

Attachment L  
Drawings and Specifications



# ROOFING REPLACEMENT

## CENTRAL DETENTION FACILITY

1901 D STREET, SE  
WASHINGTON DC



BLUEFIN LLC CORPORATE OFFICE  
6312 S. Fiddlers Green Circle Suite 100E  
Greenwood Village, CO 80111  
TEL: 866-735-0728

MID-ATLANTIC OFFICE  
2134 Espey Court Suite 14  
Crofton, MD 21114  
TEL: 410-881-0221

## DISTRICT OF COLUMBIA DEPARTMENT OF CORRECTIONS



AERIAL SITE PHOTO

### DRAWING INDEX

- C1.0 COVER PAGE
- R1.0 KEY ROOF PLAN - PHASES AND ROOF TYPES
- R1.1 PHASE 2 ROOF PLANS
- R1.2 PHASE 3 ROOF PLAN
- R1.3 PHASE 4 ROOF PLANS
- R1.4 ROOF DETAILS - TYPE 1 ROOF
- R1.5 ROOF / TYPICAL DETAILS - TYPE 3 ROOF
- R1.6 ROOF DETAILS - TYPE 2 ROOF
- R1.7 TYPICAL ROOF DETAILS - TYPE 1 ROOF
- R1.8 TYPICAL ROOF DETAILS - TYPE 2 ROOF

DRAWING TITLE  
**COVER PAGE**

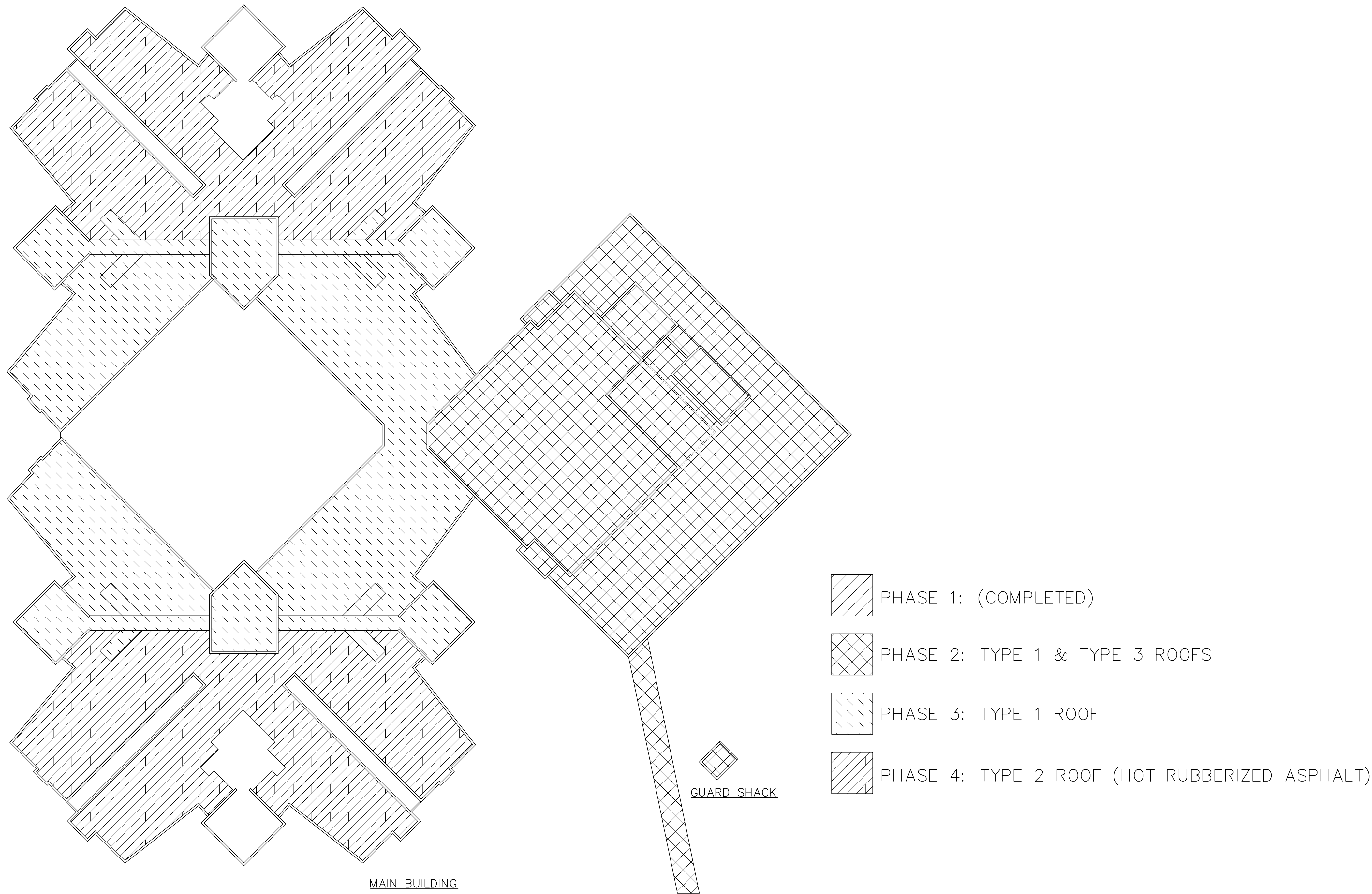
SHEET NUMBER  
**C1.0**



PROJECT  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

**District of Columbia  
Department of Corrections**



- PHASE 1: (COMPLETED)
- PHASE 2: TYPE 1 & TYPE 3 ROOFS
- PHASE 3: TYPE 1 ROOF
- PHASE 4: TYPE 2 ROOF (HOT RUBBERIZED ASPHALT)

DRAWING DATES		
NUMBER	DATE	COMMENTS

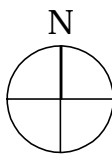
• IN-PROGRESS • NOT FOR • CONSTRUCTION		
•	3/11/16	95% REVIEW SET

DRAWING TITLE  
**KEY ROOF PLAN  
PHASES AND  
ROOF TYPES**

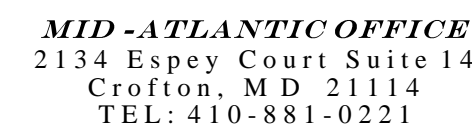
SHEET NUMBER  
**R1.0**

Actual Size to read at scale  
0 IN 1 IN 2 IN

**KEY ROOF PLAN**  
N.T.S

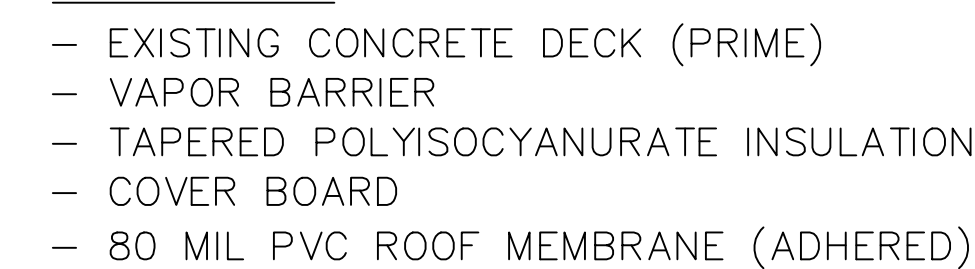






**Central Detention Facility**  
1901 D Street, SE  
Washington DC

**District of Columbia  
Department of Corrections**



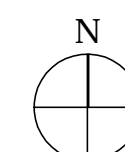
GUARD SHACK ROOF AREA  
TYPE 3 ROOF

ARMORY ROOF AREA  
TYPE 3 ROOF

## SKYWALK ROOF AREA

### MAIN BUILDING ROOF AREAS

## PHASE 2 ROOF PLANS



## KEY

	— ROOF AREA DESIGNATION
	— ROOF DRAIN
	— THRU-WALL SCUPPER
	— ROOF EDGE SCUPPER
	— GUTTER EDGE
	— CURBED OPENING
	— H.V.A.C. CURB
	— ROOF HATCH
	— SKYLIGHT
	— CURBED STACK
	— CHIMNEY
	— PIPE PORTAL CURB
	— ROOF LADDER
	— PIPE VENT
	— SOIL STACK
	— SMALL PIPE PENETRATION
	— PITCH PAN
	— EXPANSION JOINT
	— SLOPE TRANSITION

DRAWING DATES		
NUMBER	DATE	COMMENTS

IN-PROGRESS  
NOT FOR  
CONSTRUCTION

3/11/16 95% REVIEW SP

DRAWING TITLE

## PHASE 2 ROOF PLANS

SHEET NUMBER

## R1.1

Actual Size to read at scale

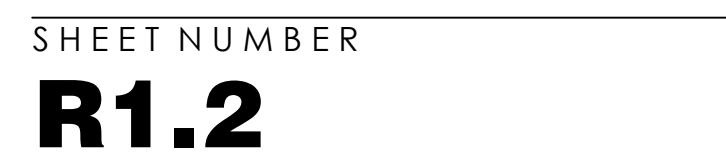




**MID-ATLANTIC OFFICE**  
2134 Espey Court Suite 14  
Crofton, MD 21114  
TEL: 410-881-0221

**Central Detention Facility**  
1901 D Street, SE  
Washington DC

**District of Columbia  
Department of Correction**



# KEY

	— ROOF AREA DESIGNATION
	— ROOF DRAIN
	— THRU—WALL SCUPPER
	— ROOF EDGE SCUPPER
	— GUTTER EDGE
	— CURBED OPENING
	— H.V.A.C. CURB
	— ROOF HATCH
	— SKYLIGHT
	— CURBED STACK
	— CHIMNEY
	— PIPE PORTAL CURB
	— ROOF LADDER
	— PIPE VENT
	— SOIL STACK
	— SMALL PIPE PENETRATION
	— ROOF PAK
	— EXPANSION JOINT
	— SLOPE TRANSITION
	— ABANDONED EQUIPMENT





**MID-ATLANTIC OFFICE**  
2134 Espey Court Suite 14  
Crofton, MD 21114  
TEL: 410-881-0221

Central Detention Facility  
1901 D Street, SE  
Washington DC

**District of Columbia  
Department of Corrections**



- EXISTING CONCRETE DECK (PRIME)
- HOT RUBBERIZED ASPHALT
- REINFORCED HFA SYSTEM WITH SBS CAP SHEET



N.T.S



- |  |                          |
|--|--------------------------|
|  | - ROOF AREA DESIGNATION  |
|  | - ROOF DRAIN             |
|  | - THRU-WALL SCUPPER      |
|  | - ROOF EDGE SCUPPER      |
|  | - GUTTER EDGE            |
|  | - CURBED OPENING         |
|  | - H.V.A.C. CURB          |
|  | - ROOF HATCH             |
|  | - SKYLIGHT               |
|  | - CURBED STACK           |
|  | - CHIMNEY                |
|  | - PIPE PORTAL CURB       |
|  | - ROOF LADDER            |
|  | - PIPE VENT              |
|  | - SOIL STACK             |
|  | - SMALL PIPE PENETRATION |
|  | - PITCH PAN              |
|  | - EXPANSION JOINT        |
|  | - SLOPE TRANSITION       |
|  | - ABANDONED EQUIPMENT    |

IN-PROGRESS  
NOT FOR  
CONSTRUCTION

3/11/16 95% REVIEW SET

## PHASE 4 ROOF PLANS

### R1.3

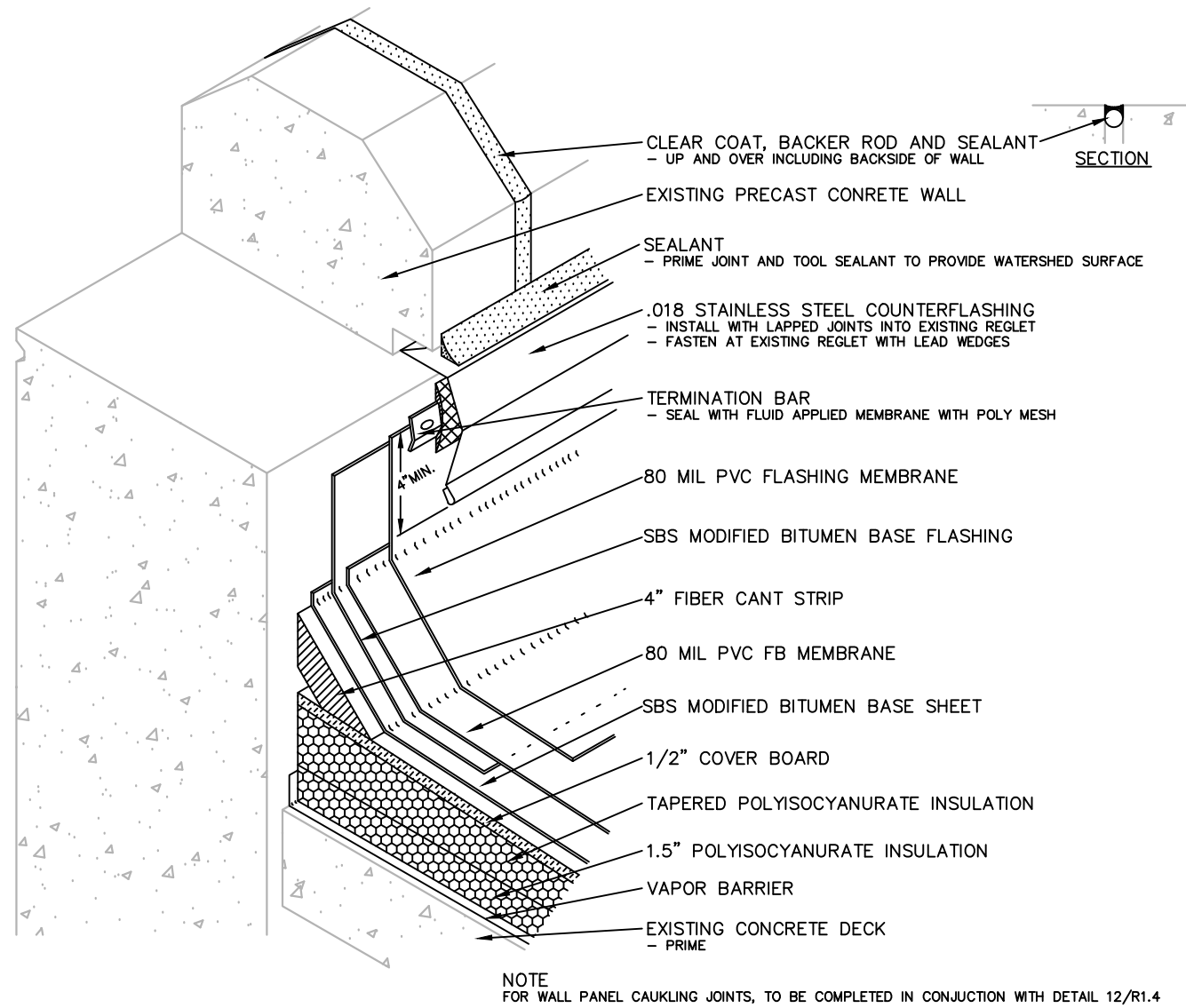
Actual Size to read at scale



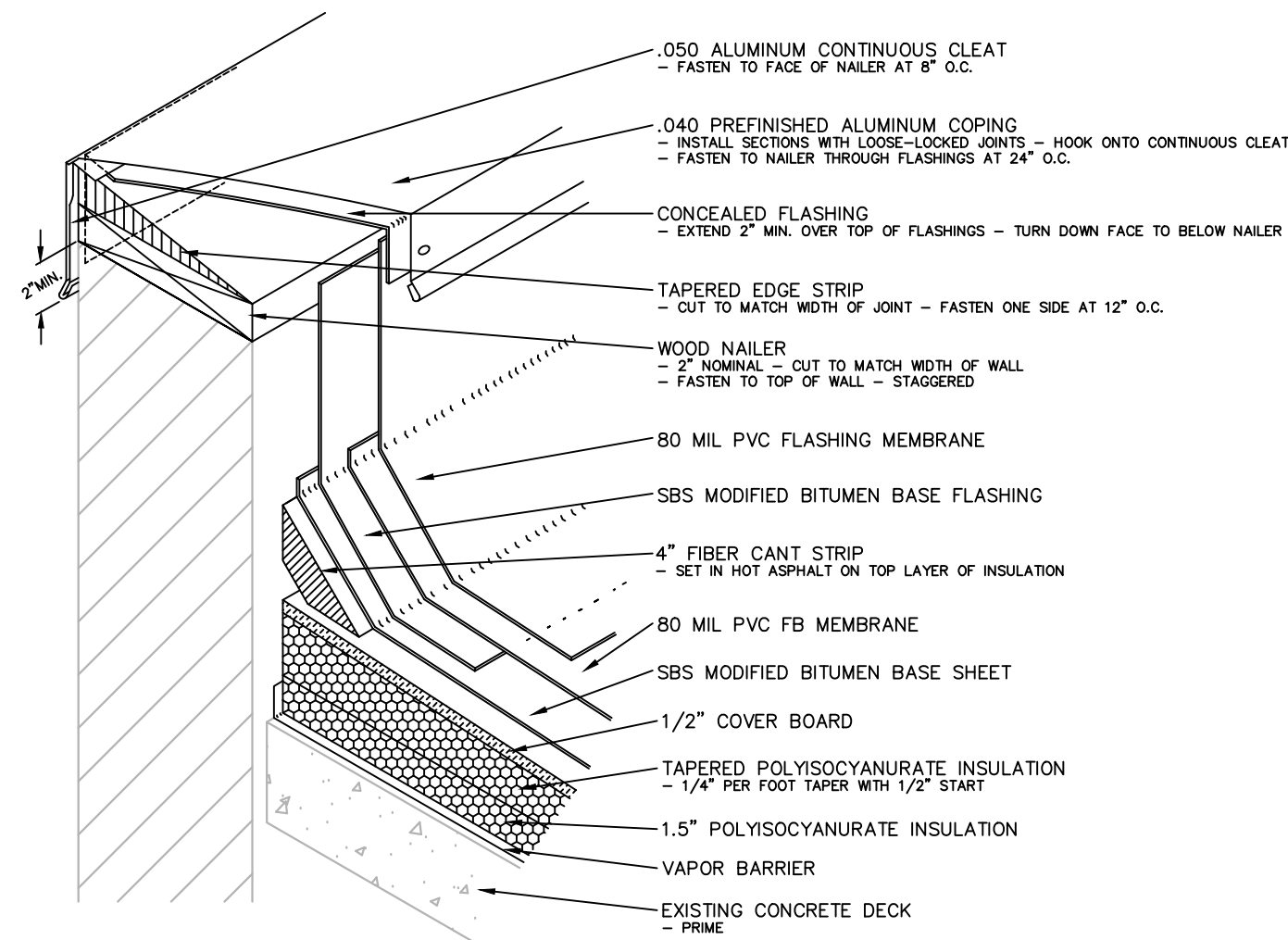
PROJECT  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

