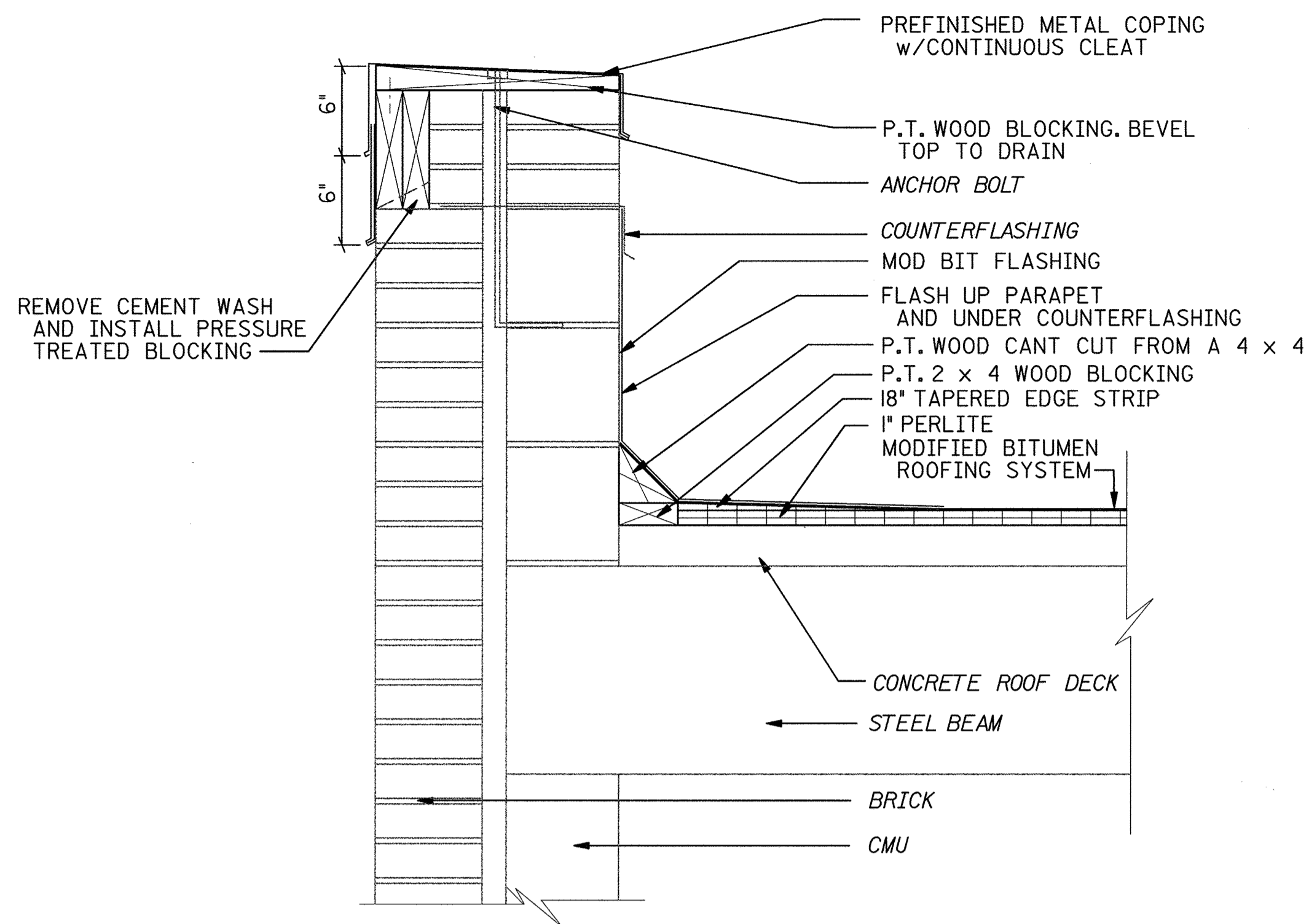


DES:					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

DETAILS

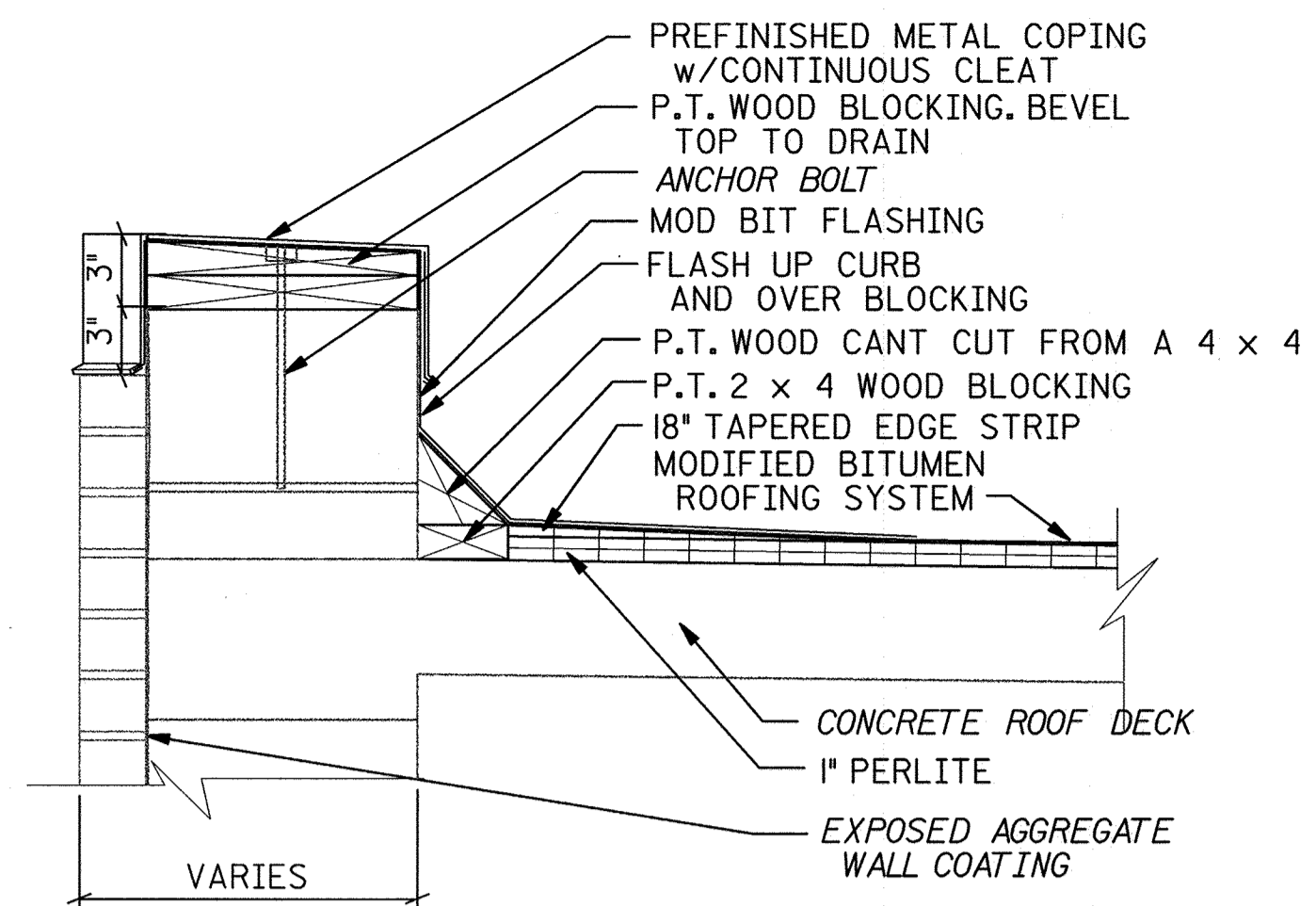
LITTLE PATUXENT WATER RECLAMATION PLANT  
REROOFING OF PLANT BUILDINGS  
CAPITAL PROJECT  
CONTRACT NO. S6153.PI  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN SHEET 7 OF 9 A-6