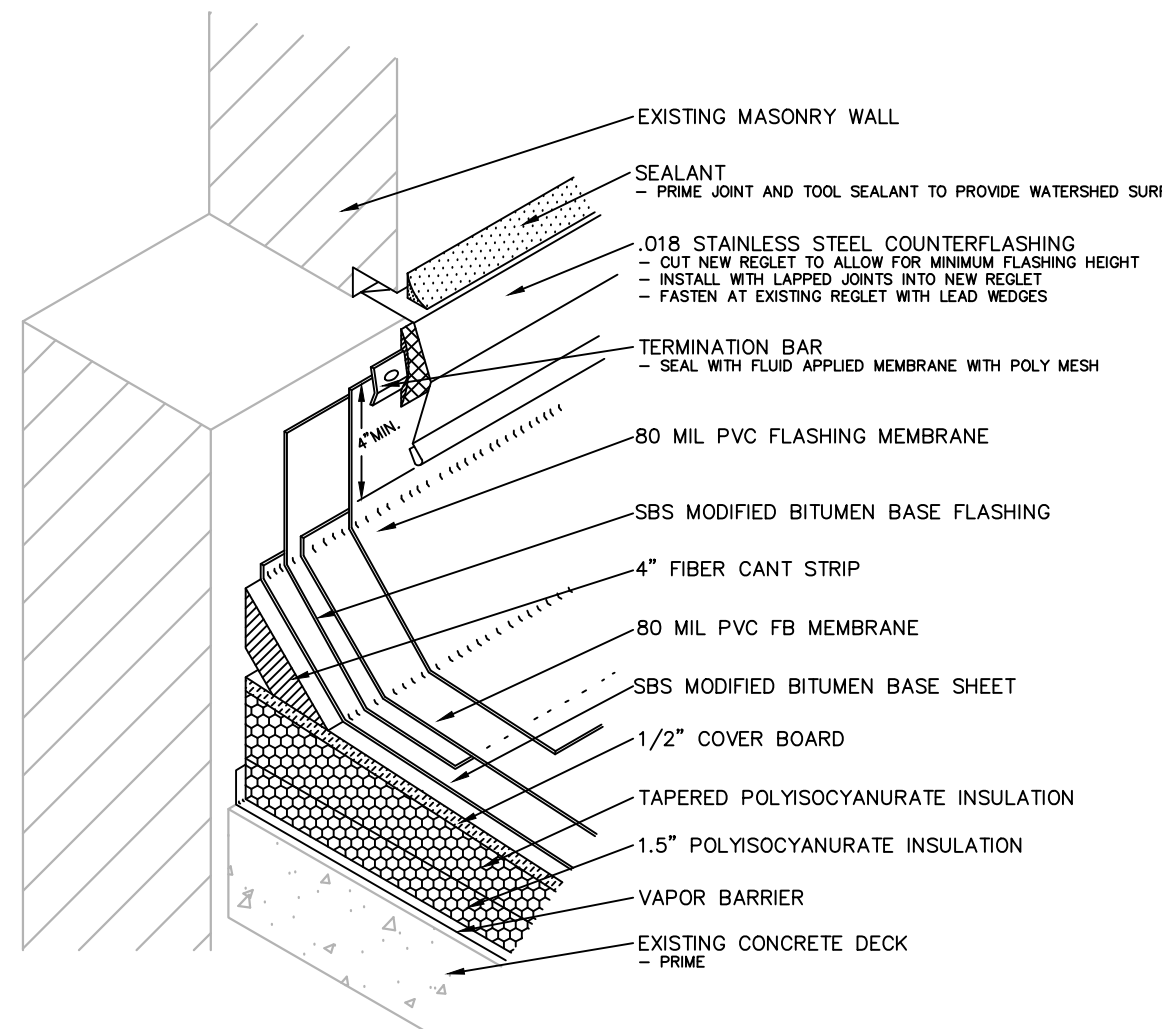
**District of Columbia  
Department of Corrections**