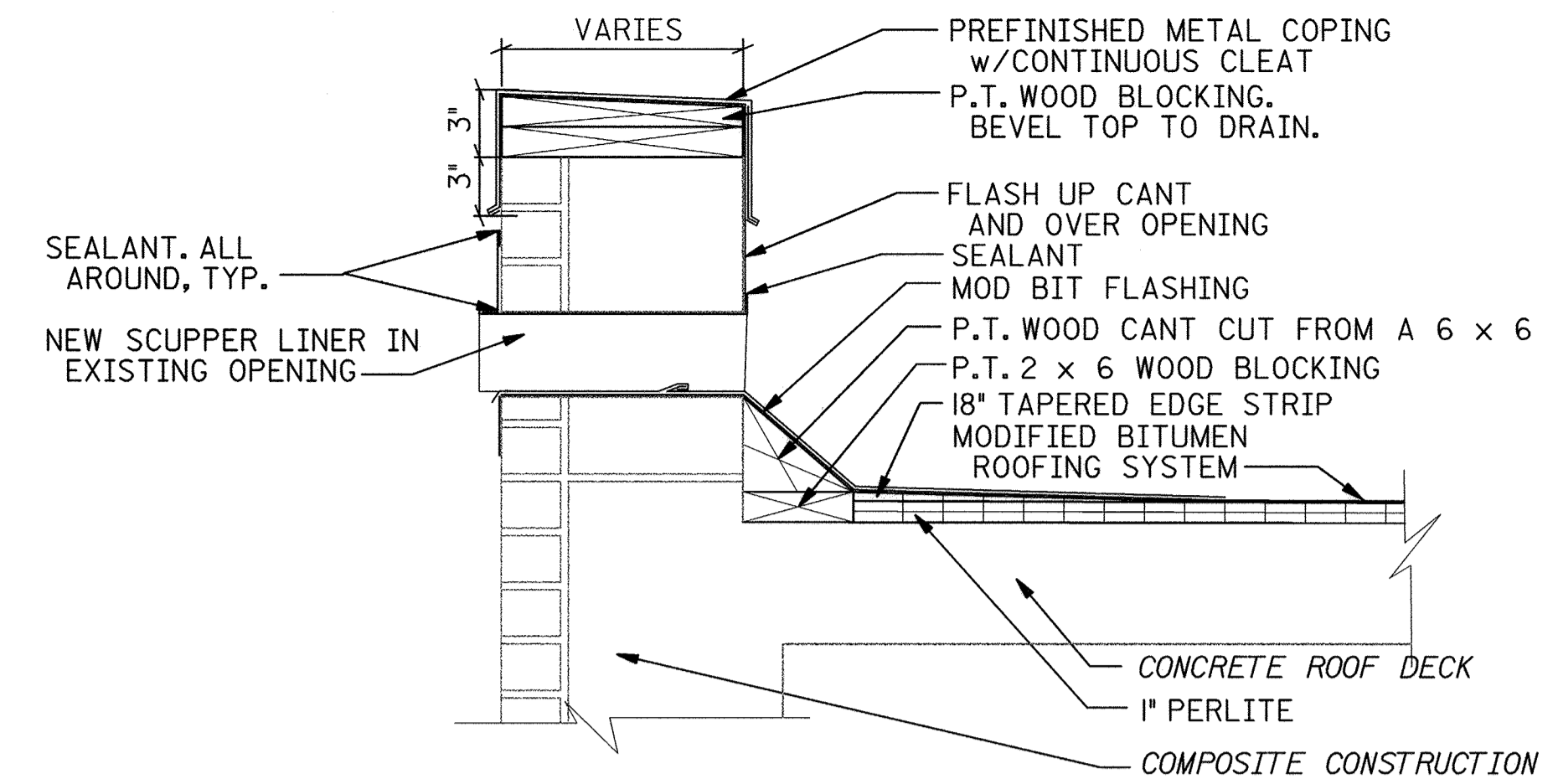


1 PARAPET DETAIL  
A-4  
1' 9" 6" 3" 0

NOTE: AT THE CONTRACTOR'S OPTION HE MAY ELIMINATE THE VERTICAL 2x BLOCKING AT THE BRICK, LEAVE THE CEMENT WASH IN PLACE, AND PROVIDE COPING THAT MATCHES THE EXISTING PROFILE.

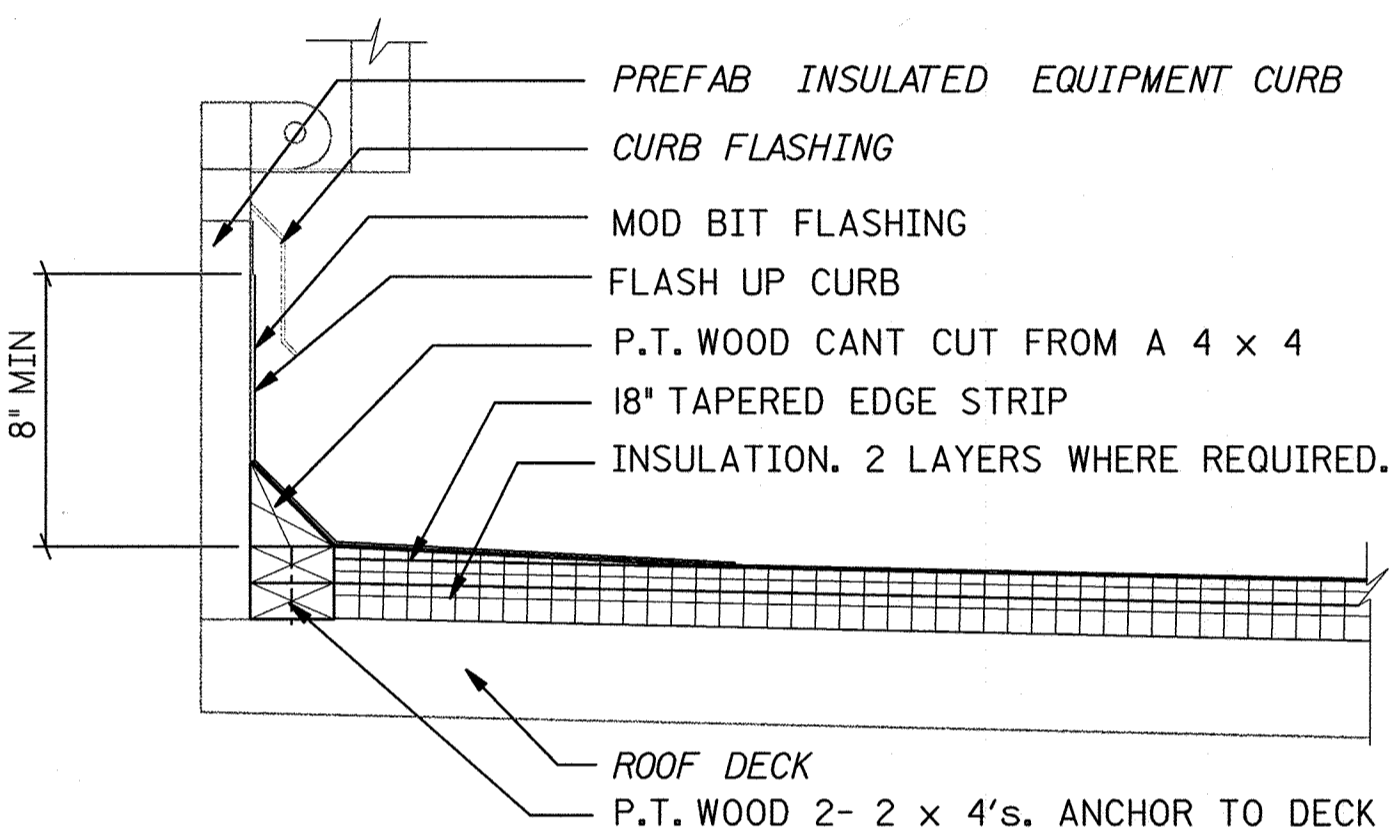


3 PARAPET DETAIL  
A-3  
1' 9" 6" 3" 0  
A-2



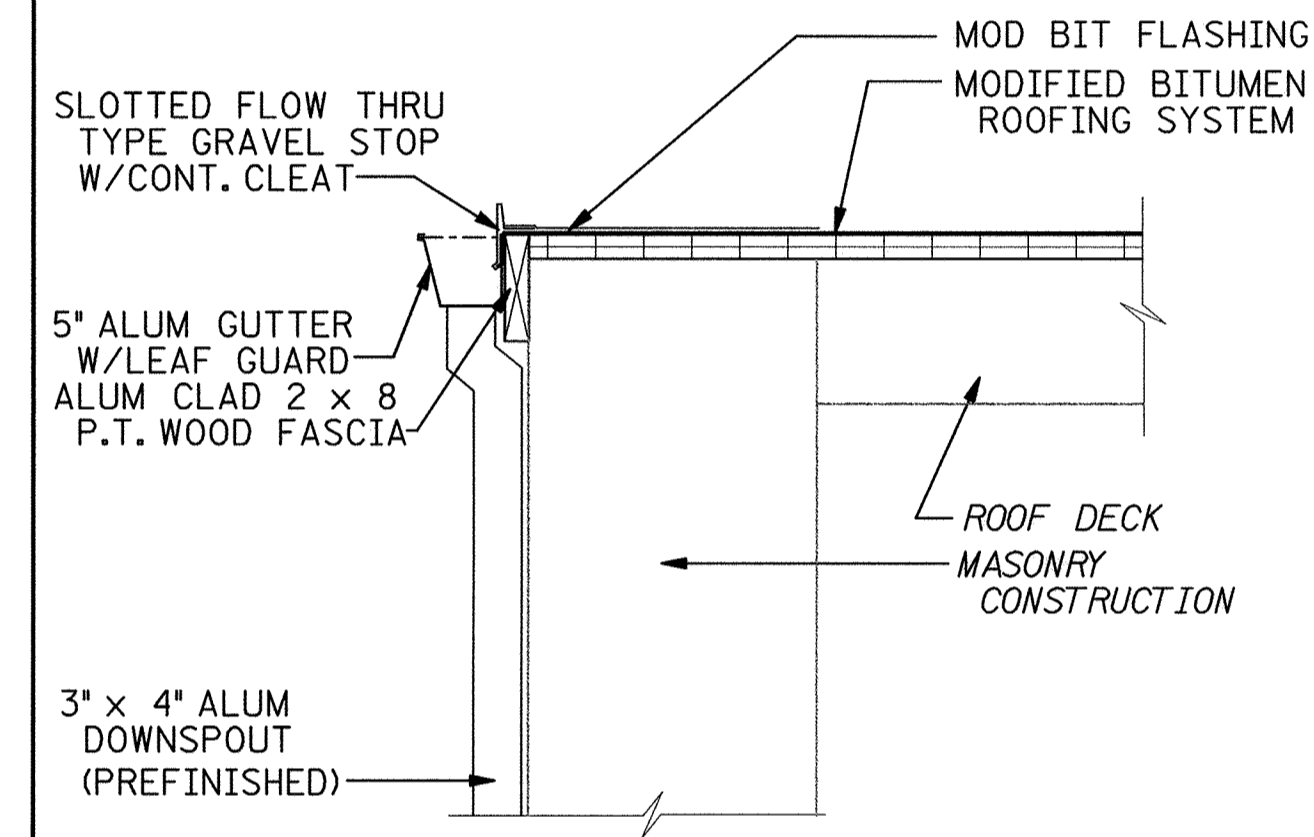
4 SCUPPER DETAIL  
A-3  
1' 9" 6" 3" 0

NOTE: SIMILAR DETAIL OCCURS AT FILTRATION BUILDING IN 18" WIDE WALL  
NOTE: SIMILAR DETAIL OCCURS IN CONCRETE WALL OF CHLORINATOR BUILDING  
NOTE: SCUPPER SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA I-26.