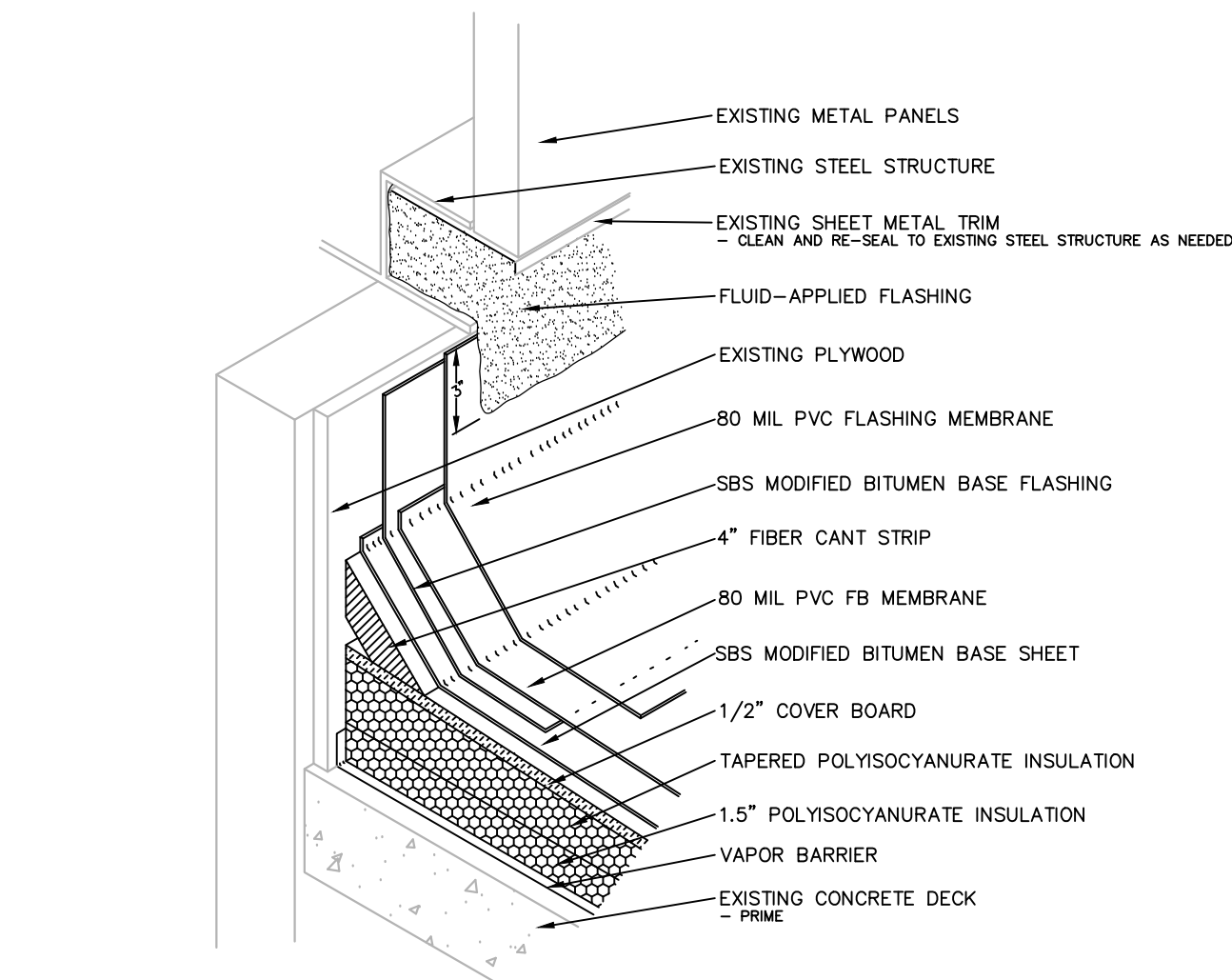
**1 PARAPET FLASHING**  
N.T.S



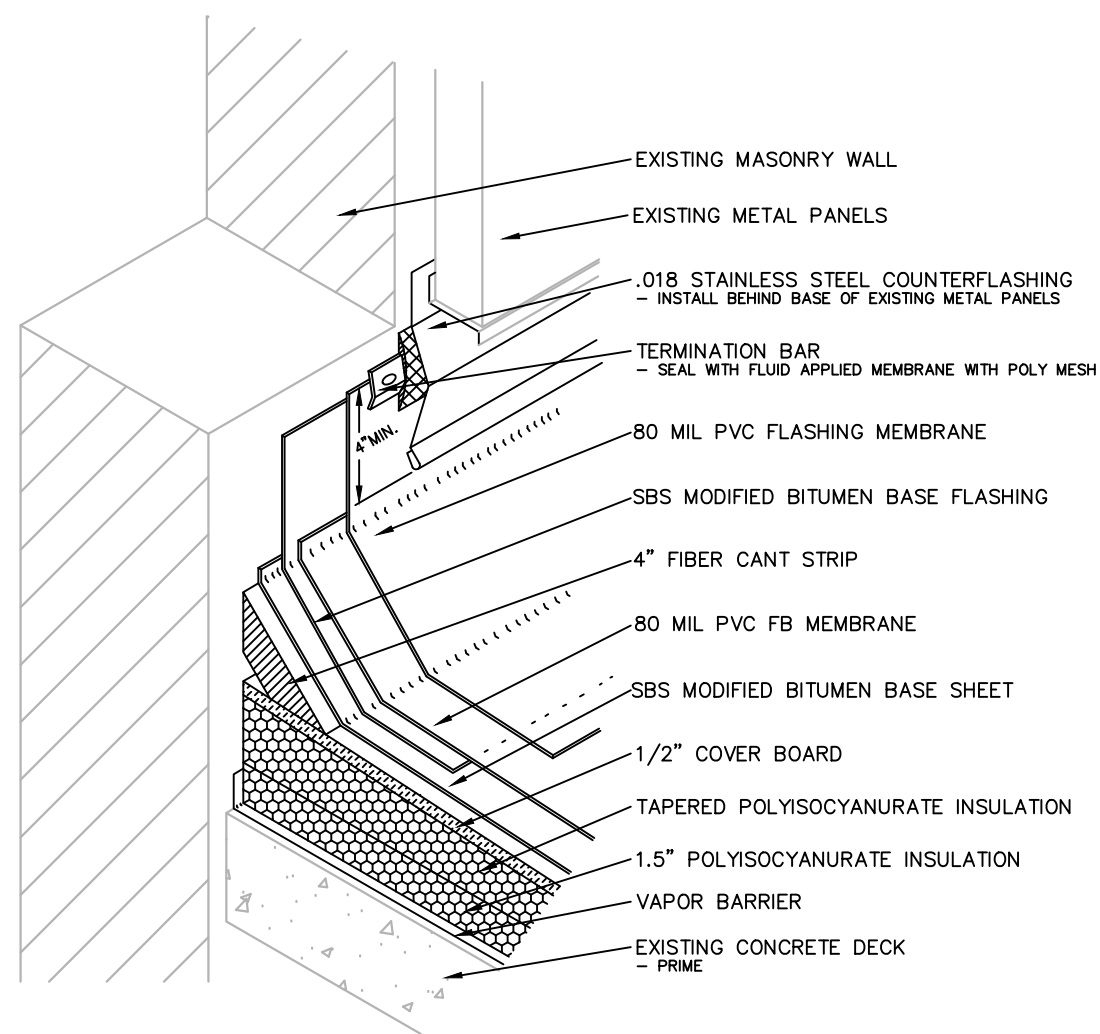
**2 PARAPET FLASHING**  
N.T.S



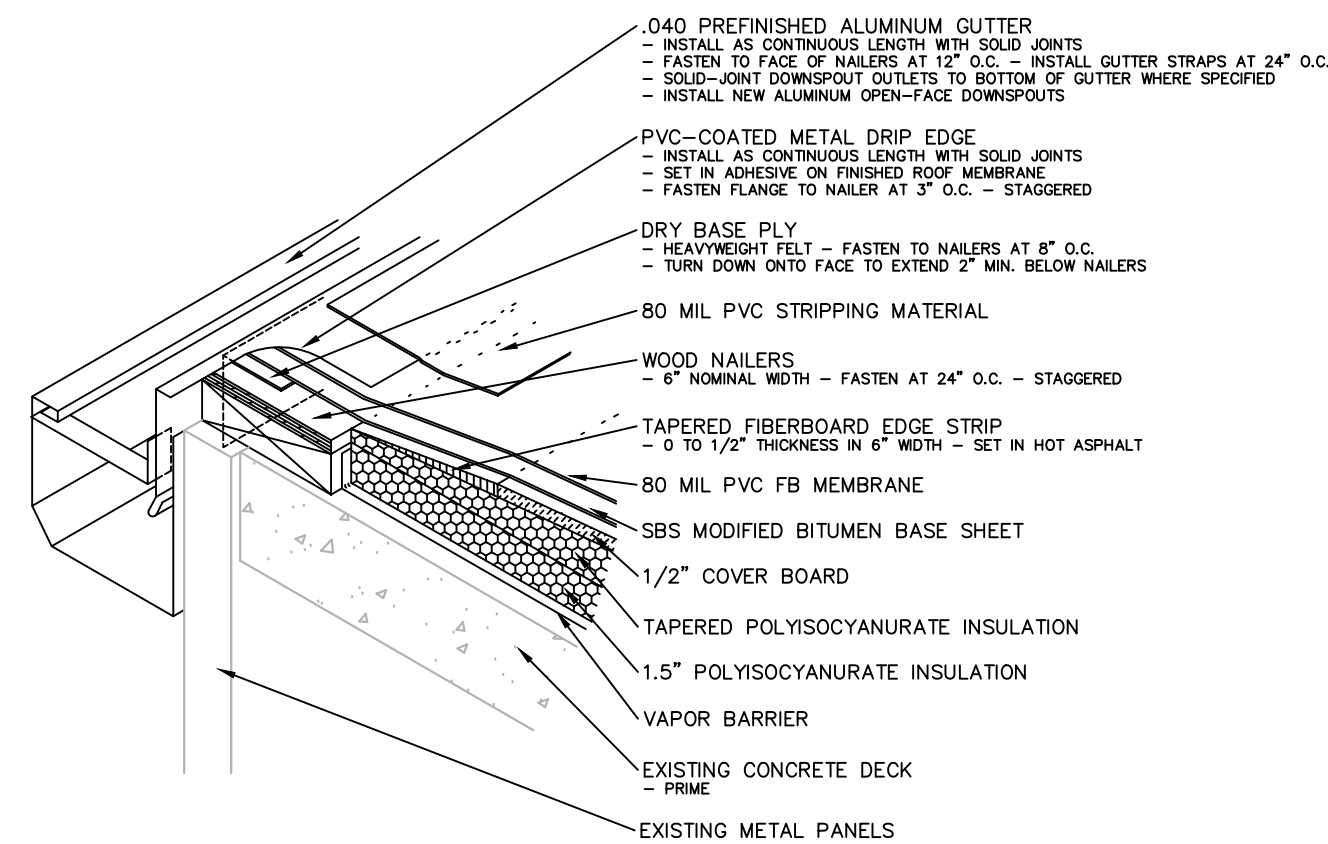
**3 WALL FLASHING**  
N.T.S



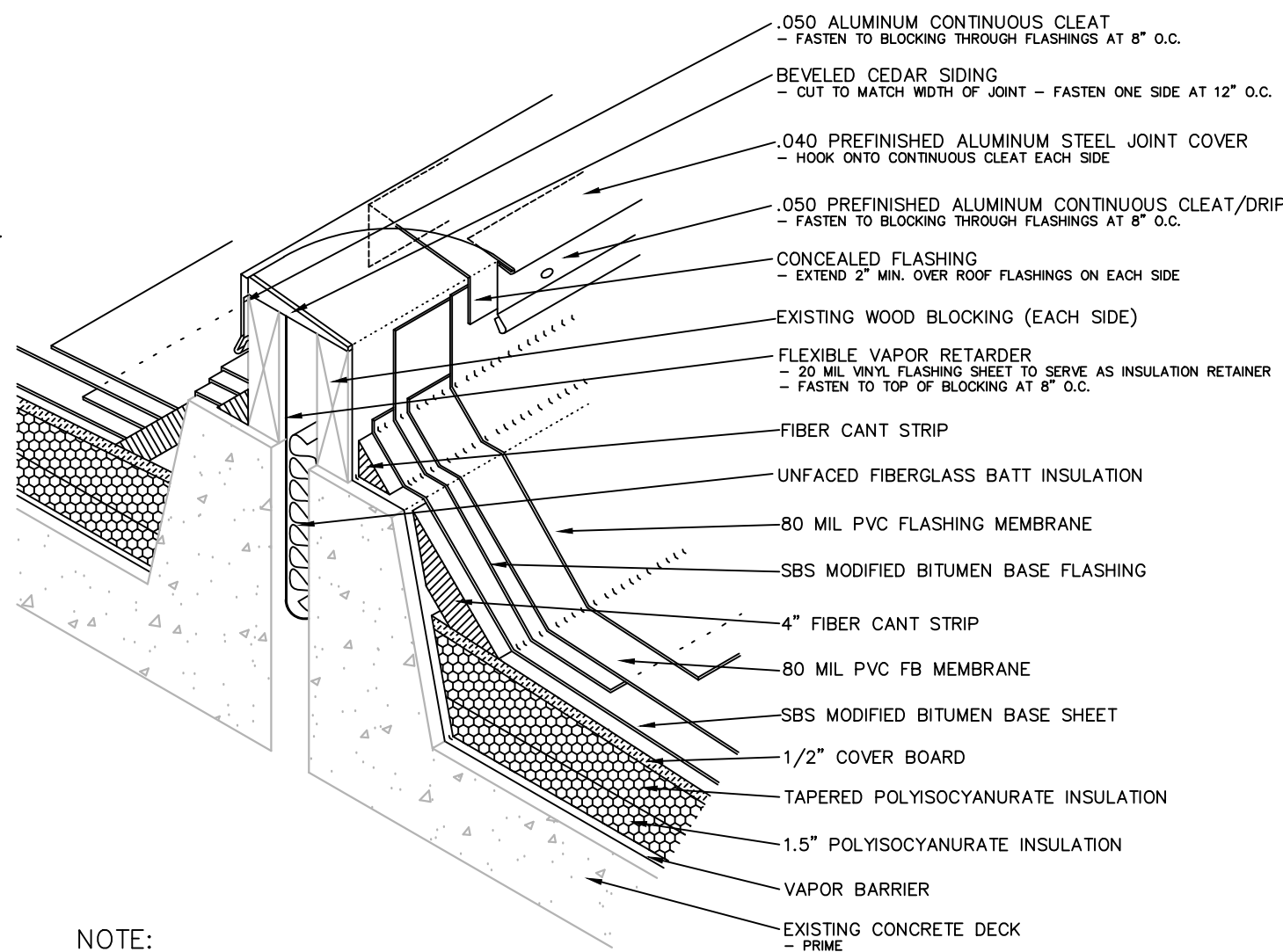
**4 WALL FLASHING**  
N.T.S



**5 WALL FLASHING**  
N.T.S

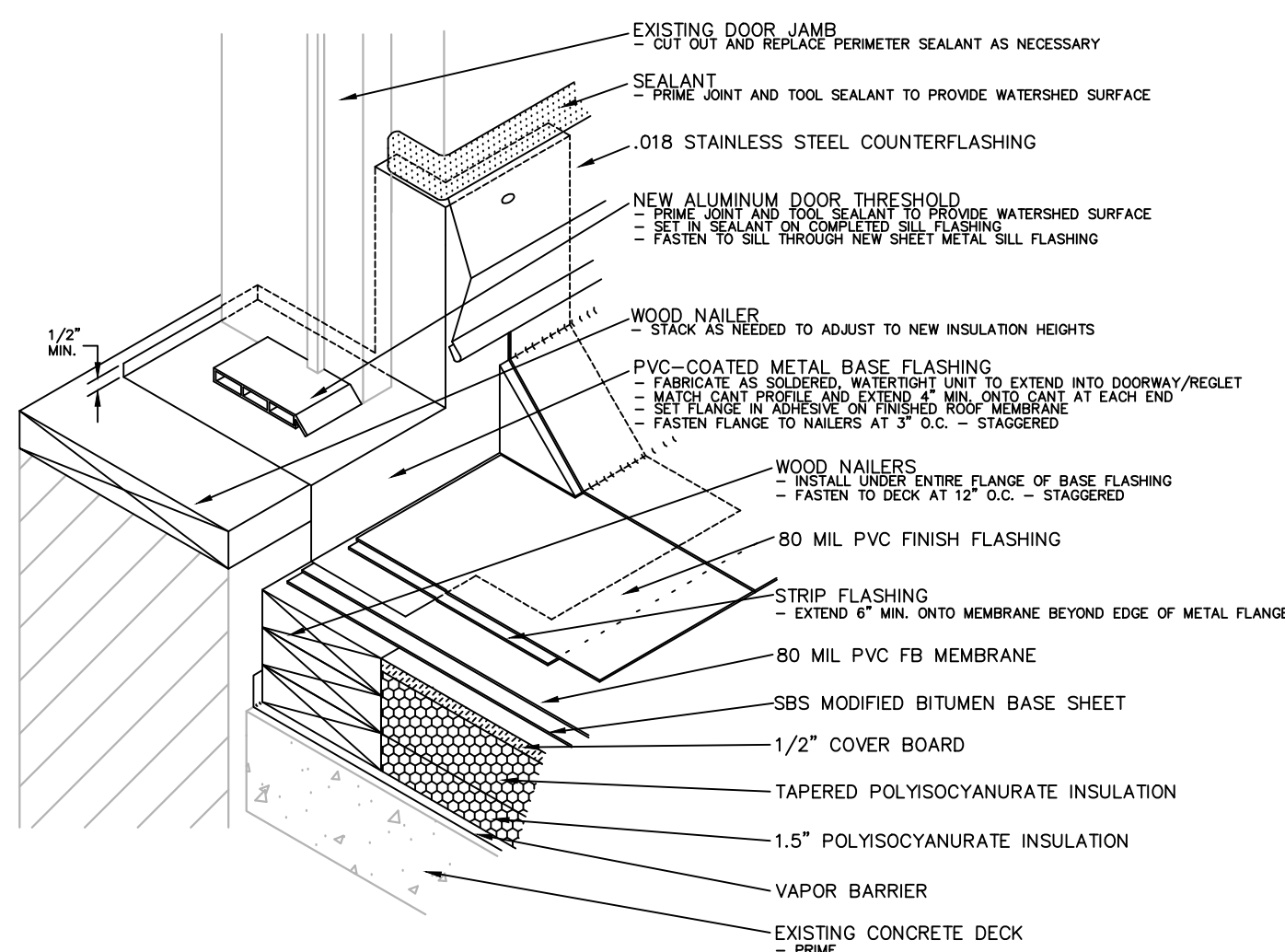


**6 GUTTER EDGE**  
N.T.S

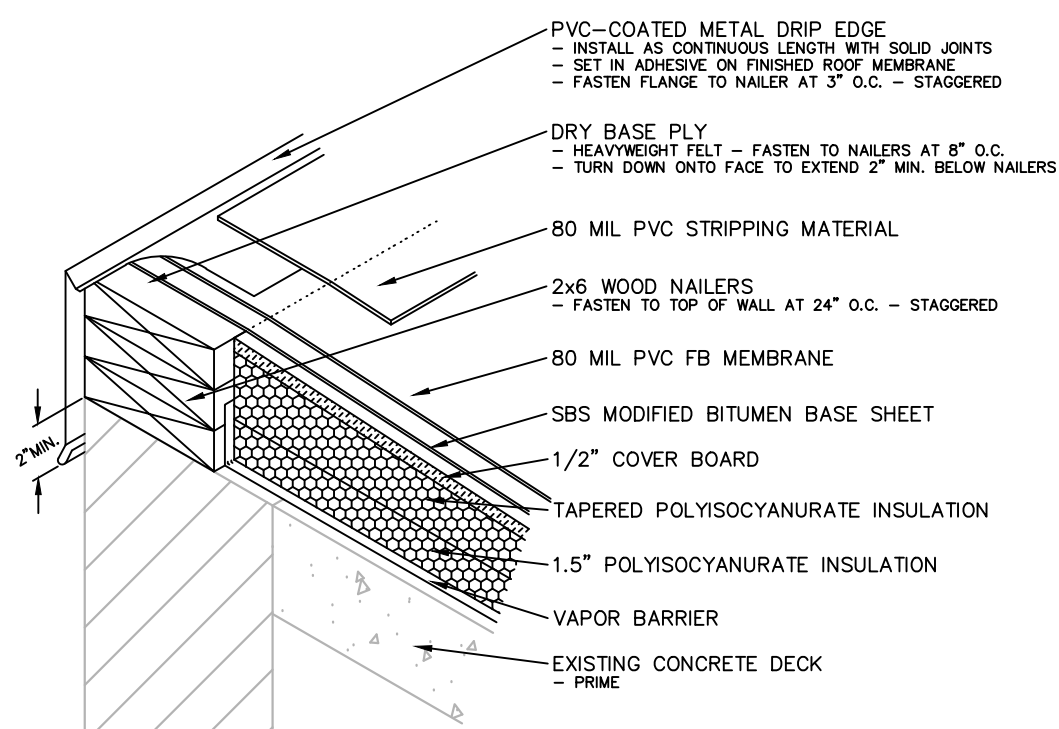


NOTE:  
CONSTRUCTION IS SIMILAR ON EACH SIDE

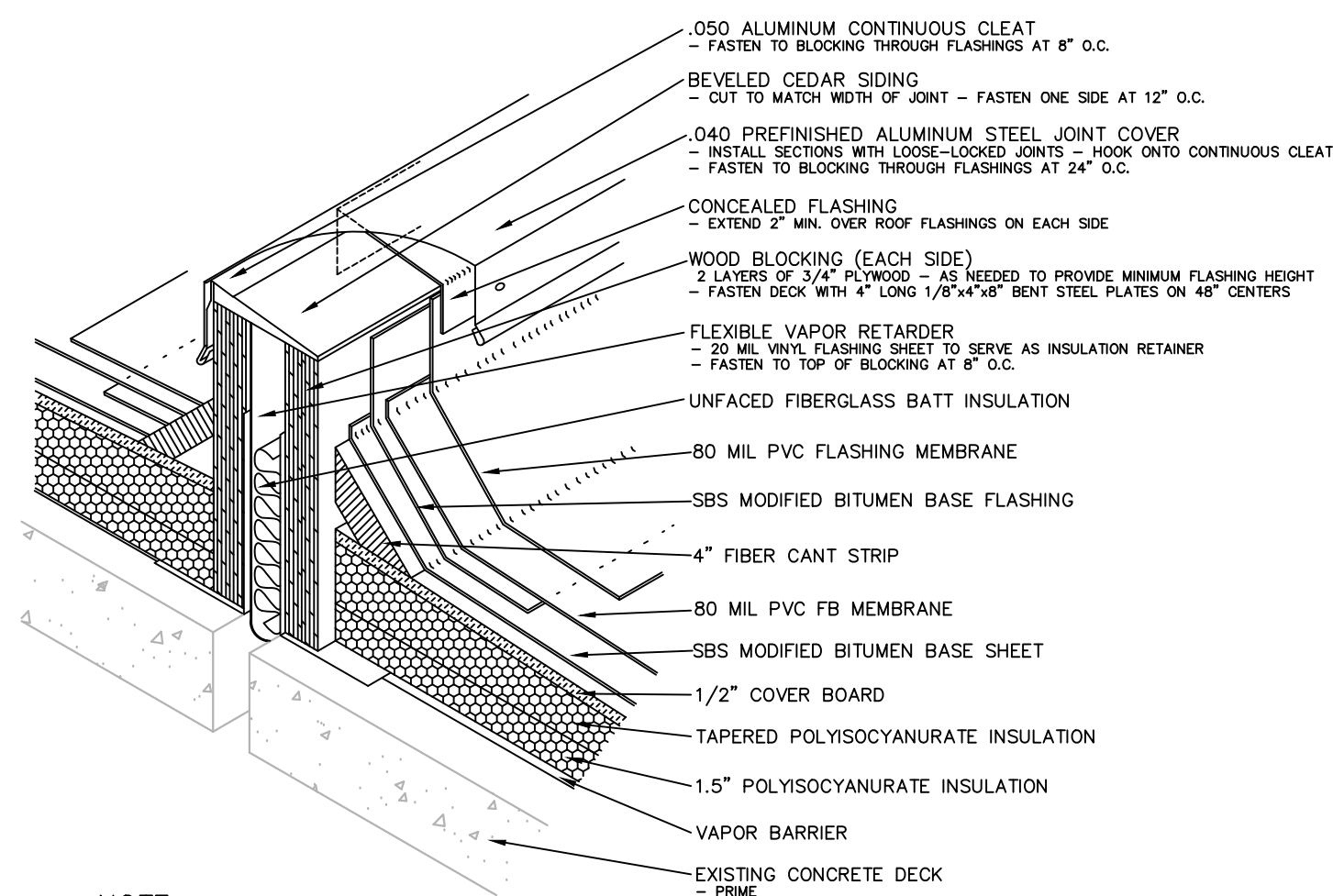
**7 EXPANSION JOINT FLASHING**  
N.T.S



**8 DOOR THRESHOLD FLASHING**  
N.T.S

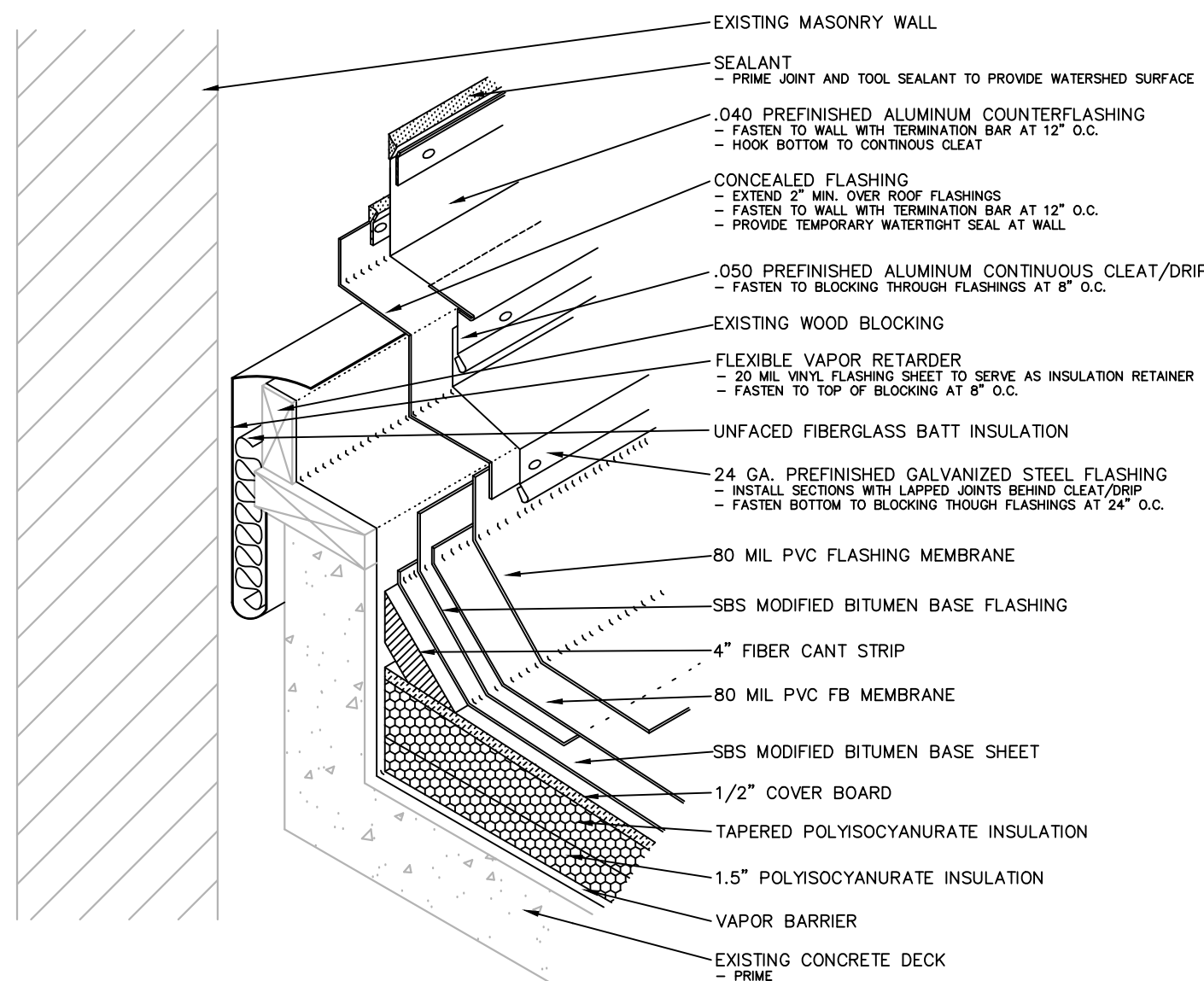


**9 ROOF EDGE FLASHING**  
N.T.S

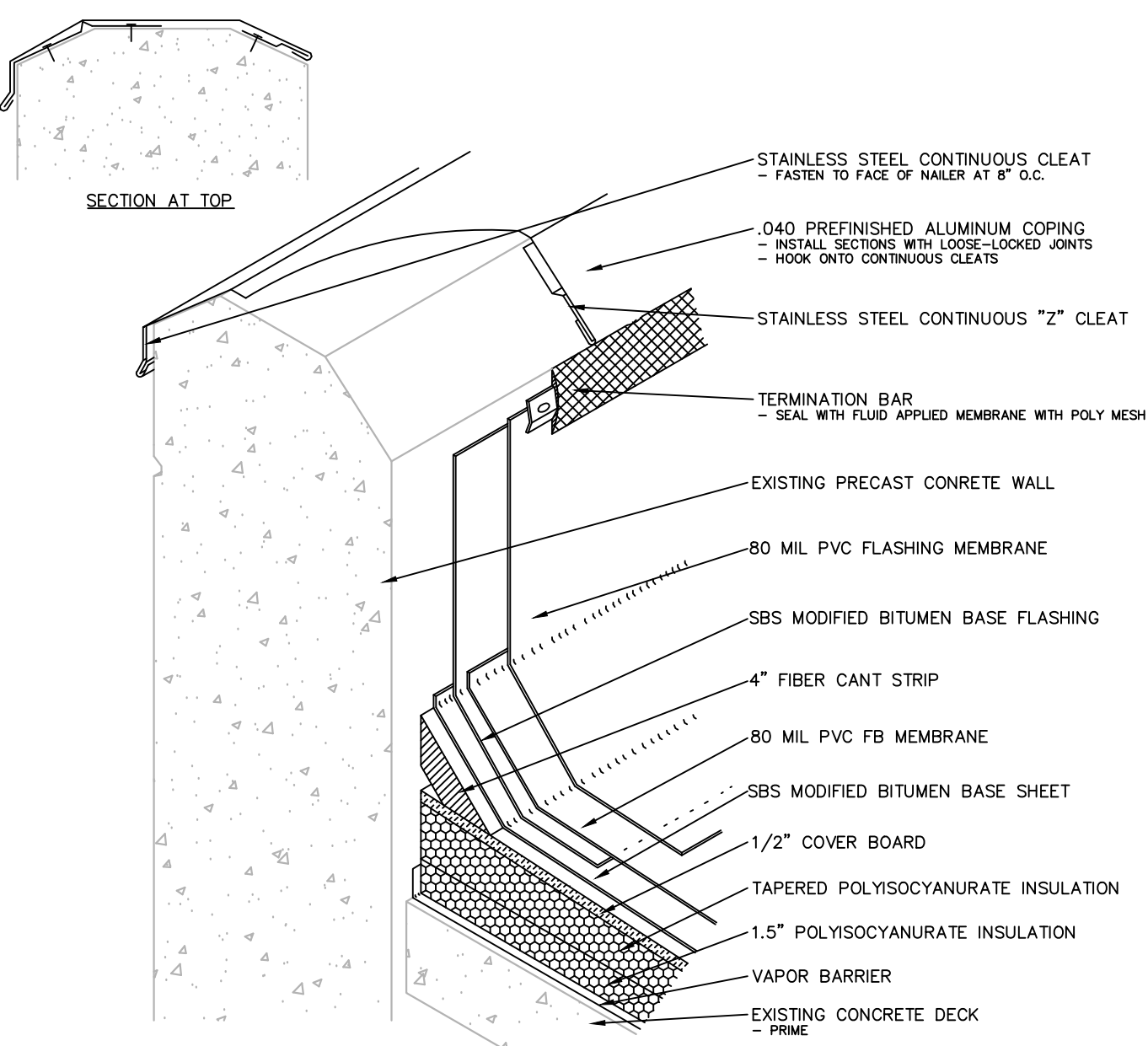


NOTE:  
CONSTRUCTION IS SIMILAR ON EACH SIDE

**10 CONTROL JOINT FLASHING**  
N.T.S



**11 WALL EXPANSION JOINT FLASHING**  
N.T.S



**12 PARAPET FLASHING ALT. ADD. 2**  
N.T.S

NUMBER	DATE	COMMENTS
•		
•		
•		
•		
•		
•		
•		
•		
•		

IN-PROGRESS  
NOT FOR  
CONSTRUCTION

3/11/16 95% REVIEW SET

DRAWING TITLE  
**ROOF DETAILS -  
TYPE 1 ROOF**

SHEET NUMBER

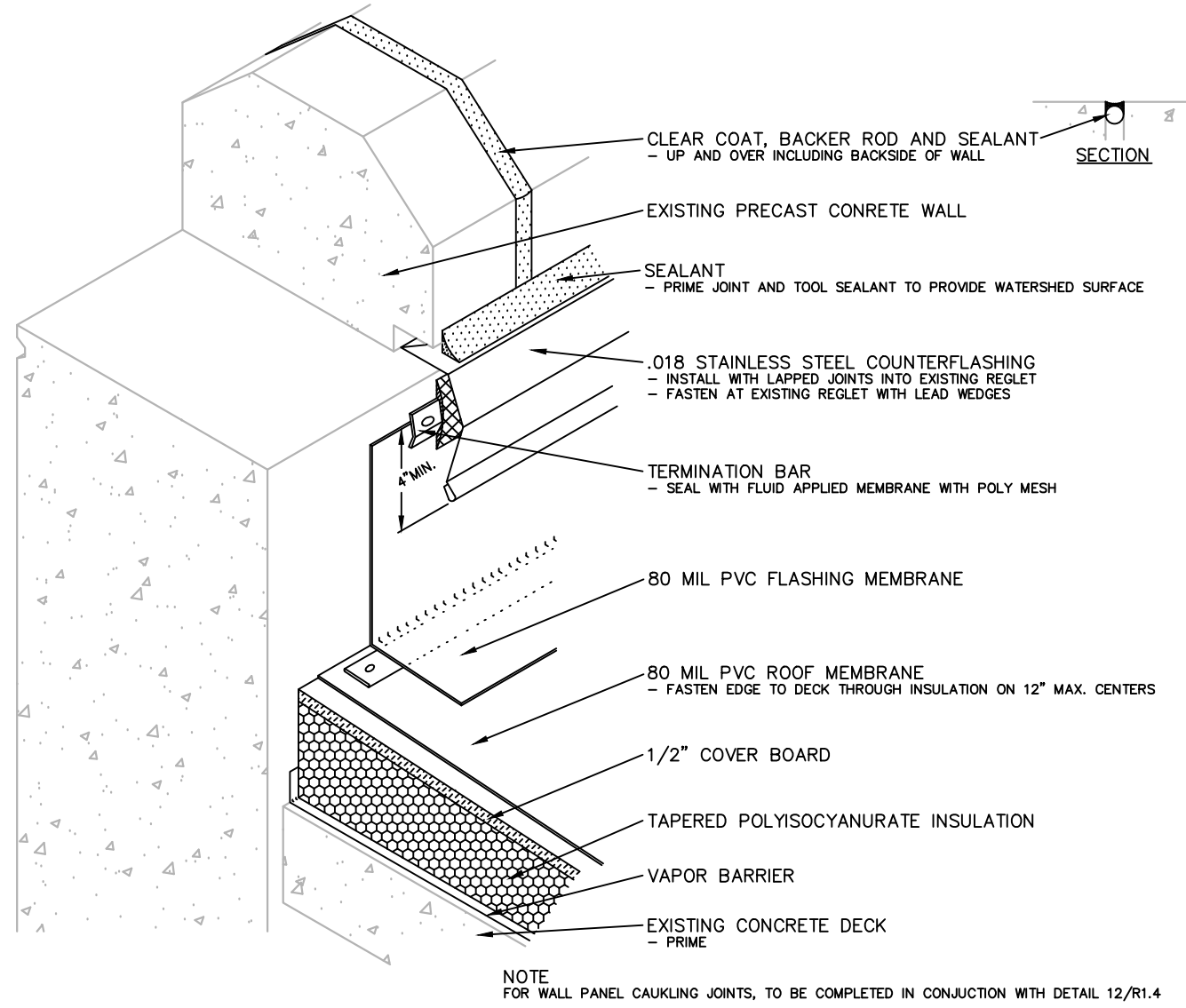
**R1.4**



PROJECT  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

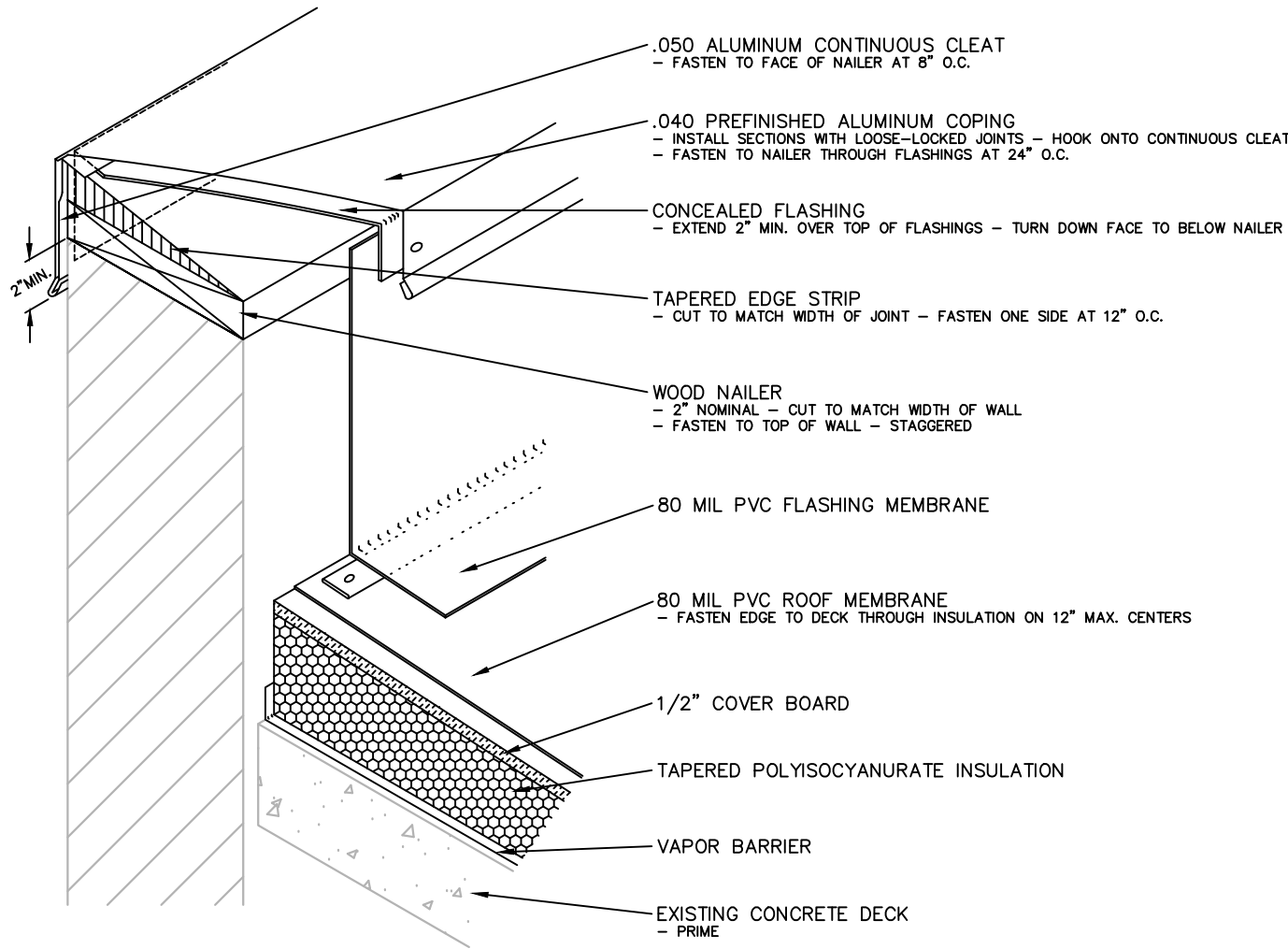
**District of Columbia  
Department of Corrections**



NOTE: FOR WALL PANEL, CAULKING JOINTS, TO BE COMPLETED IN CONJUNCTION WITH DETAIL 12/R1.4

**1 PARAPET FLASHING**

N.T.S.



**2 PARAPET FLASHING**

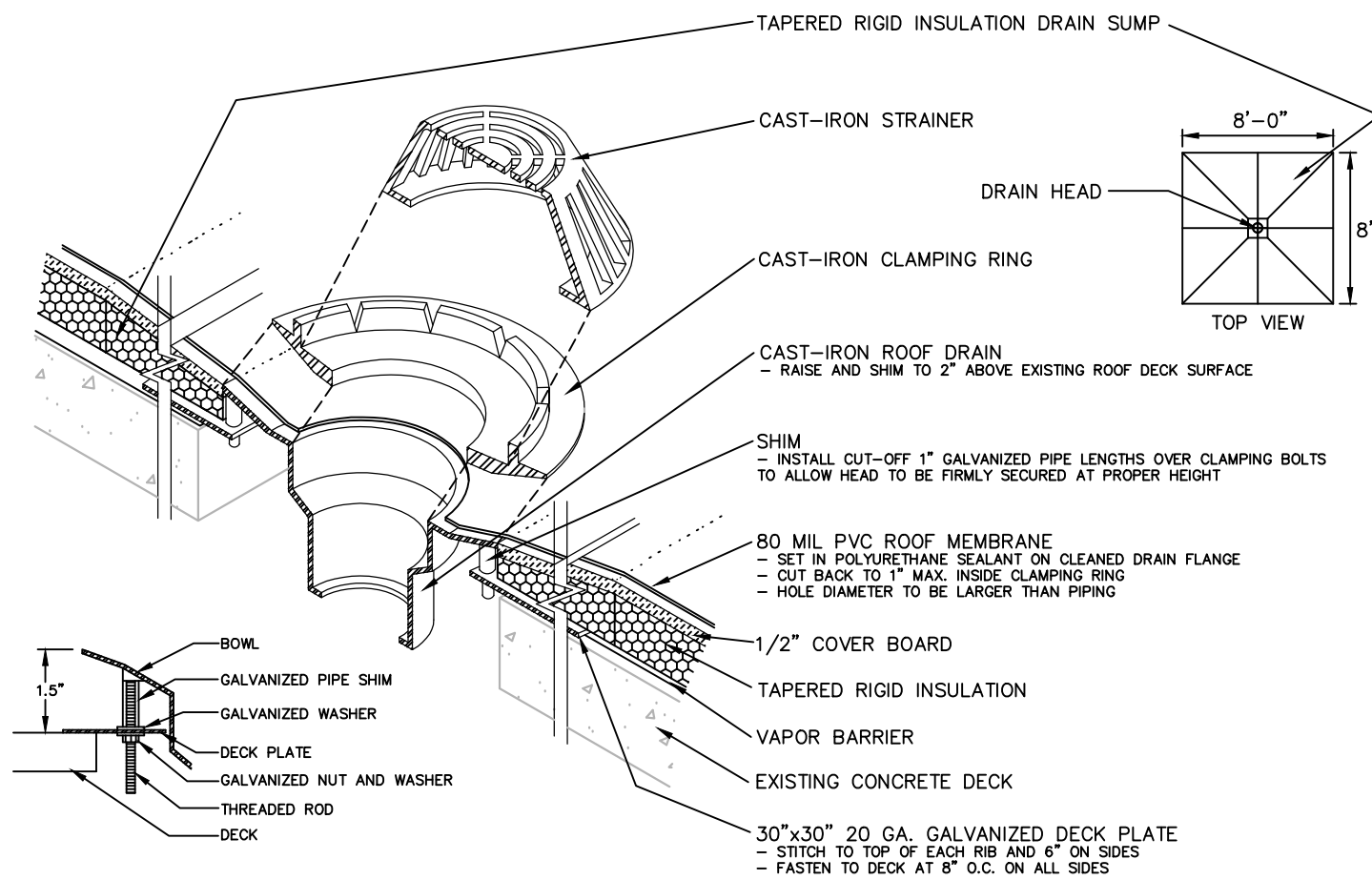
N.T.S.

**3 NOT USED**

N.T.S.

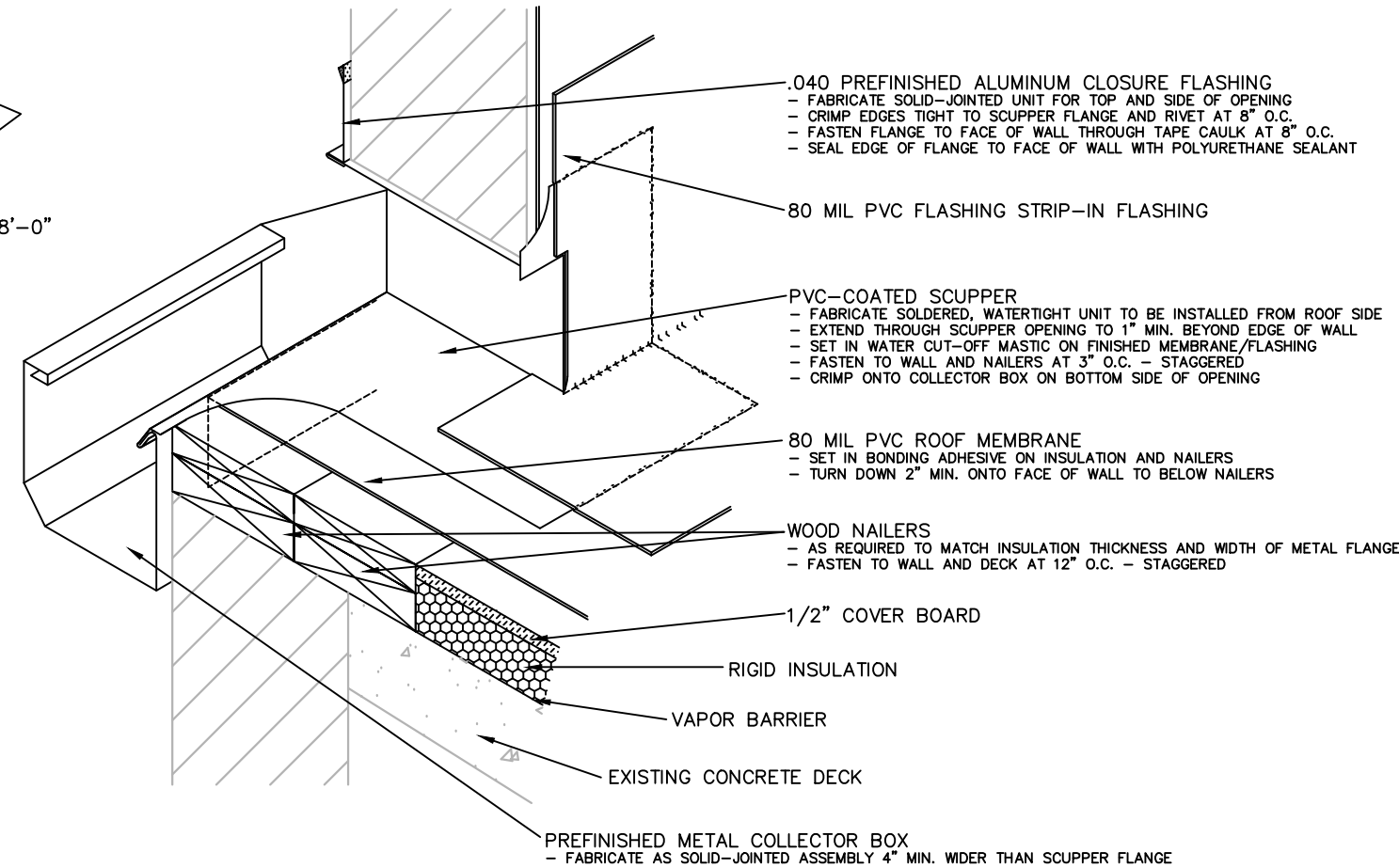
**4 NOT USED**

N.T.S.



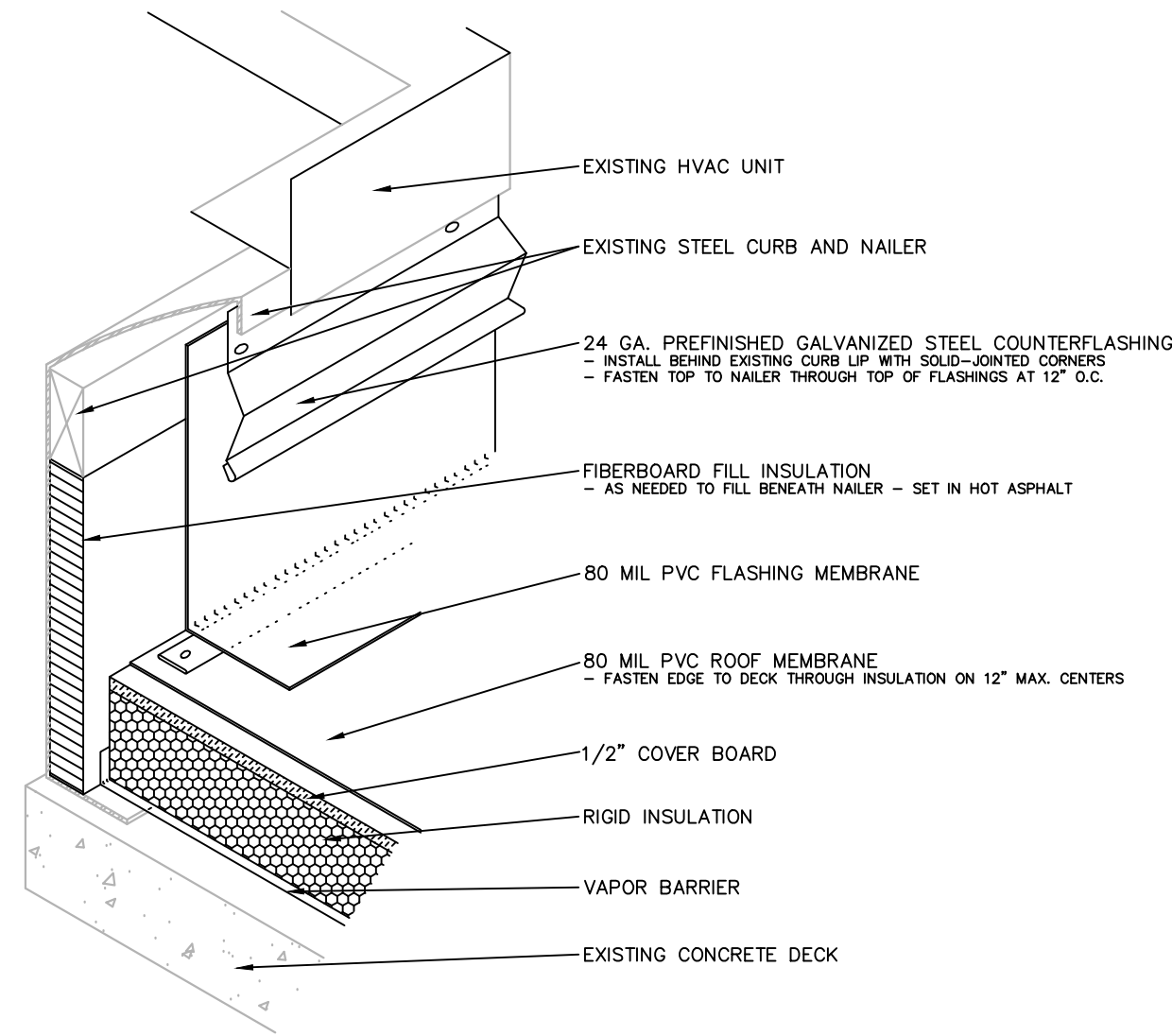
**5 TYPICAL ROOF DRAIN**

N.T.S.