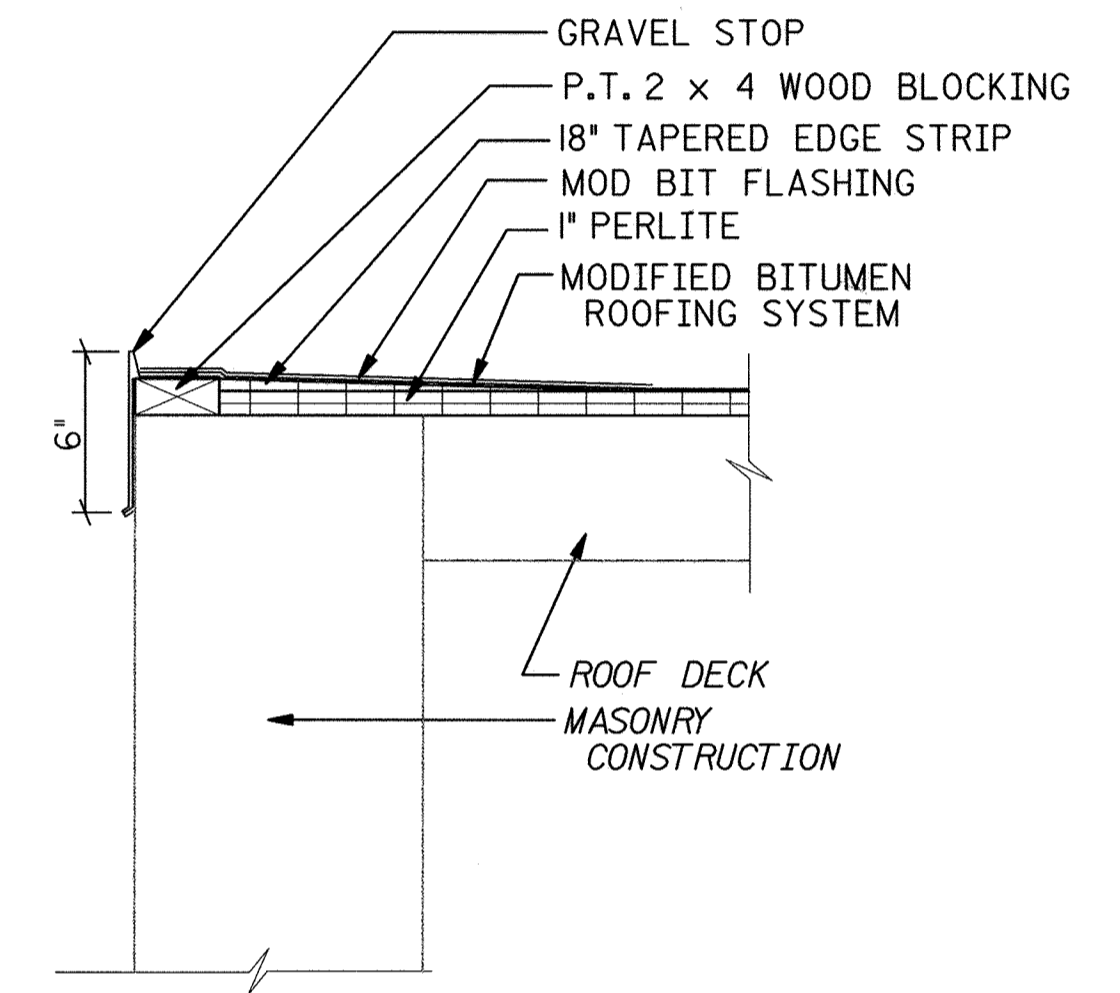
5 TYP SCUTTLE DETAIL  
A-1  
1' 9" 6" 3" 0  
A-4

NOTE: RAISE UP ON BLOCKING IF REQUIRED TO MAINTAIN CLEARANCE ABOVE ROOF  
NOTE: WHERE INSULATION IS 1" PERLITE ONLY, DELETE 1-2x4 WOOD BLOCKING