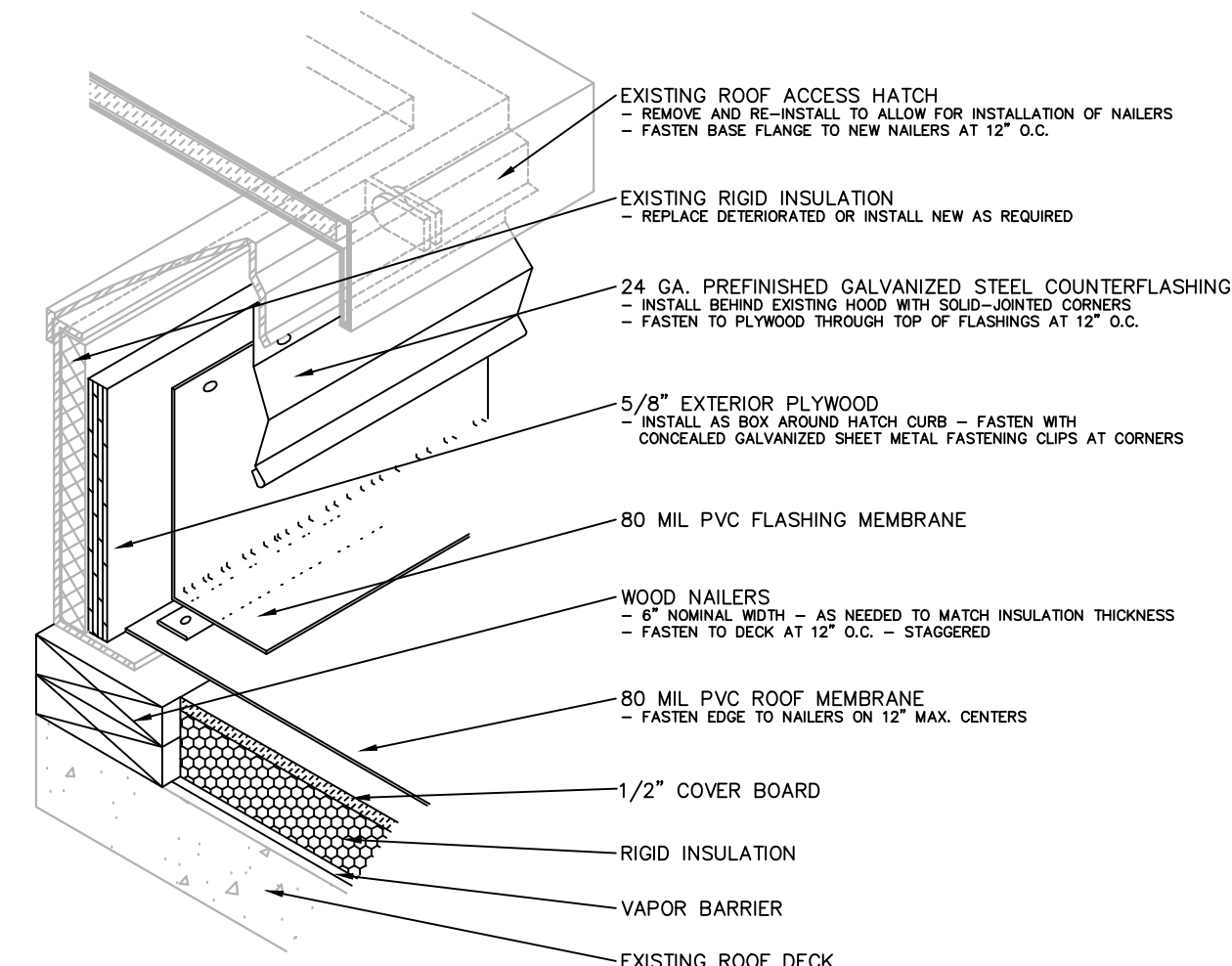
**6 TYPICAL SCUPPER**

N.T.S.



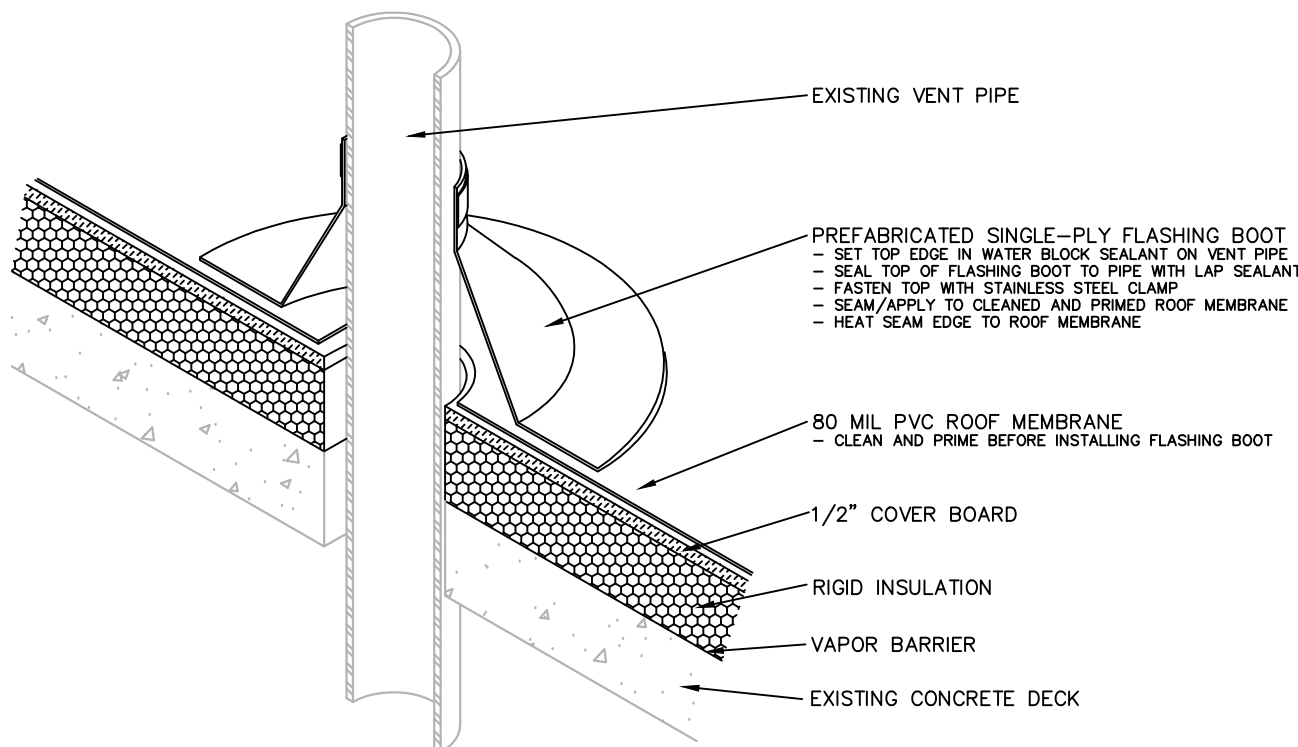
**7 TYPICAL HVAC CURB**

N.T.S.



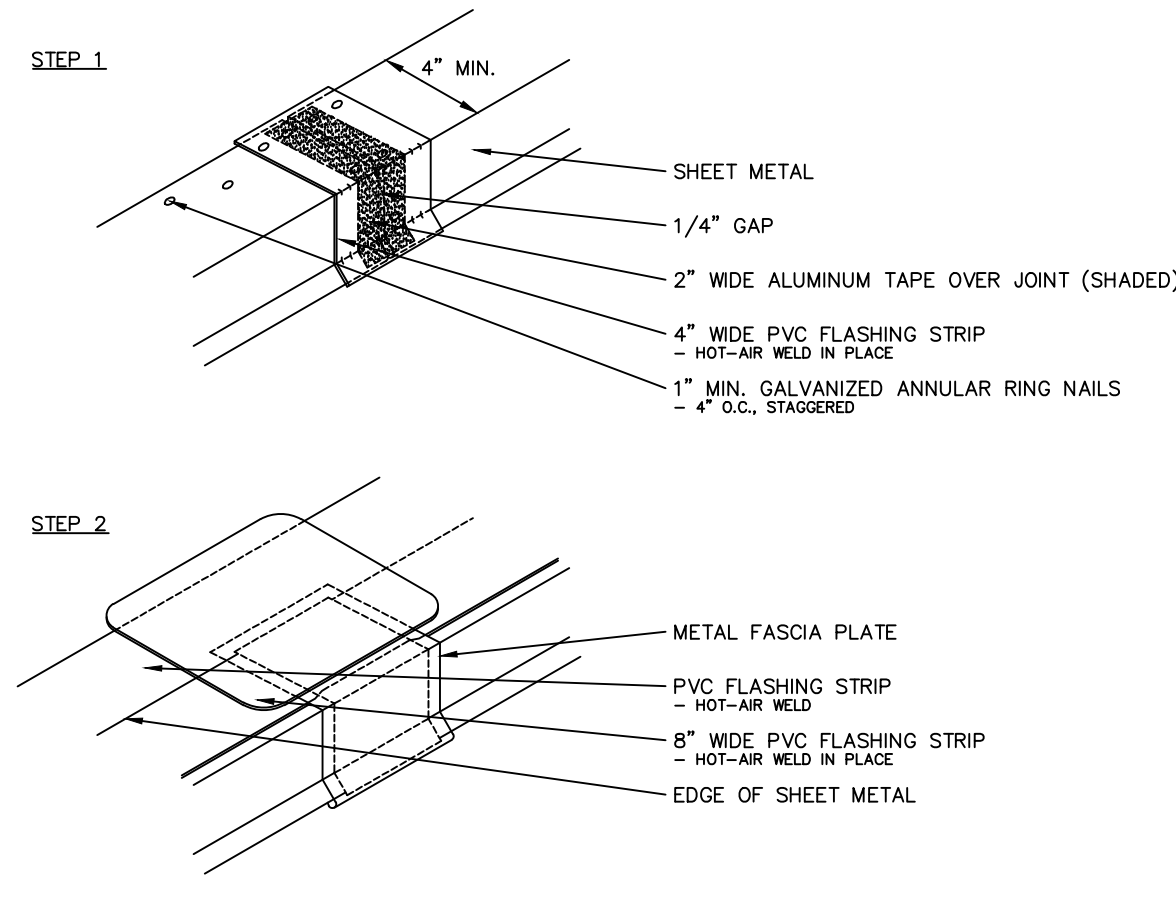
**8 TYPICAL ROOF HATCH**

N.T.S.



**9 TYPICAL VENT PIPE**

N.T.S.



NOTE: REFER TO INDIVIDUAL DETAILS FOR CONSTRUCTION

**10 TYPICAL METAL JOINT FABRICATION**

N.T.S.

**11 NOT USED**

N.T.S.

**12 NOT USED**

N.T.S.

DRAWING DATES		
NUMBER	DATE	COMMENTS

IN-PROGRESS NOT FOR CONSTRUCTION		
	3/11/16	95% REVIEW SET

DRAWING TITLE  
**ROOF / TYPICAL  
DETAILS -  
TYPE 3 ROOF**

SHEET NUMBER

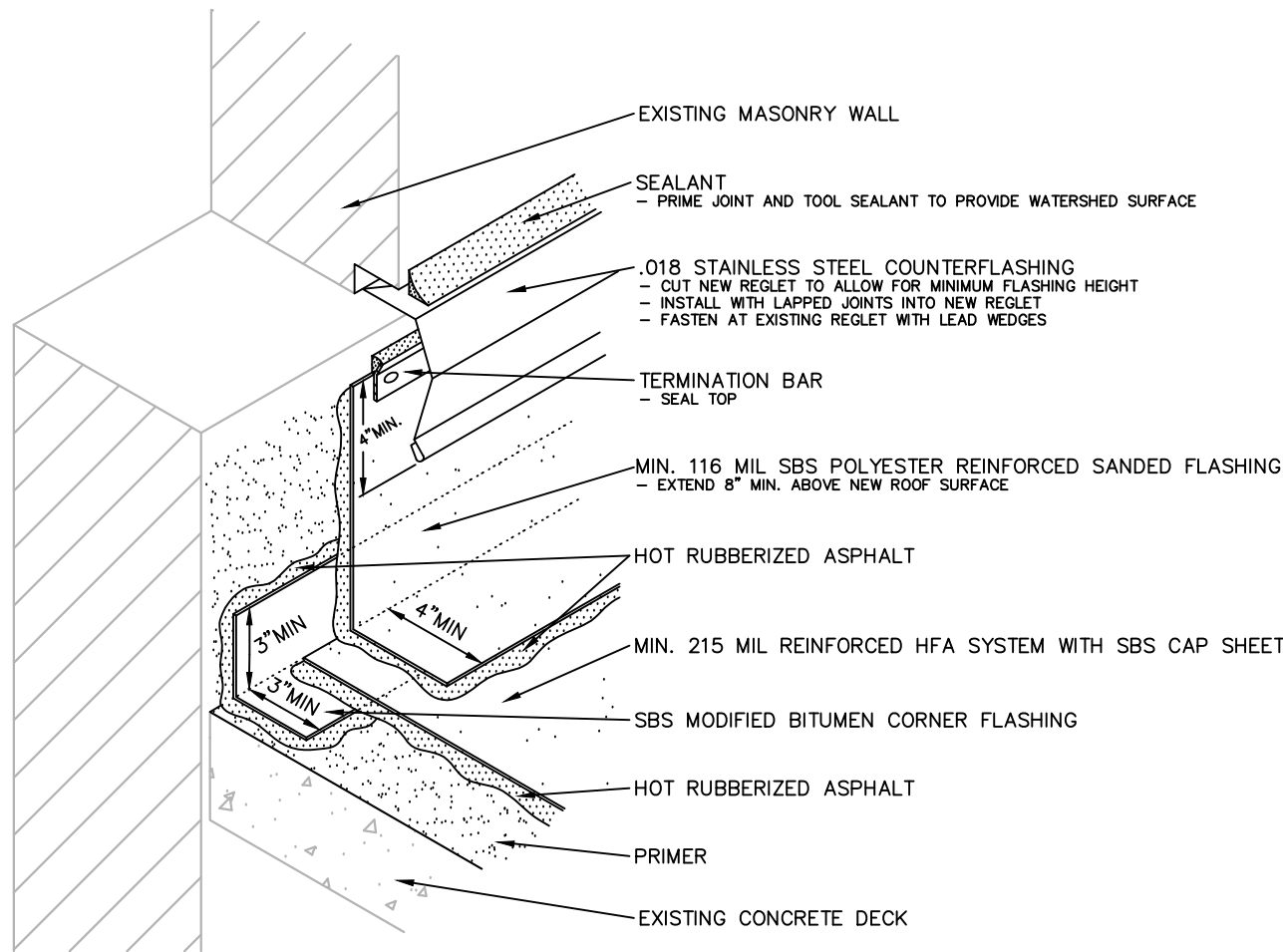
**R1.5**



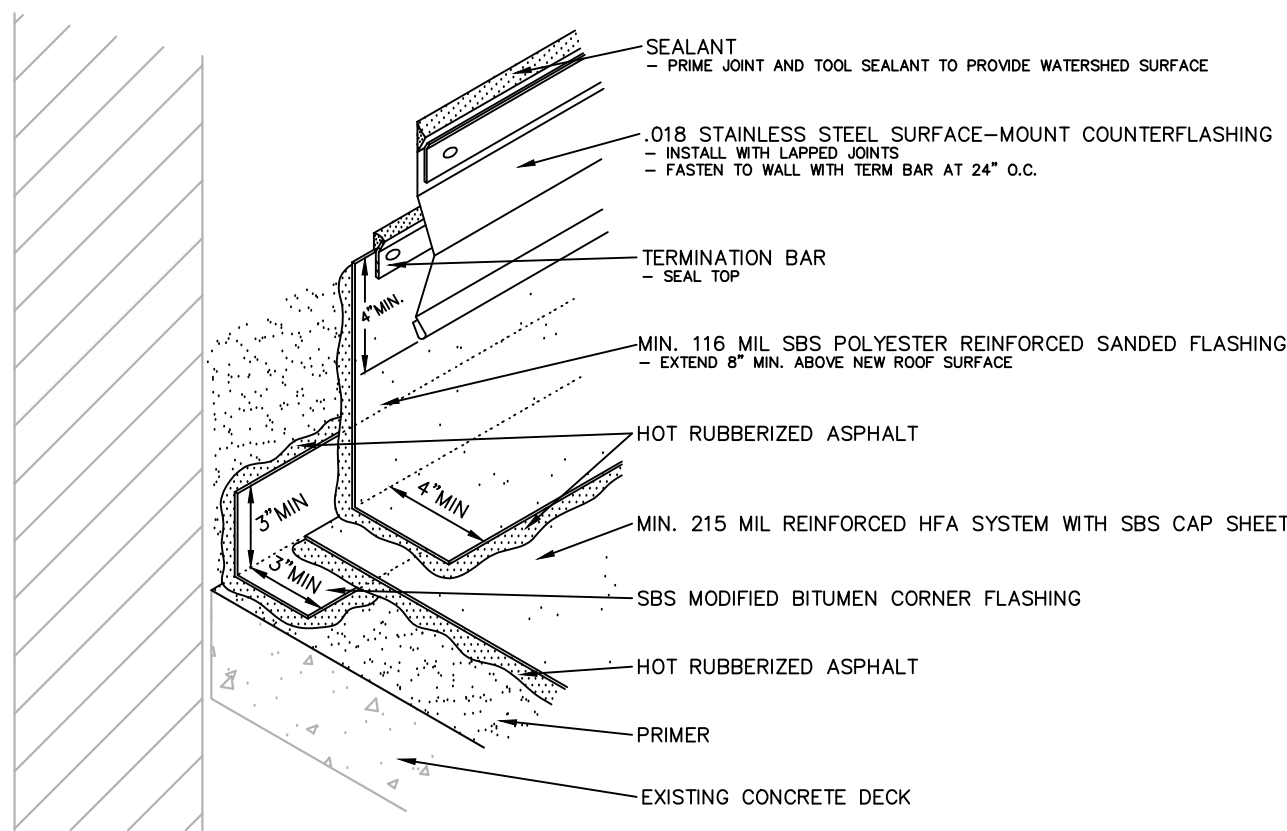
PROJECT  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