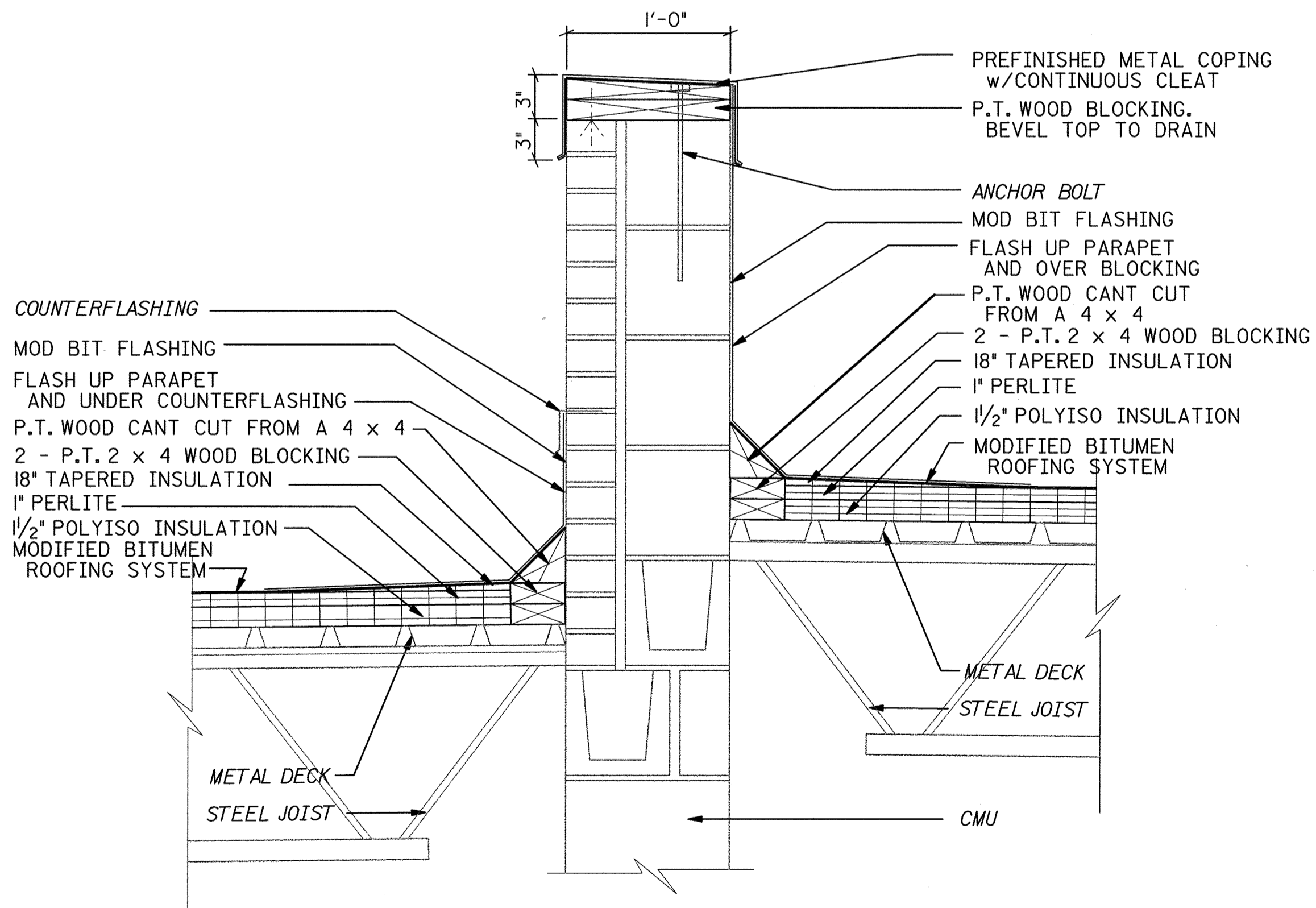


6 GUTTER DETAIL  
A-4  
1' 9" 6" 3" 0

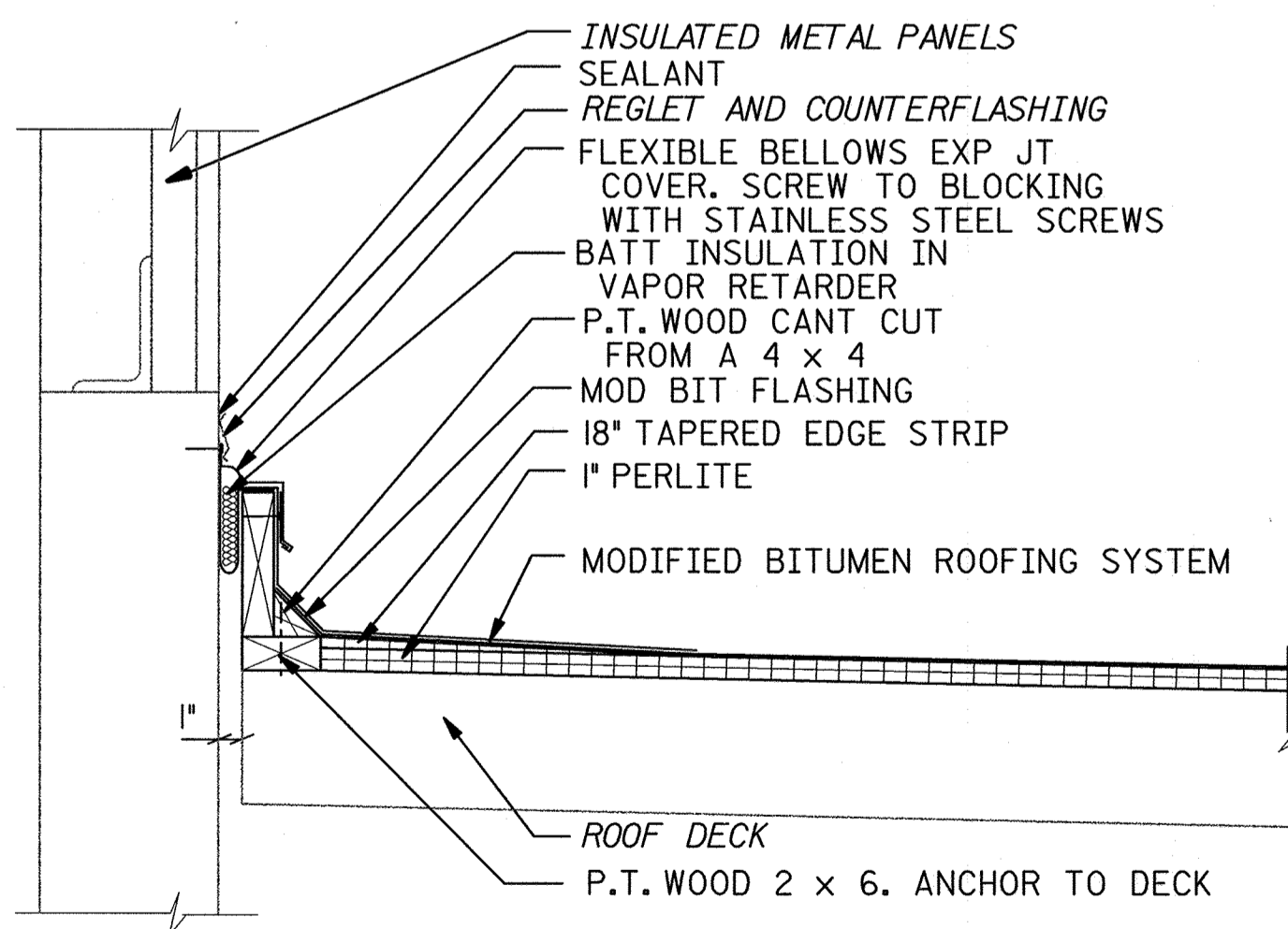
NOTE: SIMILAR CONDITION ON HEADWORKS BUILDING. WALL IS METAL PANELS



9 GRAVEL STOP DETAIL  
A-4  
1' 9" 6" 3" 0



2 PARAPET DETAIL  
A-2  
1' 9" 6" 3" 0

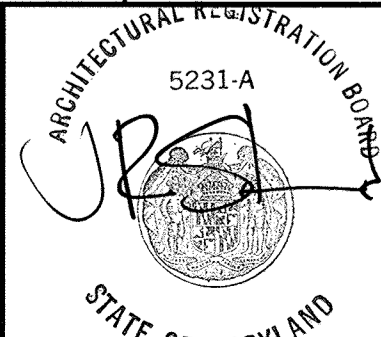


7 EXP JT COVER DETAIL  
A-1  
1' 9" 6" 3" 0