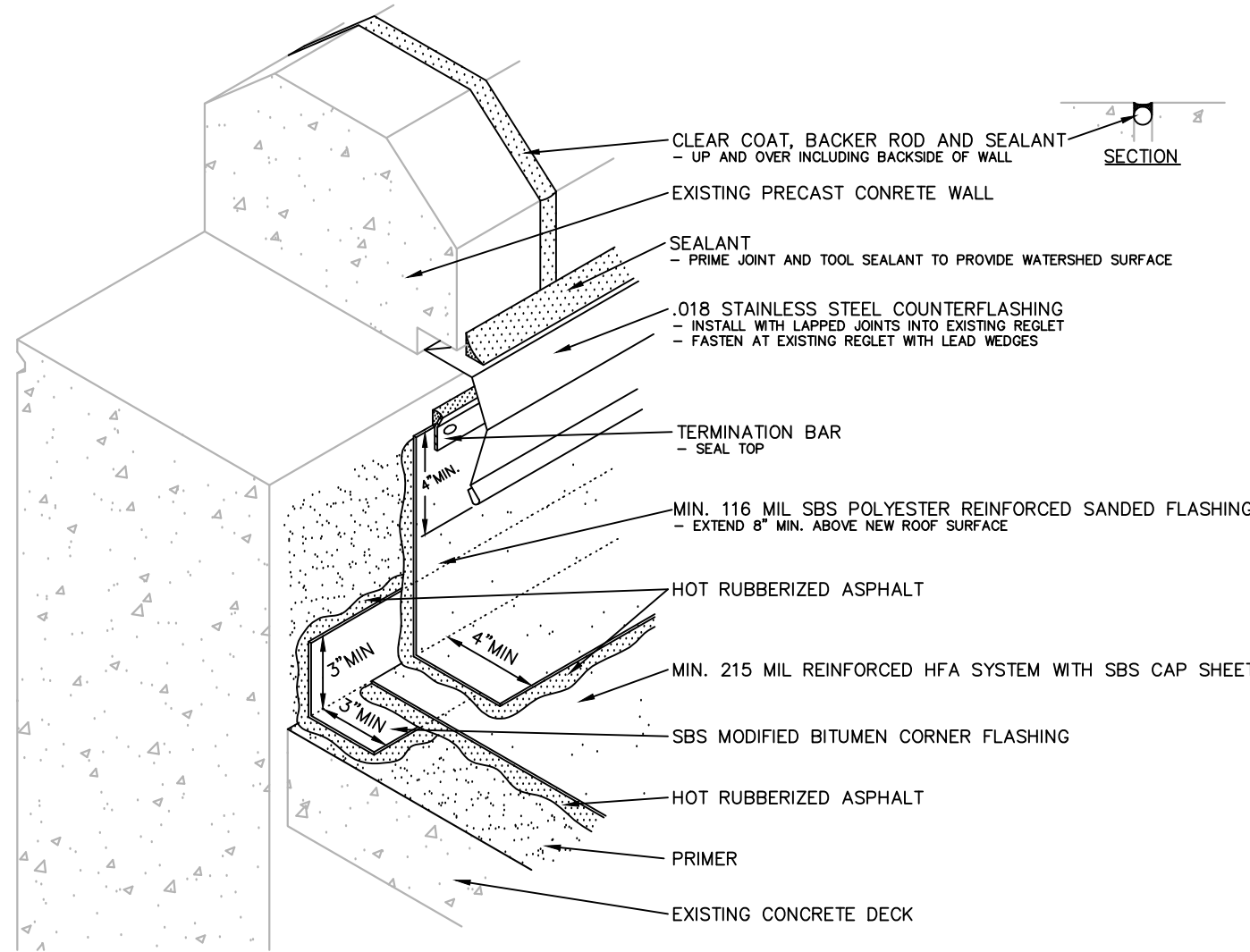
**District of Columbia  
Department of Corrections**