8 NOT USED

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

**BUCHART HORN, INC.**  
Engineers, Architects and Planners



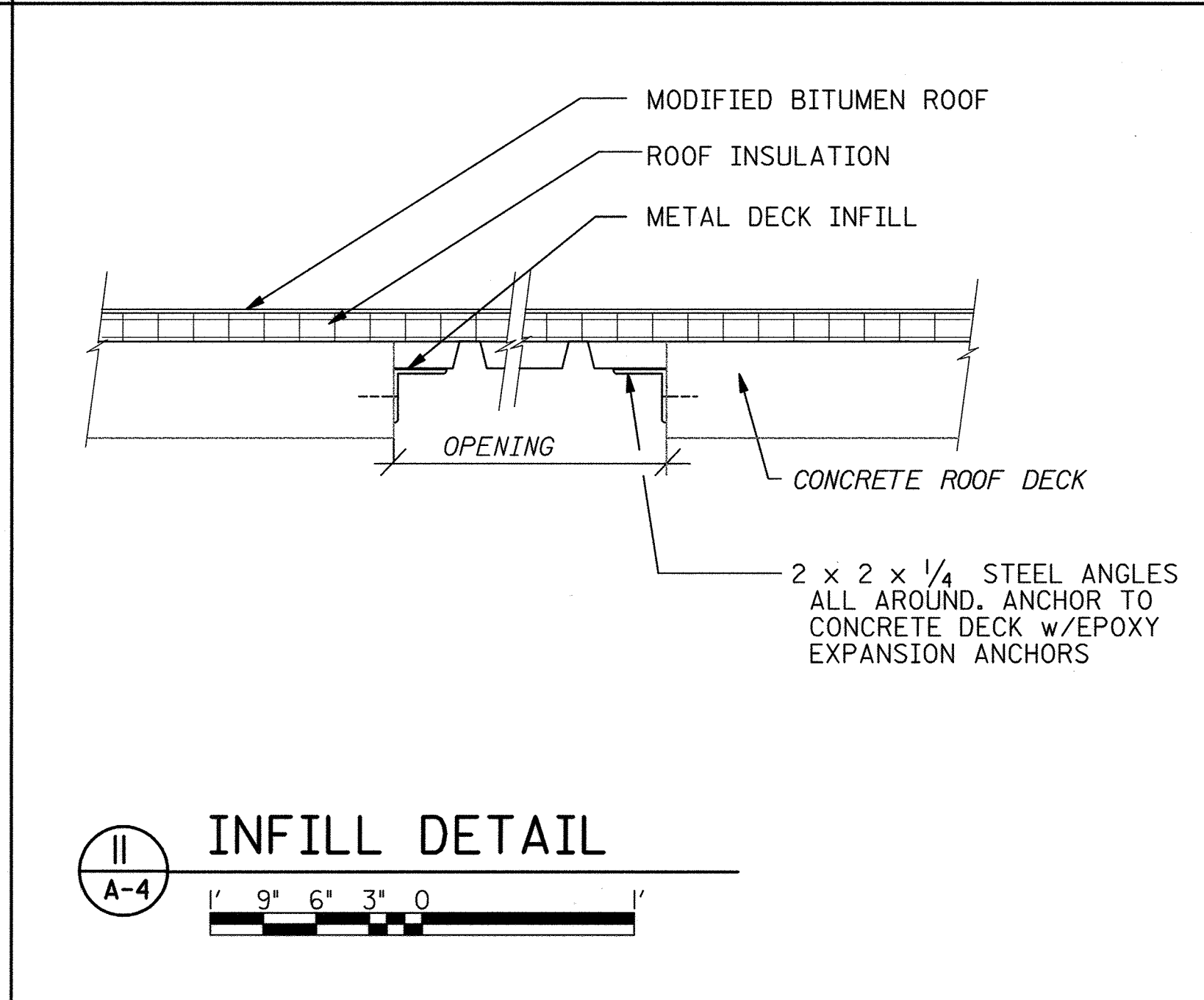
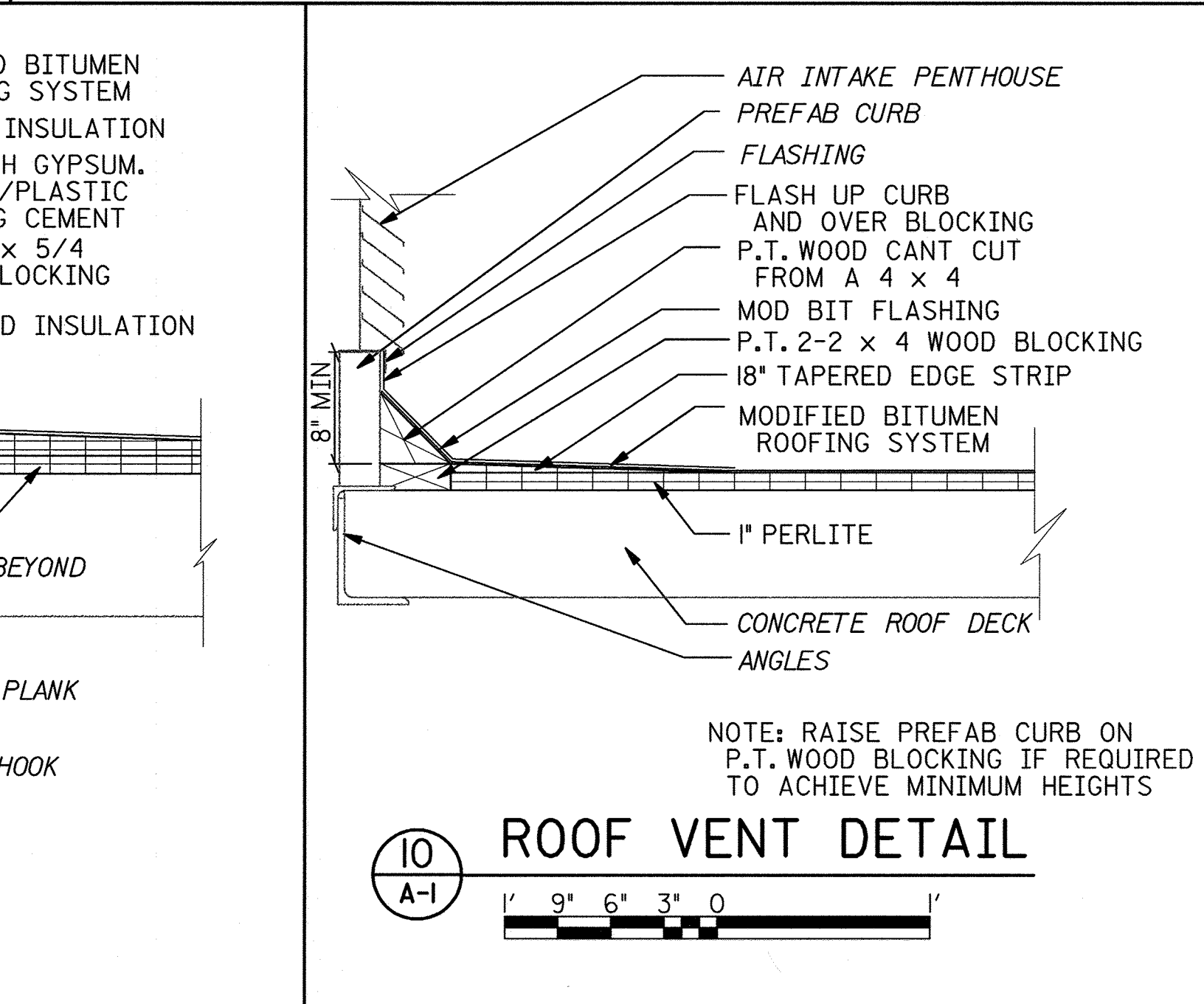
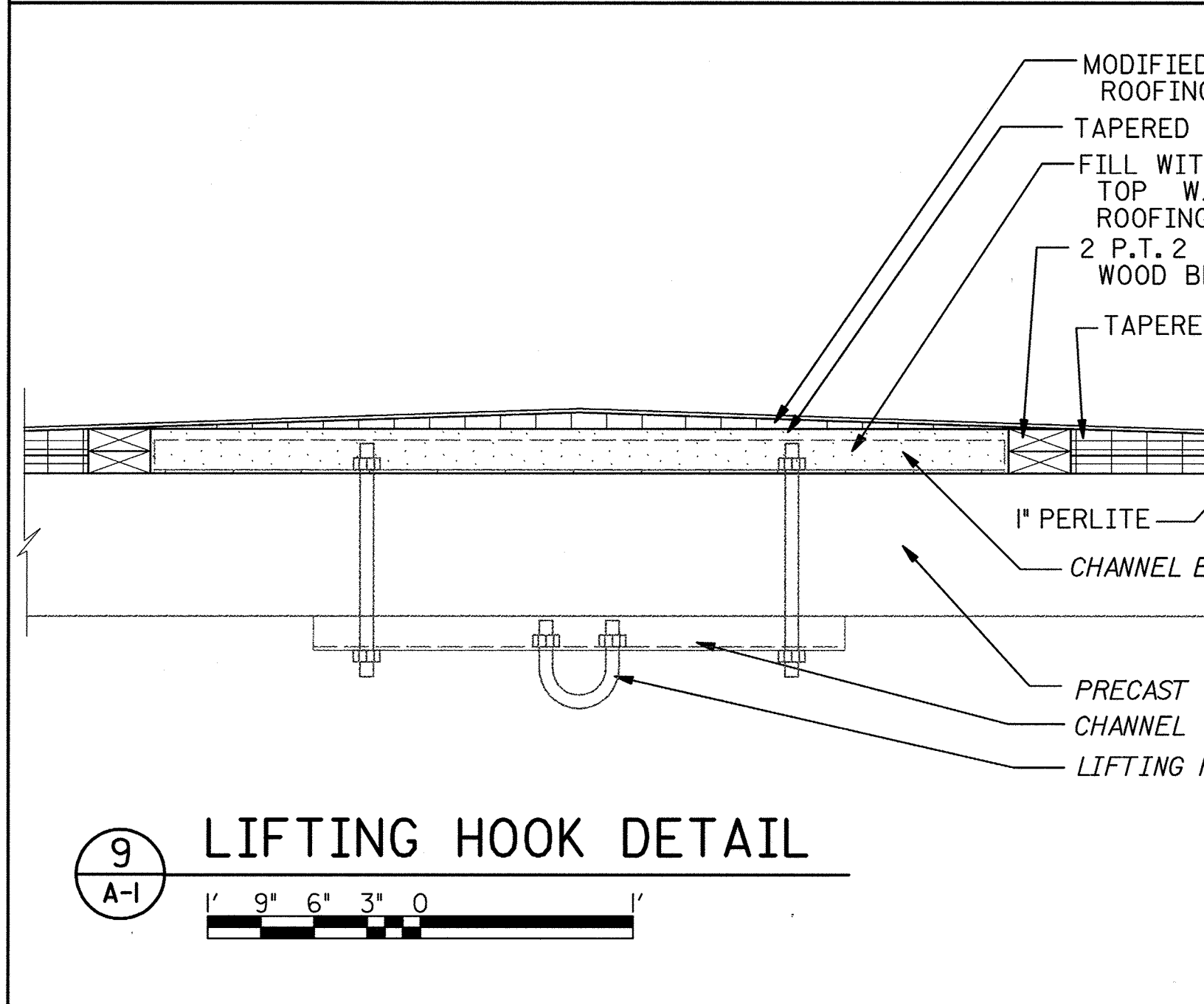
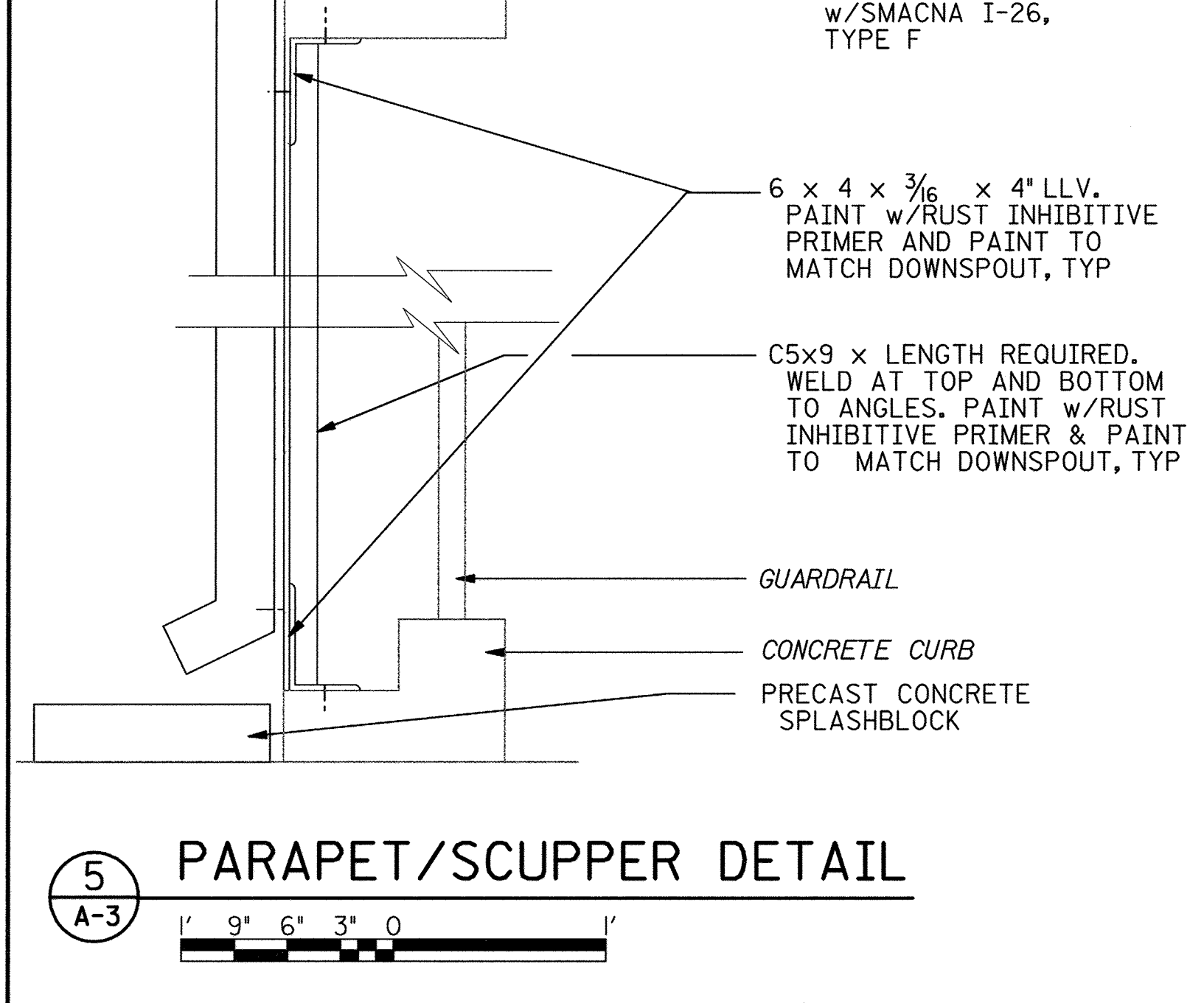
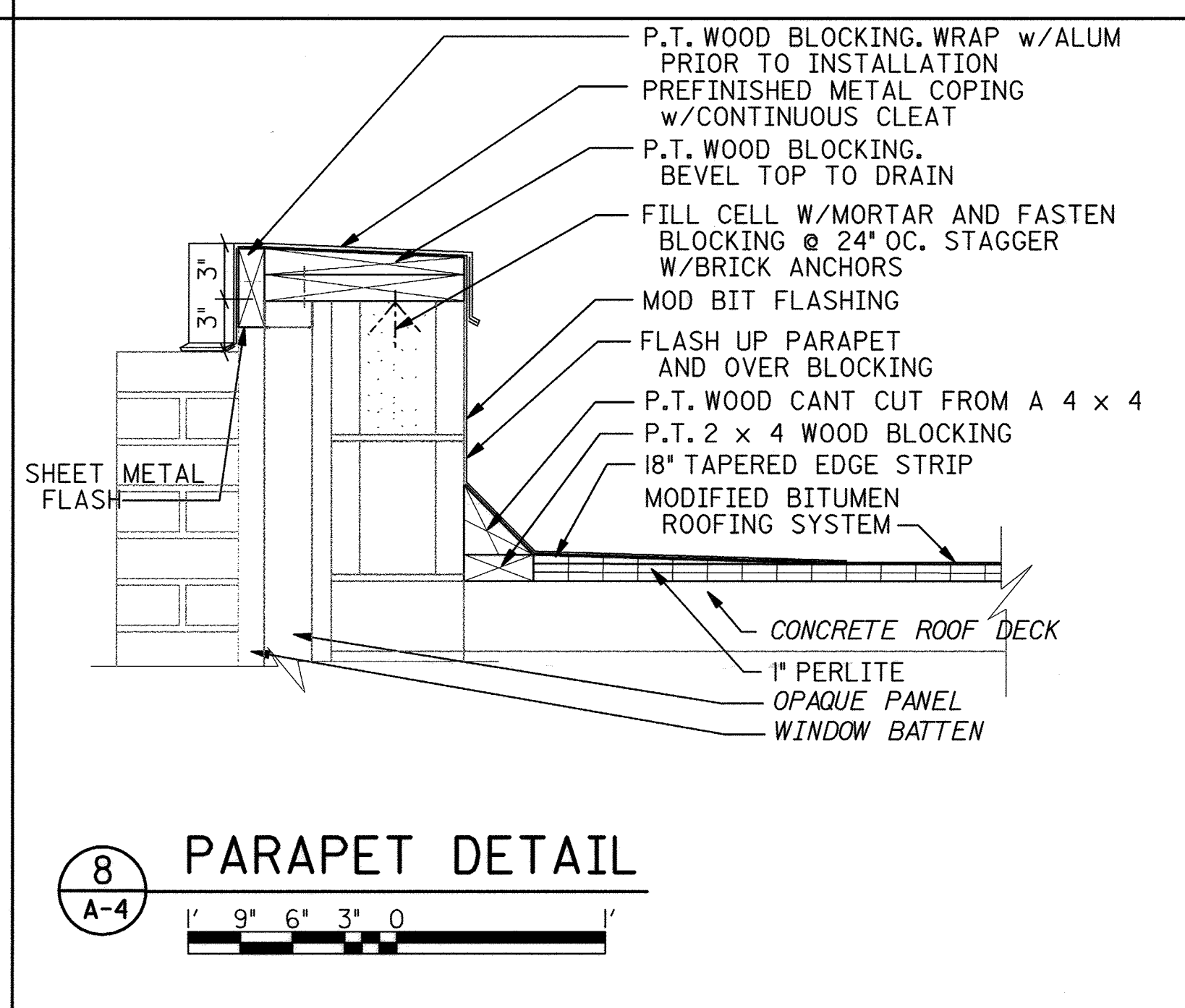
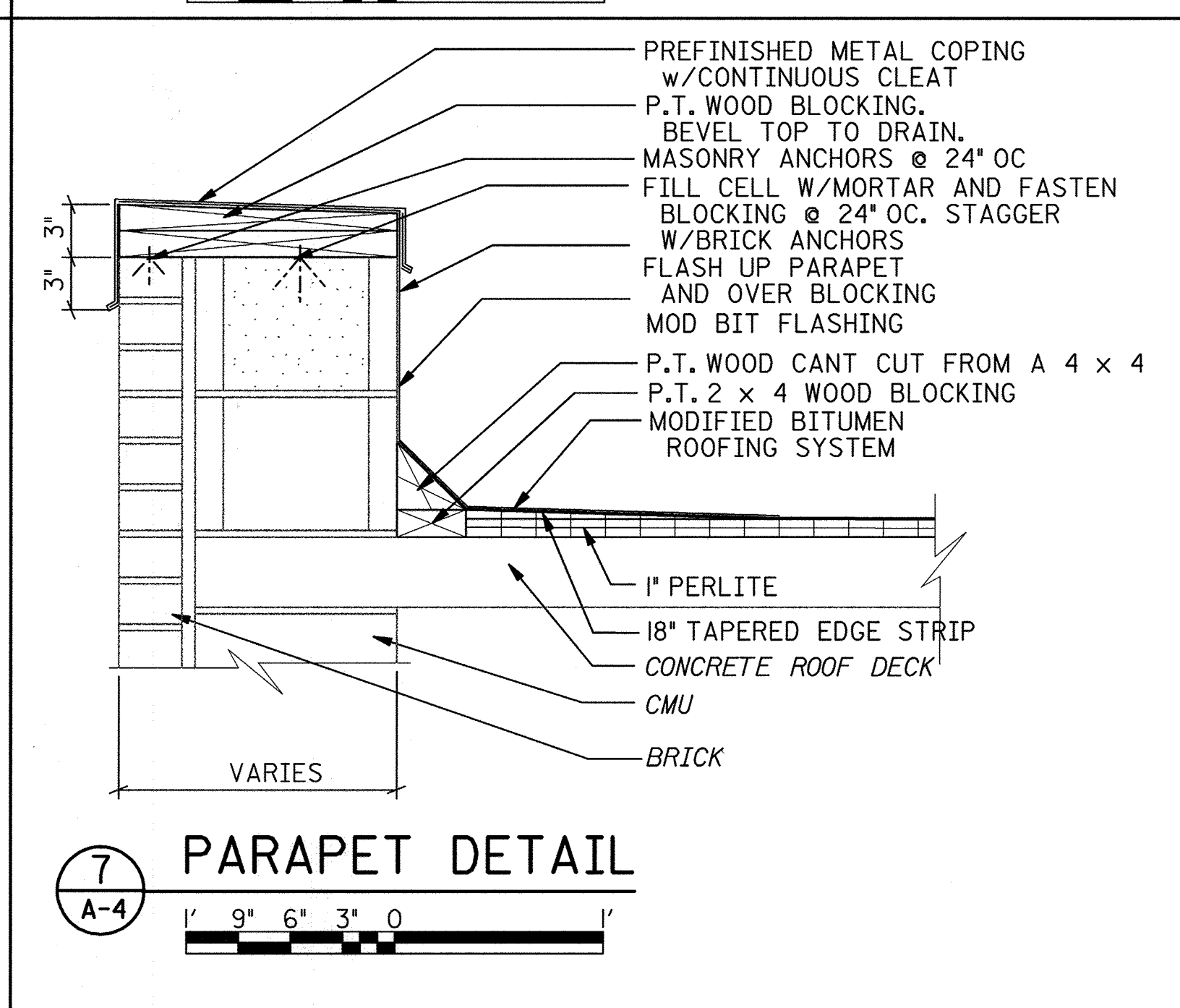
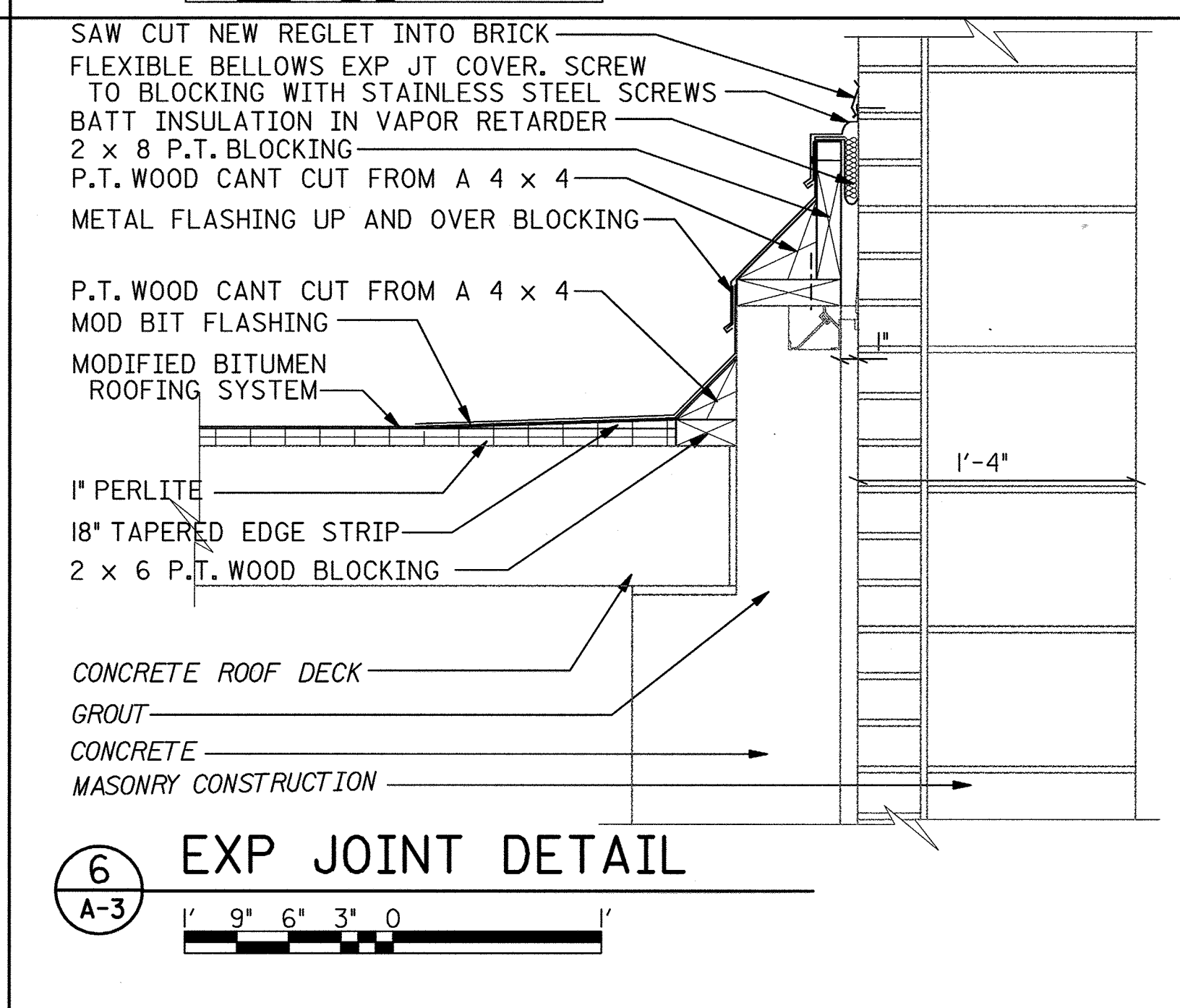
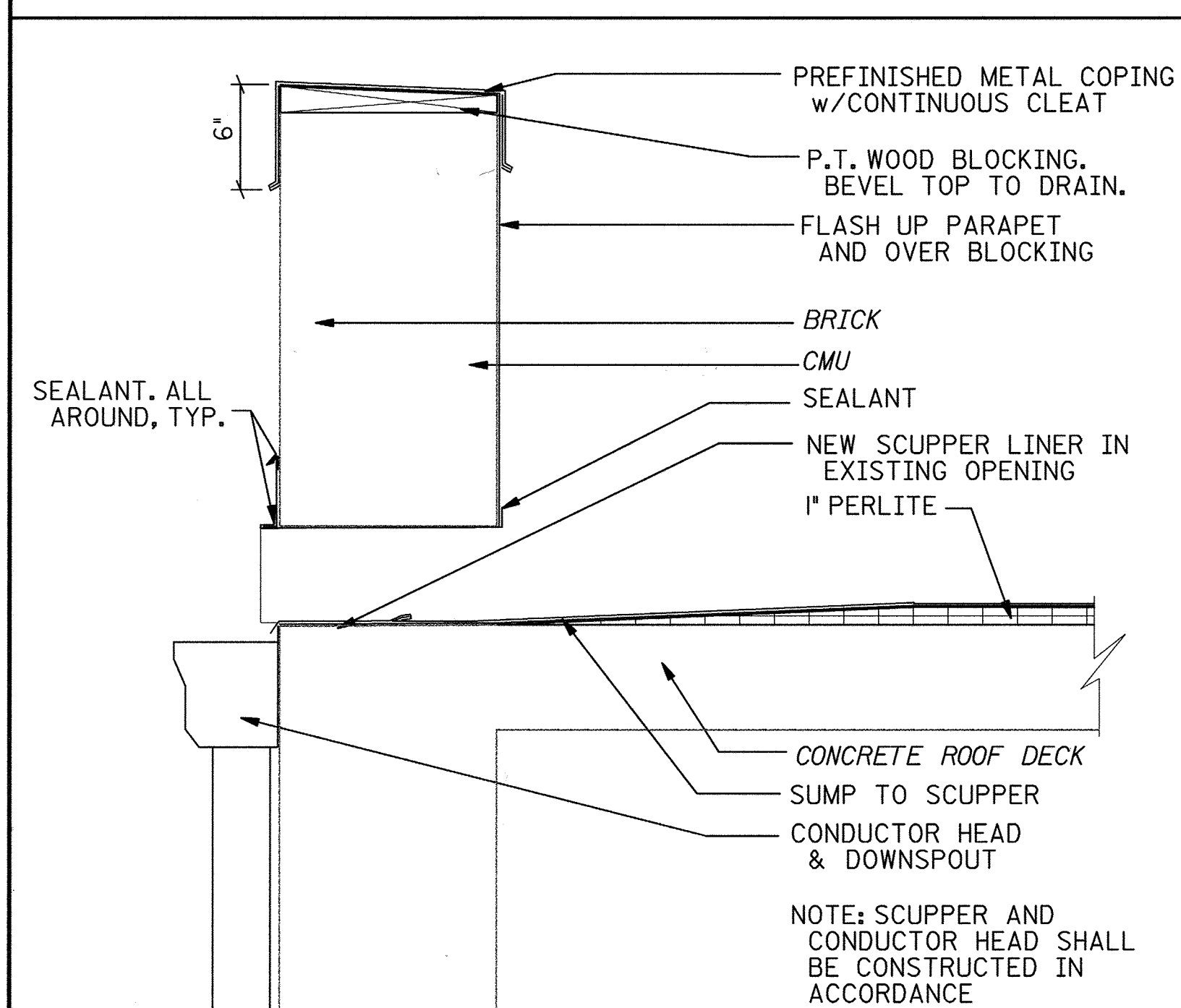
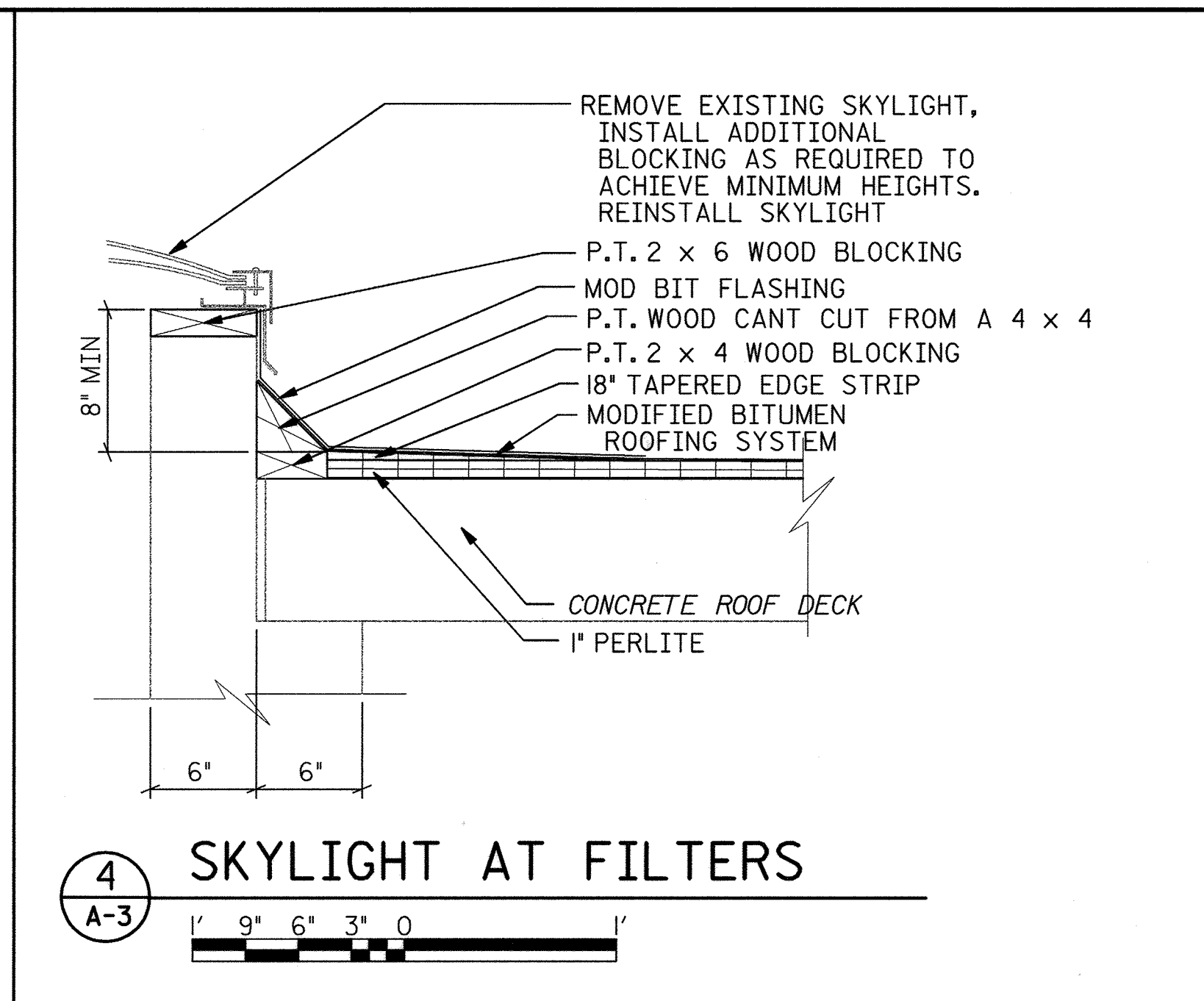
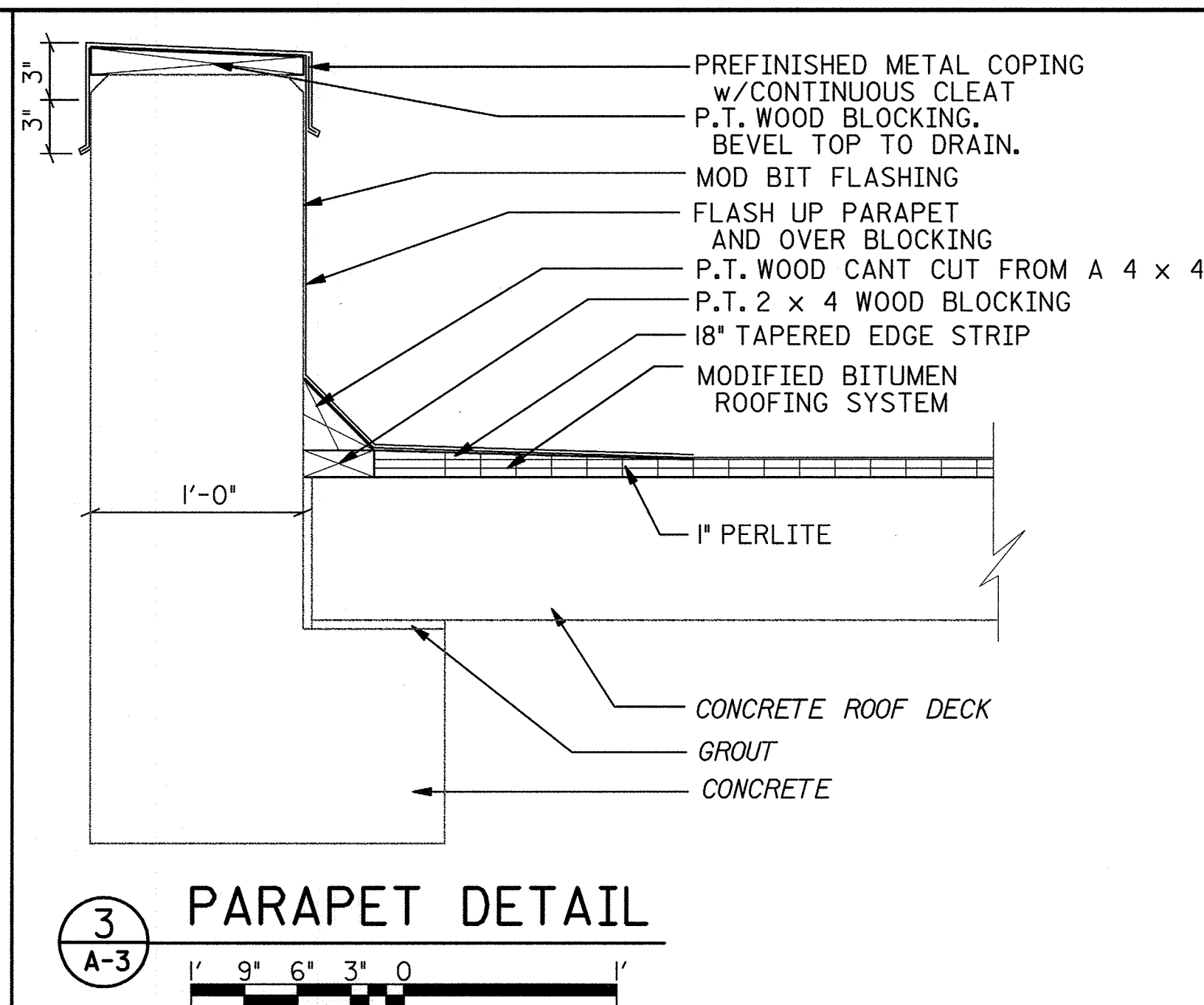
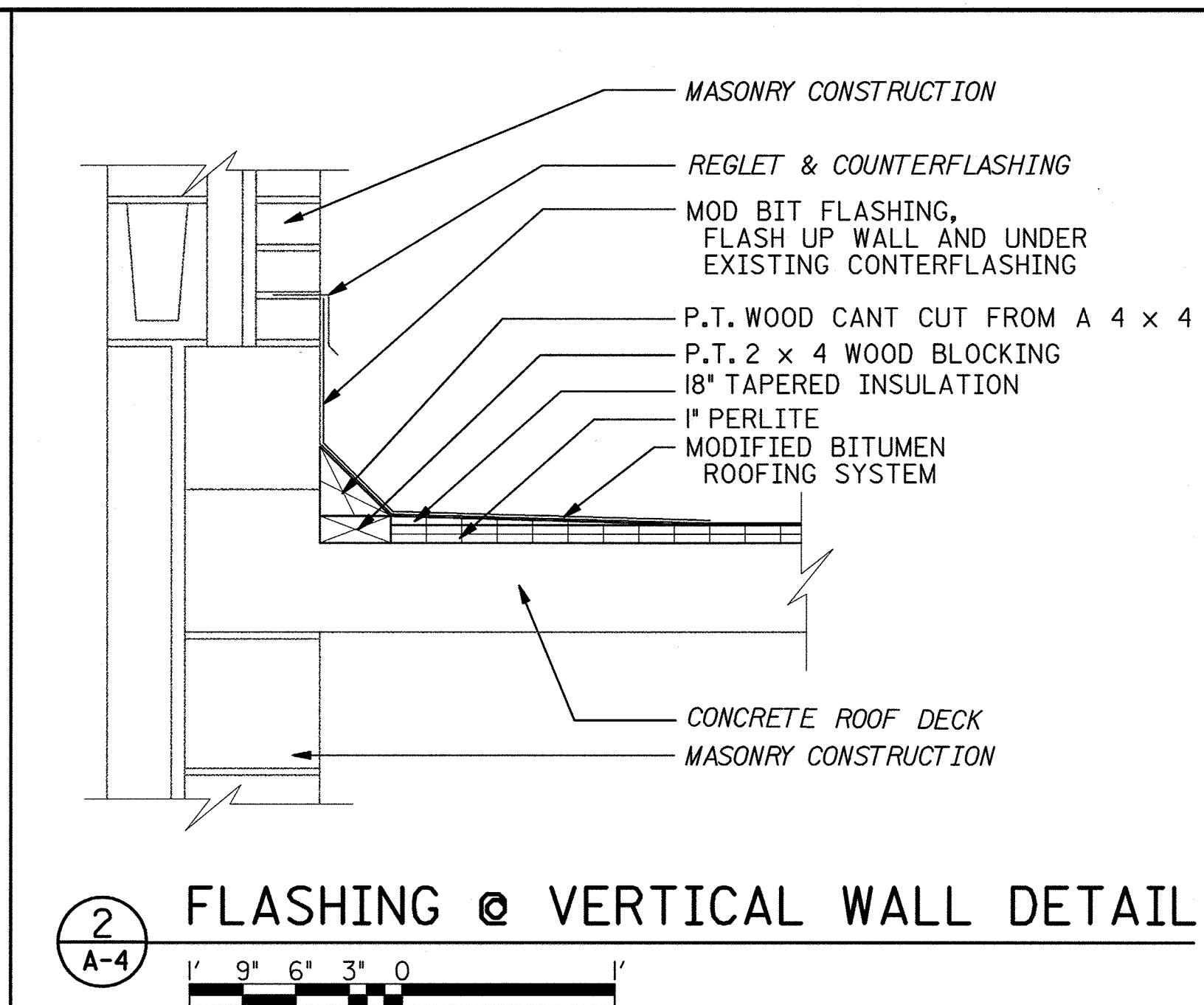
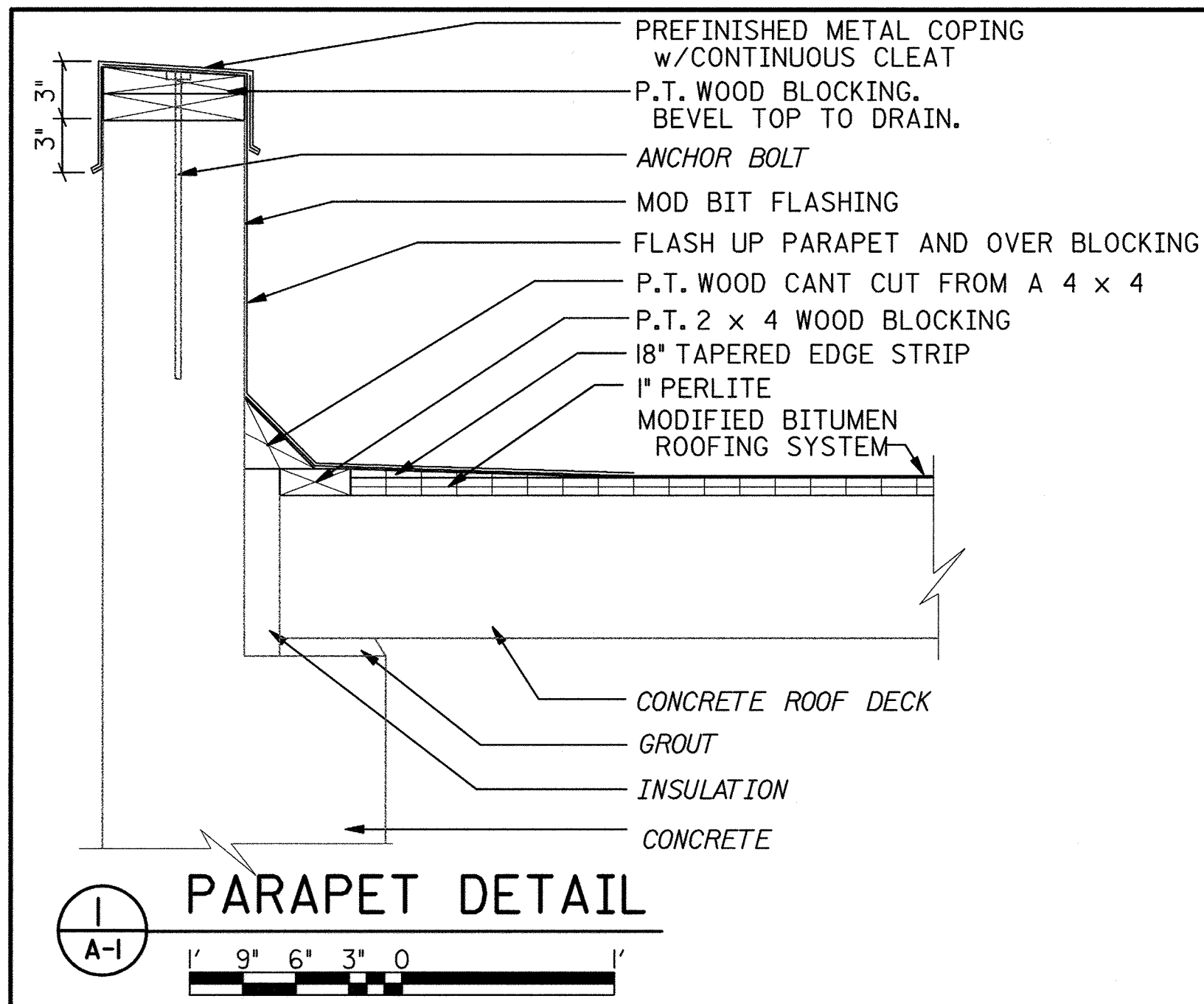
DES:				
DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

DETAILS

LITTLE PATUXENT WATER RECLAMATION PLANT  
REROOFING OF PLANT BUILDINGS  
CAPITAL PROJECT  
CONTRACT NO. S6153.PI  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 8 OF 9  
A-7





DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Jan 1998*  
DIRECTOR OF PUBLIC WORKS

*2/10/98 Robert W. Beninger*  
DATE: 2-12-98  
CHIEF, BUREAU OF UTILITIES

**bh**  
**BUCHART HORN, INC.**  
Engineers, Architects and Planners

ANNUAL RENEWAL REGISTRATION BOARD  
5231-A  
*J.P.S.*  
STATE OF MARYLAND

DES:					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

LITTLE PATUXENT WATER RECLAMATION PLANT  
REROOFING OF PLANT BUILDINGS  
CAPITAL PROJECT  
CONTRACT NO. S6153.PI  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN SHEET 9 OF 9  
A-8