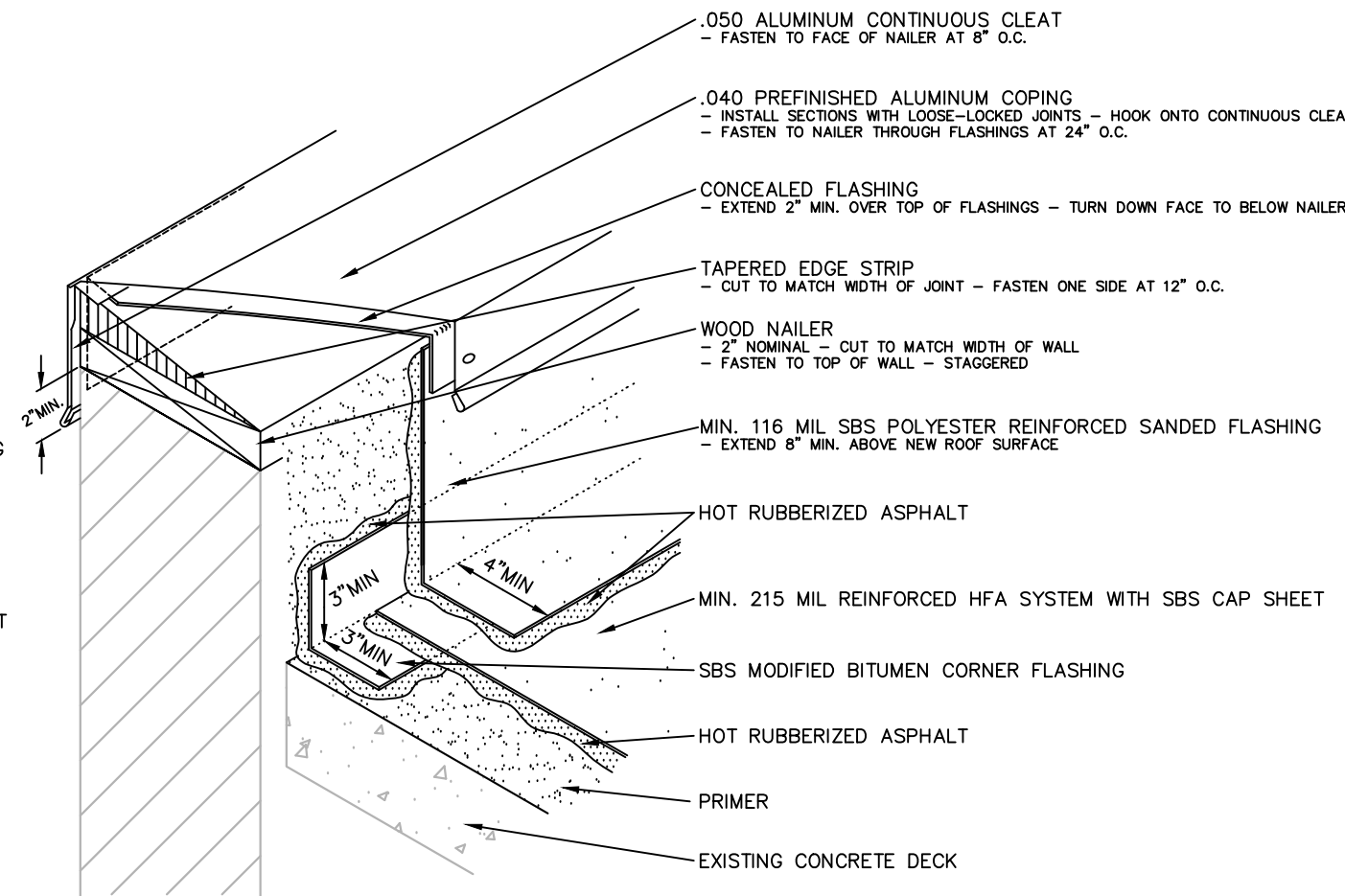
**1 WALL FLASHING**  
N.T.S



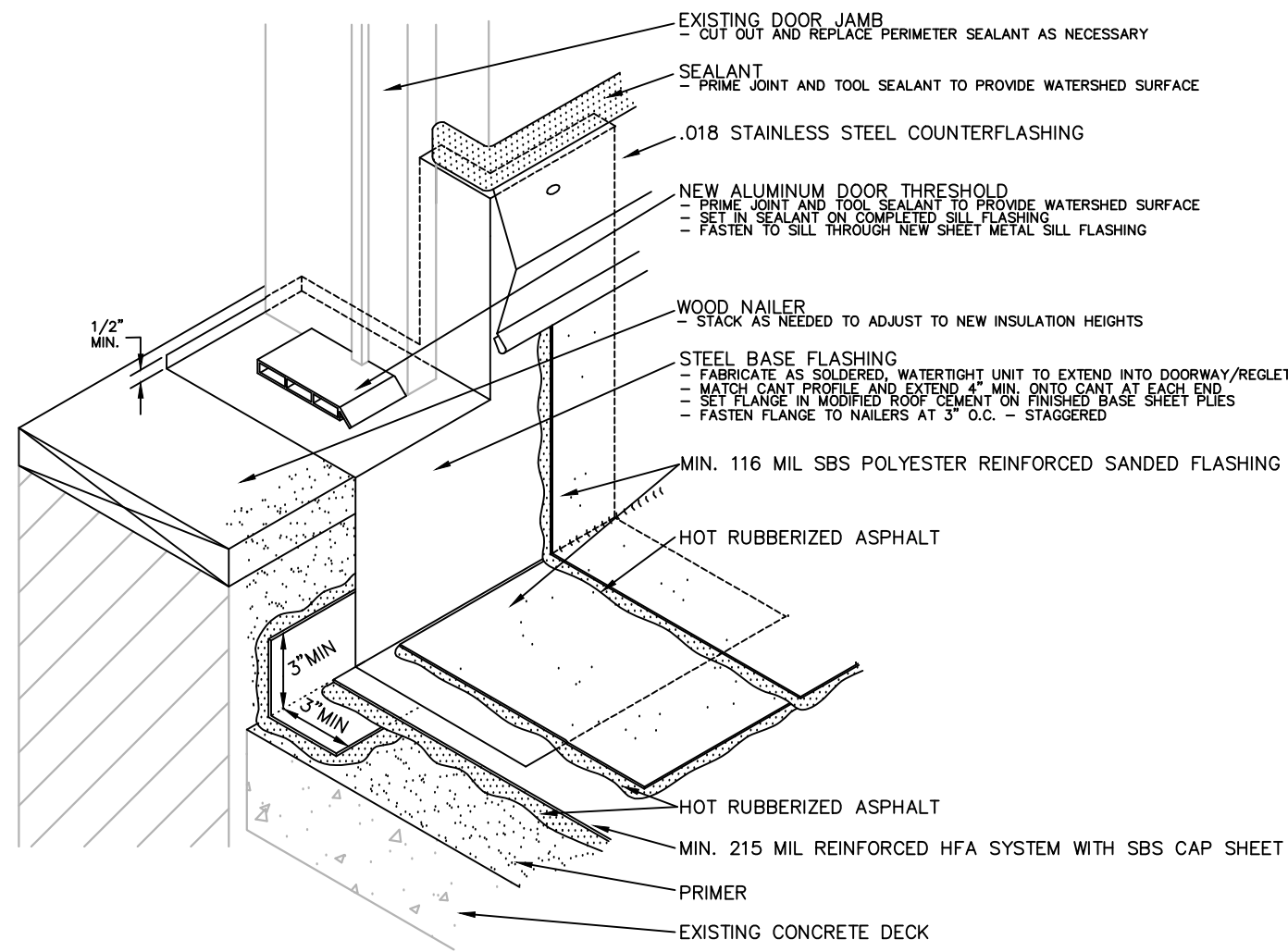
**2 WALL FLASHING**  
N.T.S



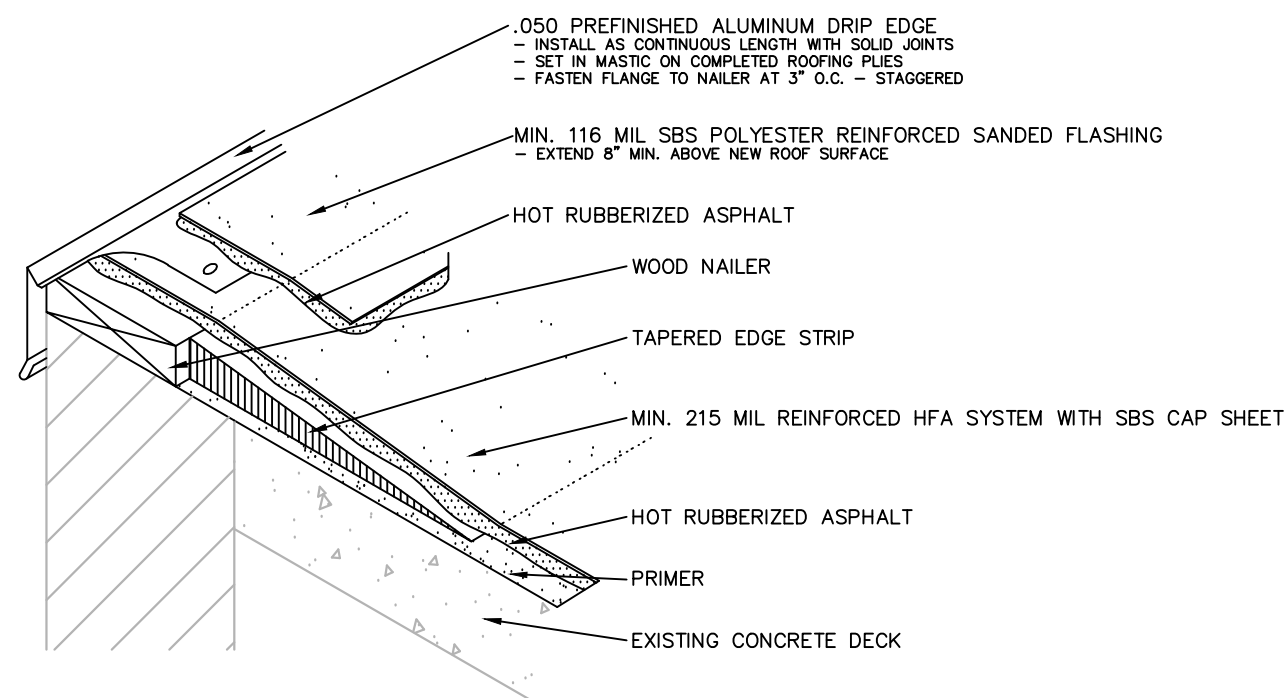
**3 PARAPET FLASHING**  
N.T.S



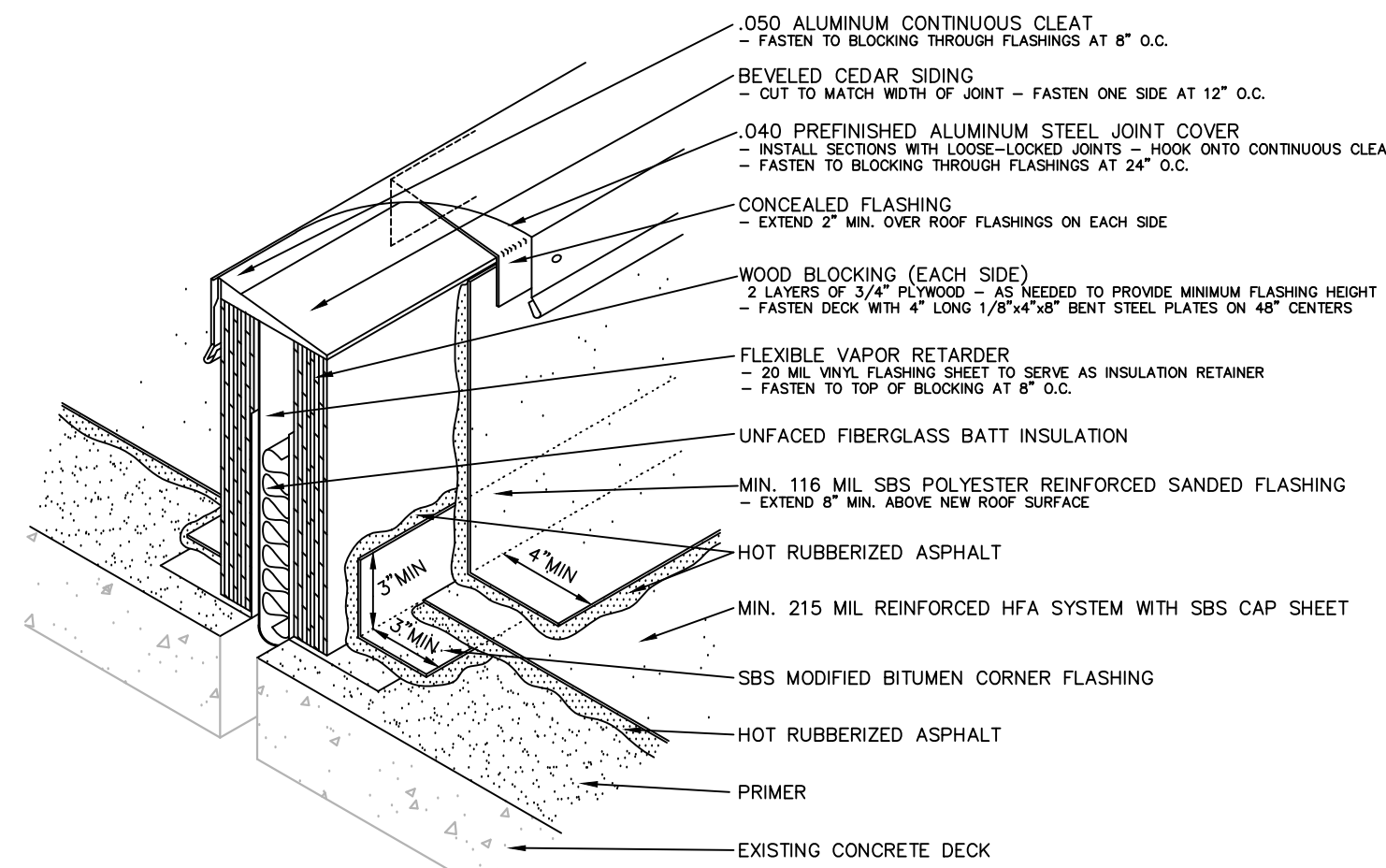
**4 PARAPET FLASHING**  
N.T.S



**5 DOOR THRESHOLD FLASHING**  
N.T.S



**6 ROOF EDGE FLASHING**  
N.T.S



NOTE:  
CONSTRUCTION IS SIMILAR ON EACH SIDE

**7 CONTROL JOINT FLASHING**  
N.T.S

**8 NOT USED**  
N.T.S

**9 NOT USED**  
N.T.S

**10 NOT USED**  
N.T.S

**11 NOT USED**  
N.T.S

**12 NOT USED**  
N.T.S

DRAWING DATES		
NUMBER	DATE	COMMENTS

IN-PROGRESS  
NOT FOR  
CONSTRUCTION

3/11/16 95% REVIEW SET

DRAWING TITLE  
**ROOF DETAILS -  
TYPE 2 ROOF**

SHEET NUMBER

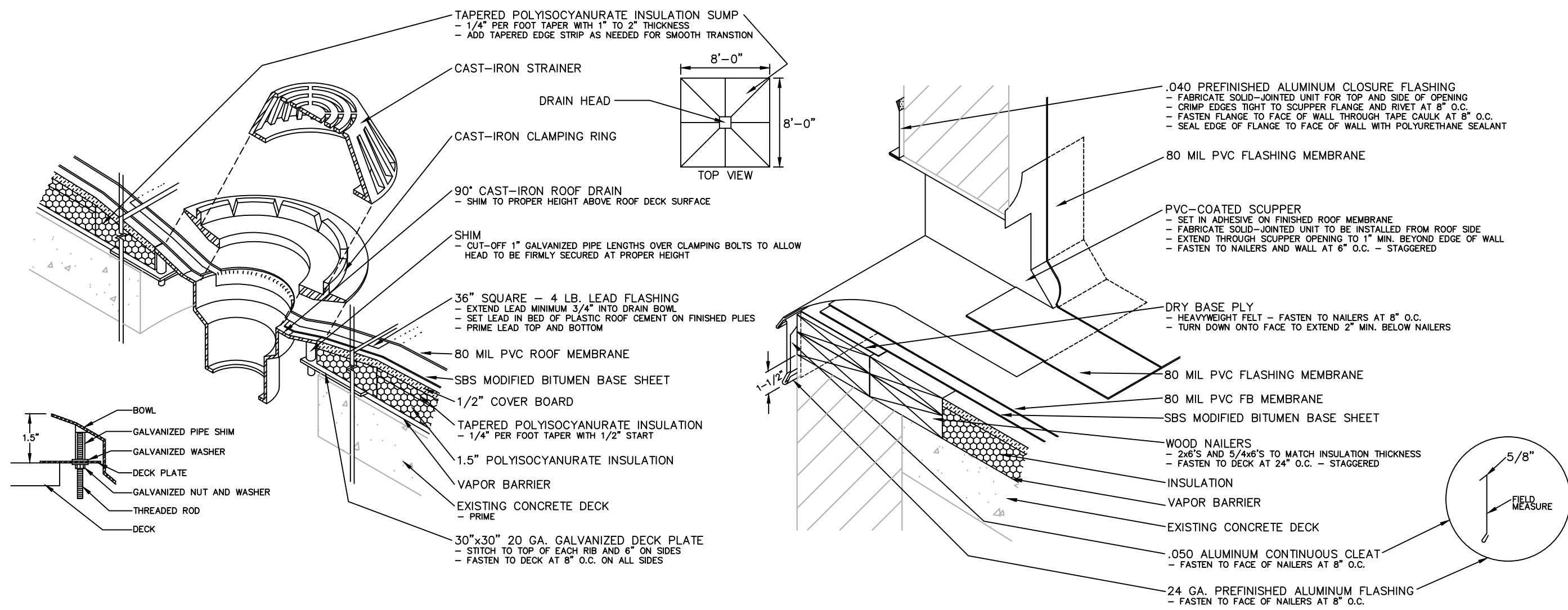
**R1.6**



PROJECT  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

**District of Columbia  
Department of Corrections**

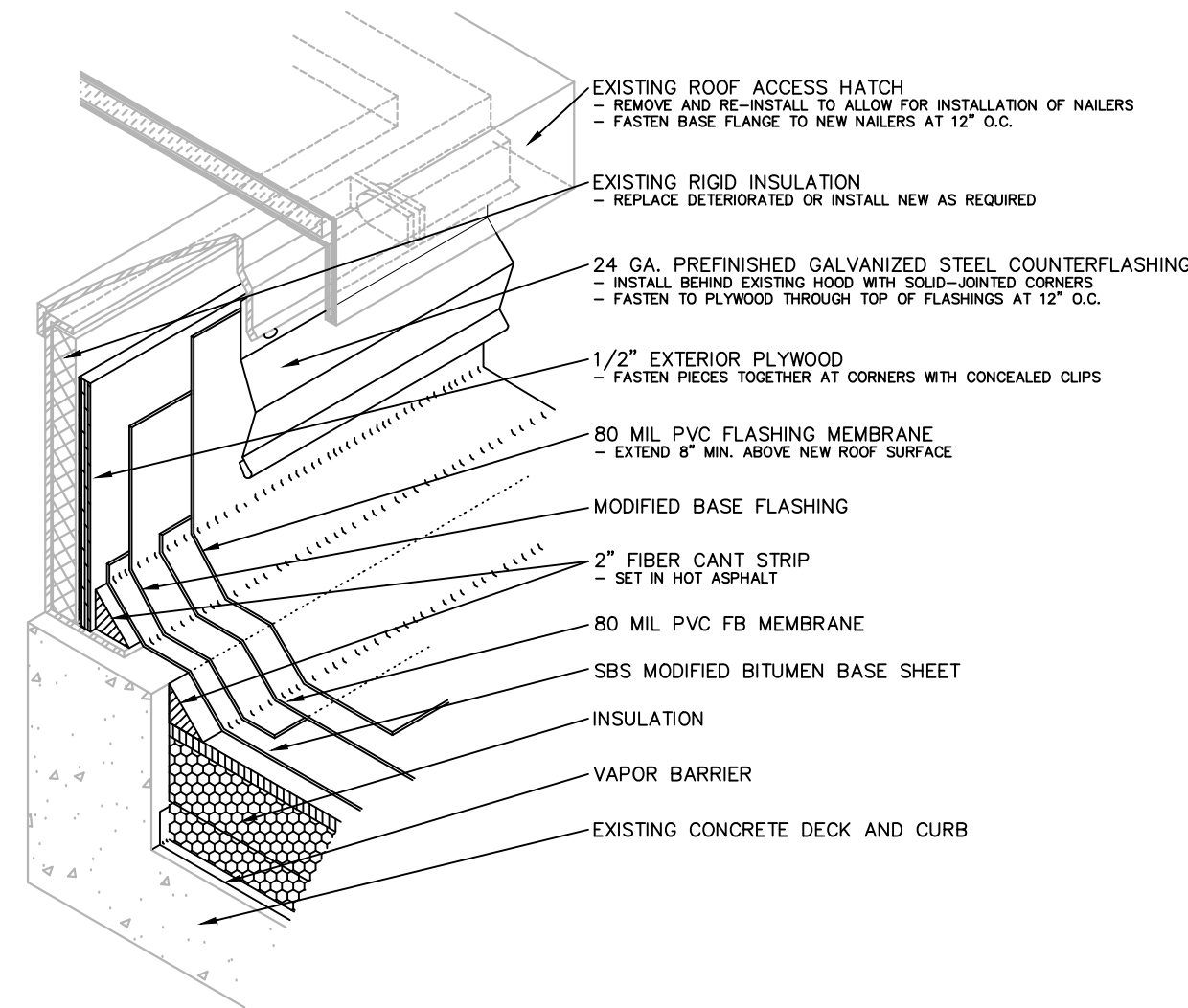


**1 TYPICAL ROOF DRAIN**  
N.T.S

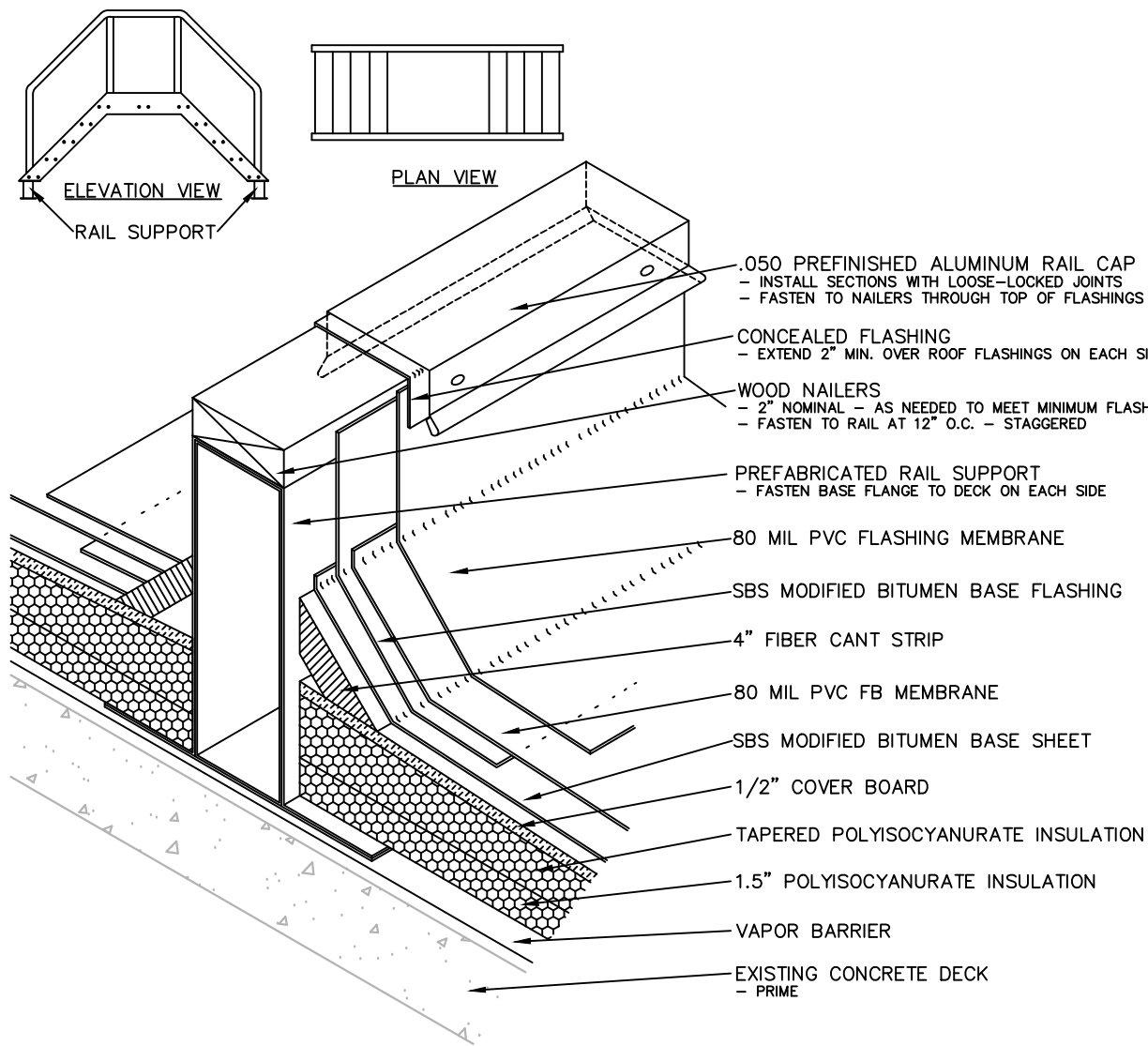
**2 TYPICAL SCUPPER**  
N.T.S

**3 TYPICAL EXHAUST CURB**  
N.T.S

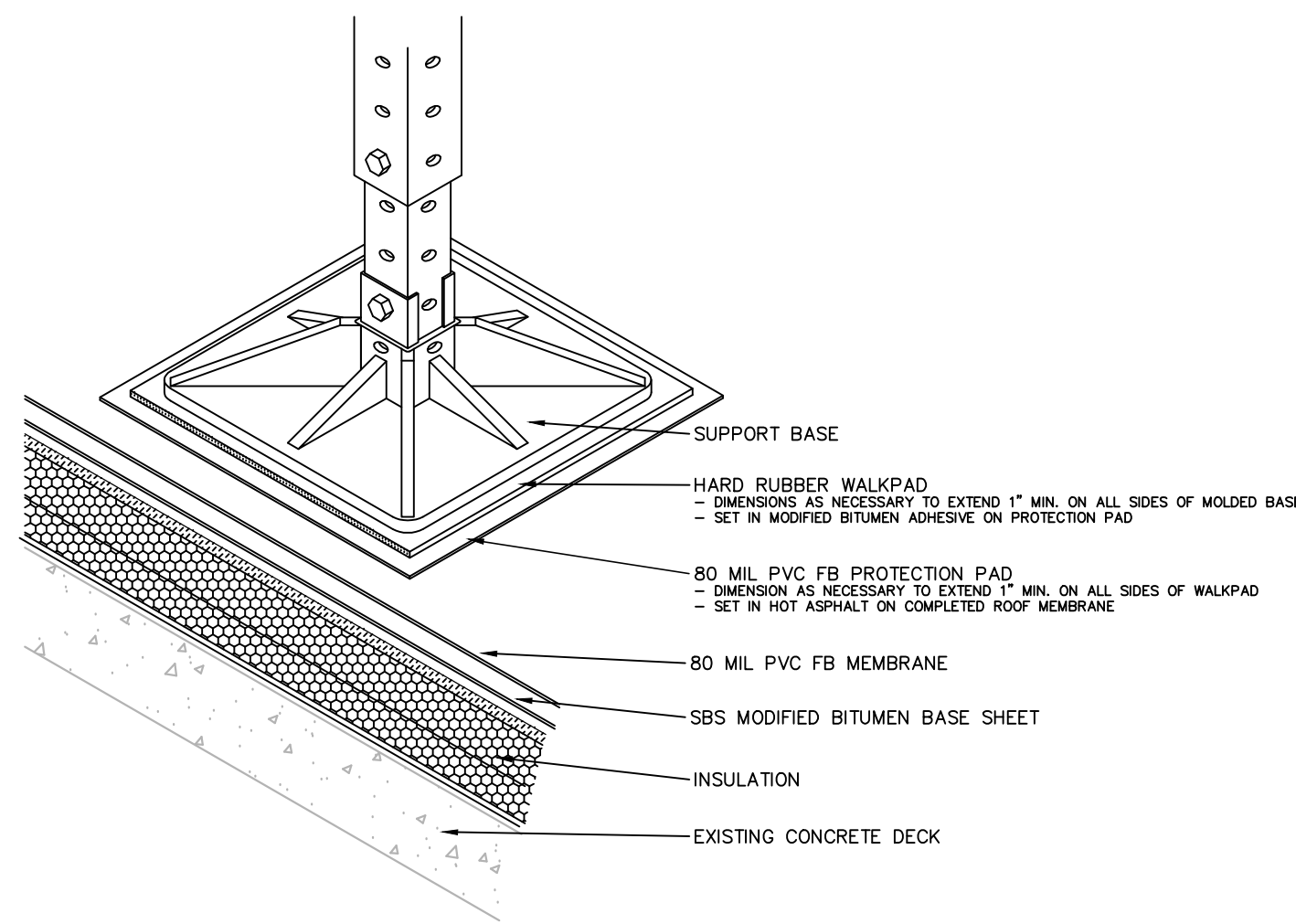
**4 TYPICAL HVAC CURB**  
N.T.S



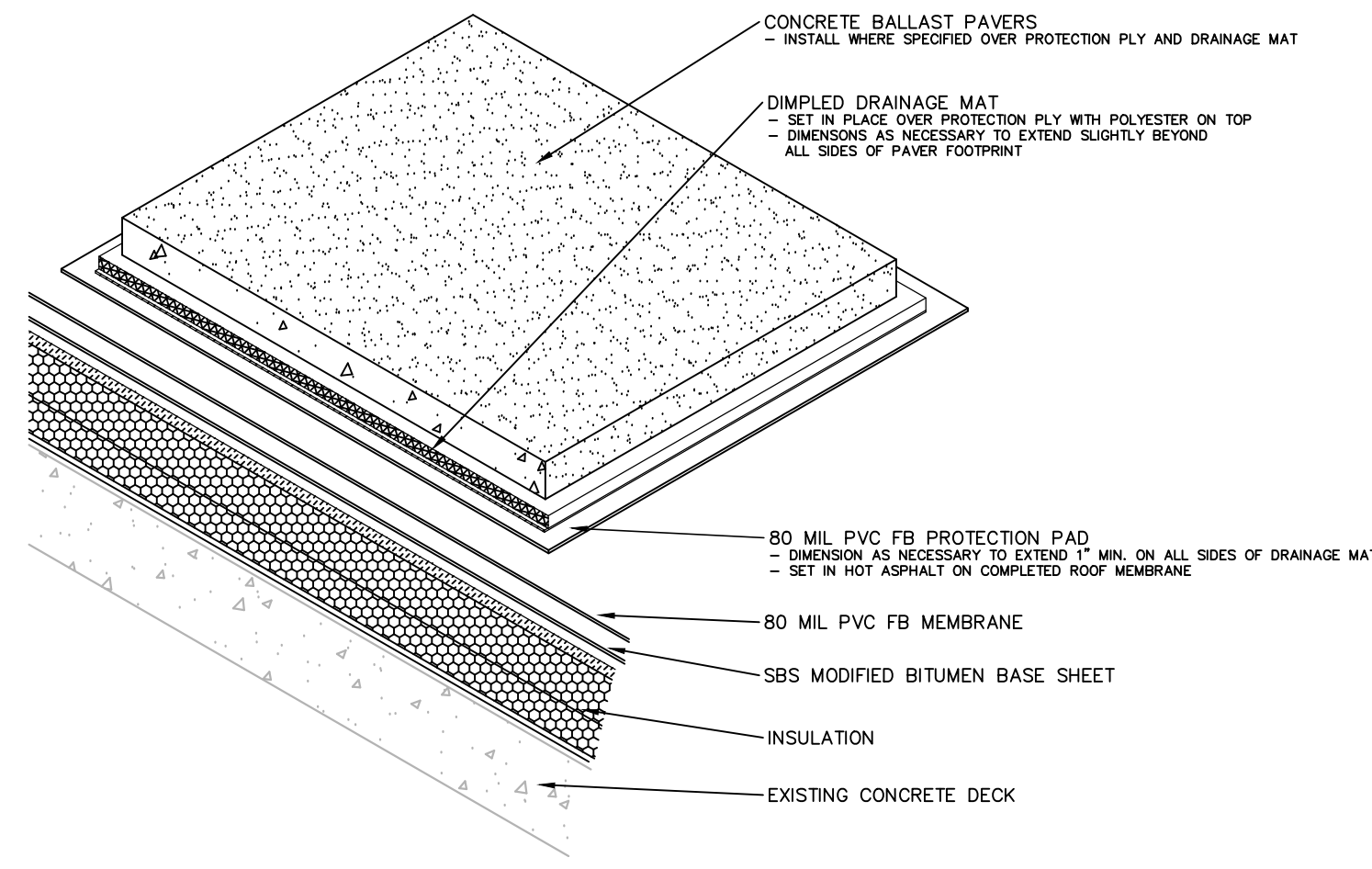
**5 ROOF HATCH FLASHING**  
N.T.S



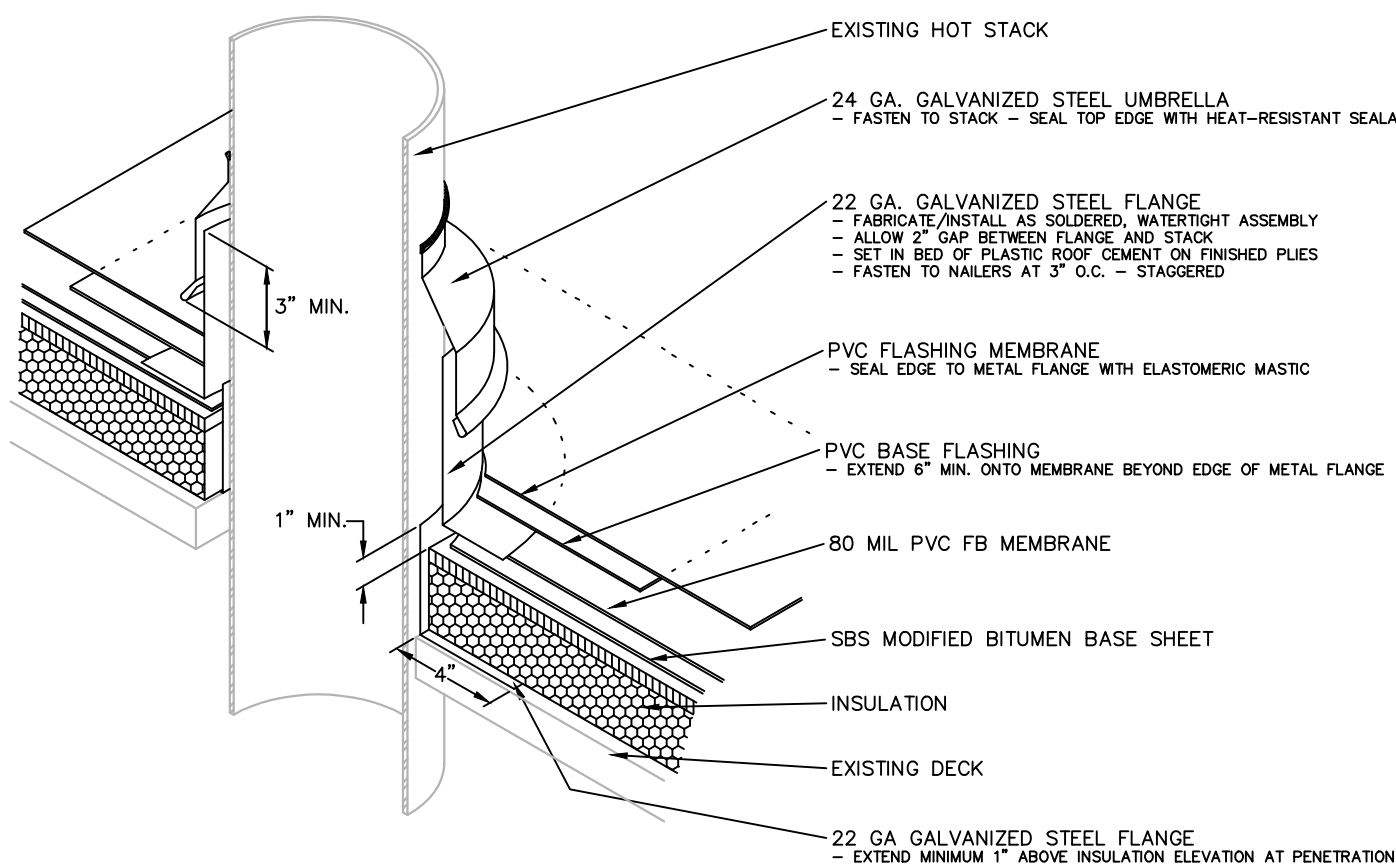
NOTE:  
CONSTRUCTION IS SIMILAR ON EACH SIDE  
**6 RAIL CURB SUPPORT**  
N.T.S



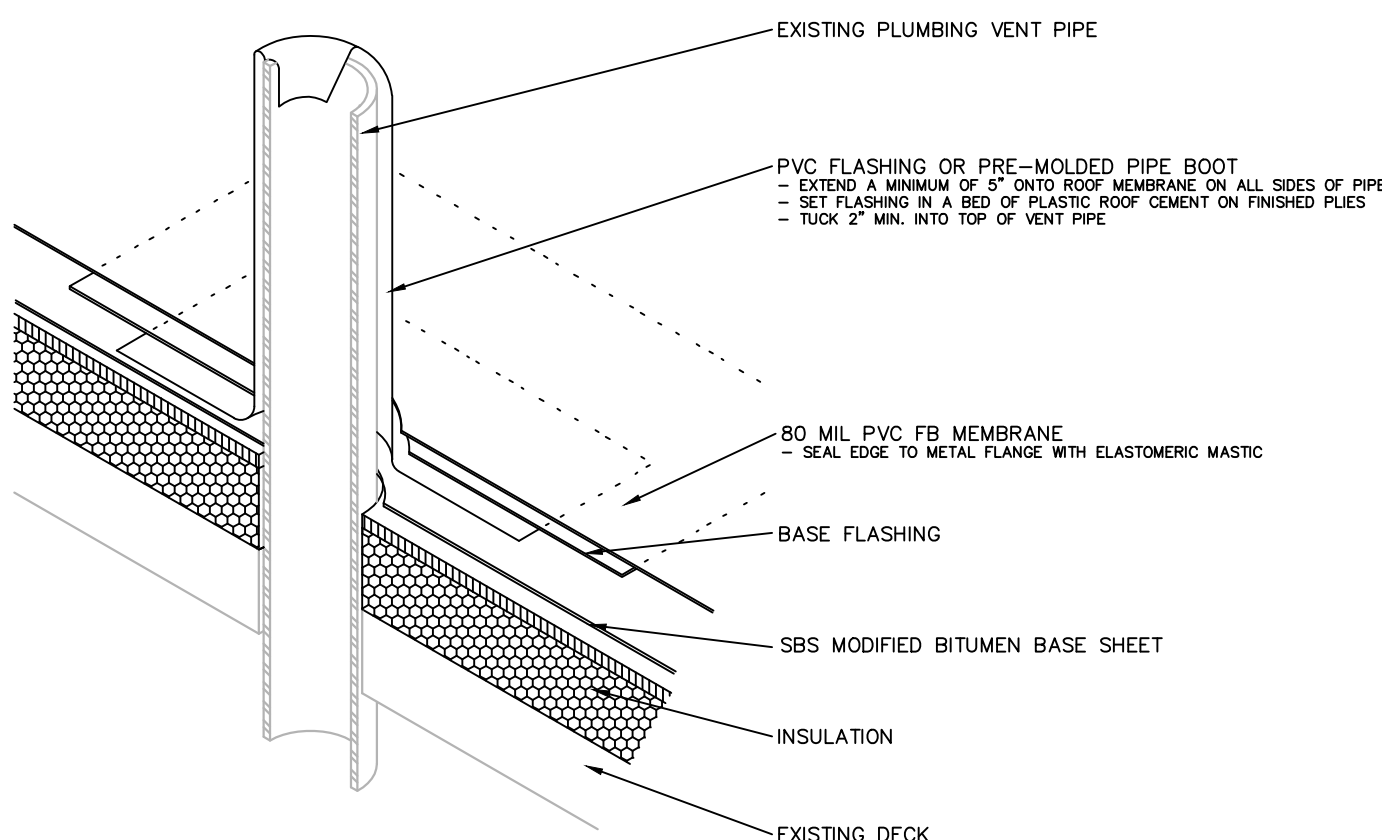
**7 SUPPORT BASE**  
N.T.S



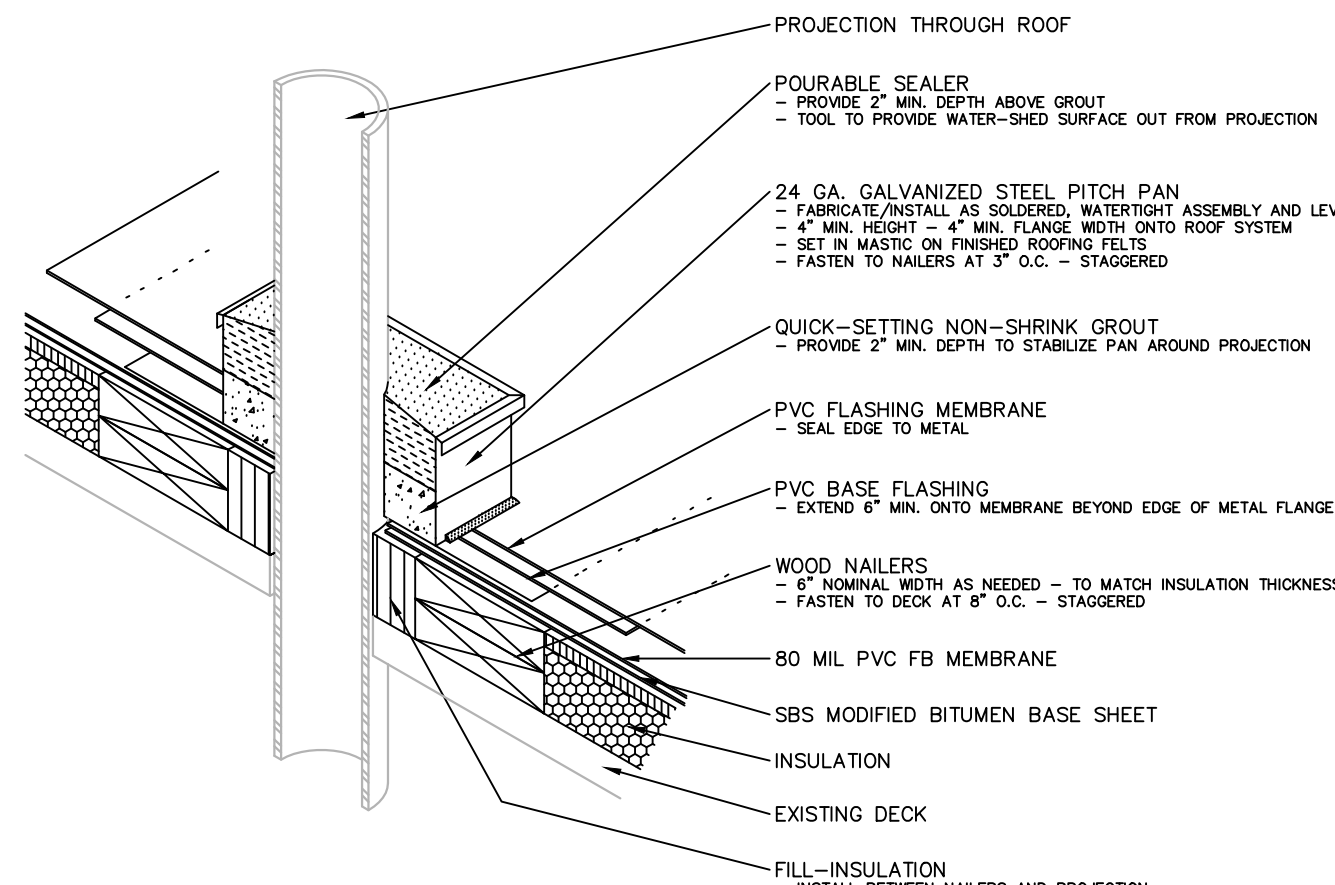
**8 PAVER MEMBRANE PROTECTION**  
N.T.S



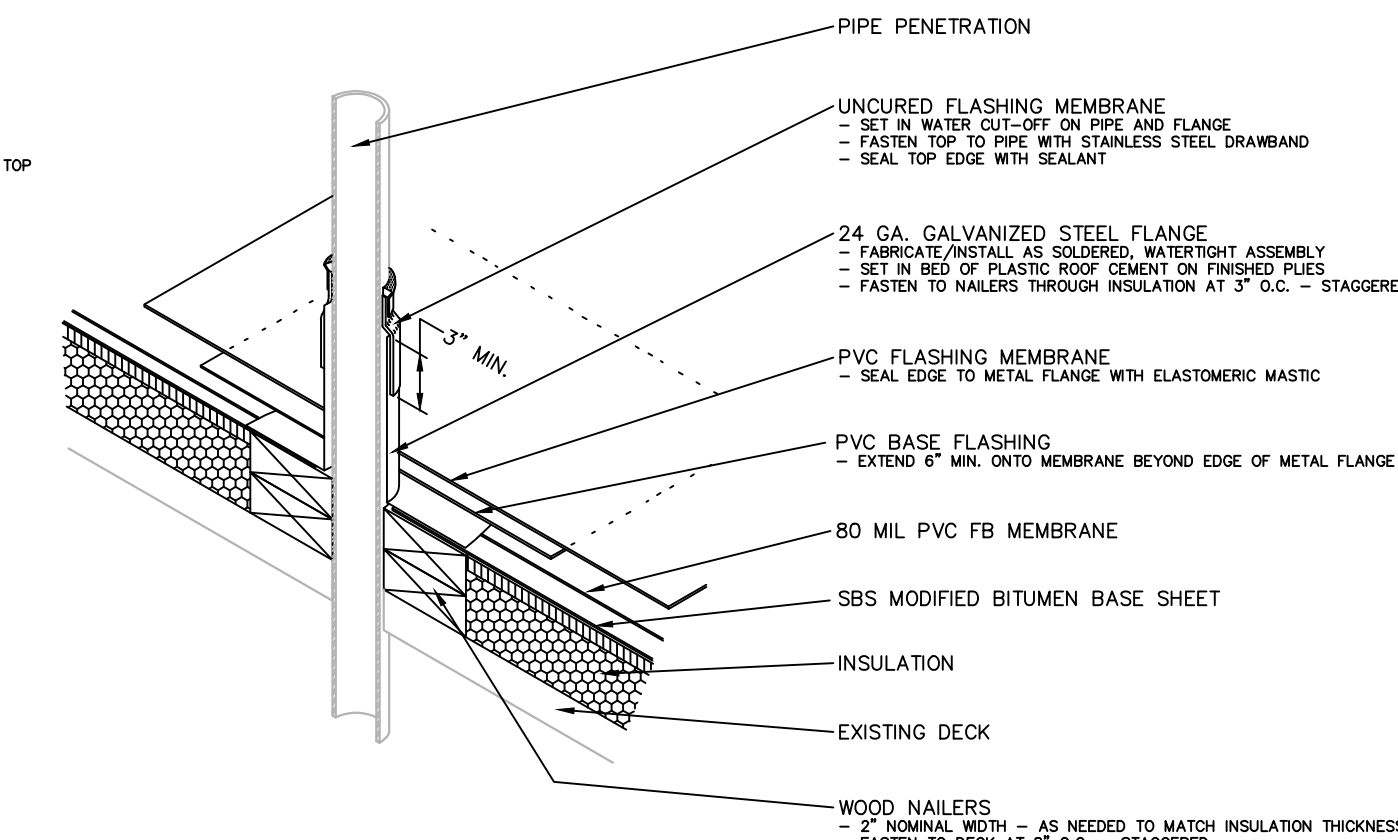
**9 TYPICAL HOT STACK**  
N.T.S



**10 TYPICAL SOIL STACK**  
N.T.S



**11 TYPICAL PITCH PAN**  
N.T.S



**12 TYPICAL PIPE PENETRATION**  
N.T.S

DRAWING DATES		
NUMBER	DATE	COMMENTS

IN-PROGRESS  
NOT FOR  
CONSTRUCTION

3/11/16 95% REVIEW SET

DRAWING TITLE  
**TYPICAL  
ROOF DETAILS -  
TYPE 1 ROOF**

SHEET NUMBER

**R1.7**





Actual Size to read at scale



# TABLE OF CONTENTS

## **DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS**

□□□□□□ □□ □□□□ - □□□□□□ □□□□ M□□□□ □..... □

□□□□□□ □□ □□□□ - □□□ □□□ M..... 3

## DIVISION 01 - GENERAL REQUIREMENTS

1. 1990 年 10 月 1 日 - 1991 年 10 月 1 日 ..... 1  
 2. 1991 年 10 月 1 日 - 1992 年 10 月 1 日 ..... 2  
 3. 1992 年 10 月 1 日 - 1993 年 10 月 1 日 ..... 3  
 4. 1993 年 10 月 1 日 - 1994 年 10 月 1 日 ..... 4  
 5. 1994 年 10 月 1 日 - 1995 年 10 月 1 日 ..... 5  
 6. 1995 年 10 月 1 日 - 1996 年 10 月 1 日 ..... 6  
 7. 1996 年 10 月 1 日 - 1997 年 10 月 1 日 ..... 7  
 8. 1997 年 10 月 1 日 - 1998 年 10 月 1 日 ..... 8

## DIVISION 02 - EXISTING CONDITIONS

□□□□□□ □□ □□□□□ - □□ **M** □□□□□□ □□ ..... □□

## DIVISION 03 - CONCRETE

**3** - M ..... **3**

## DIVISION 05 - METALS

[illegible]

## DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

□□□□□□ □□ □□□□ - □□□□ □□□□□□□□ ..... 3□

□□□□□□ □□ **5**□□ - □□□□ □□□□□□ ..... 3□

## DIVISION 07 - THERMAL AND MOISTURE PROTECTION

000000 0 00 05000 - 00000000000 000 00-0000000 ..... 35  
 000000 0 00 0000 - 000-0000000 0000000000 0000000 ..... 30  
 000000 0 00 0000 - 0000M00 00000000 0 ..... 5  
 000000 0 00 5300 - 000 00000 0 ..... 00  
 000000 0 00 5000 - 0000M0000000 M0M00000 0000000 ..... 50  
 000000 0 00 5000 - 00000 0000000 000 ..... 00  
 000000 0 00 0000 - 00000 M0000 0000000 000 00M ..... **Error! Bookmark not defined.**  
 000000 0 00 0005 - 00 00 0000000 ..... 00







## SECTION 00 4100 - BID FORM

**Please see RFP-Form of Offeror Letter**

**END OF BID FORM**



## SECTION 01 1000 - SUMMARY

### PART 1 GENERAL

#### 1.01 PROJECT

- 1. Provide the following items and materials:
- 2. The following items are to be provided by the contractor:
- 3. The following items are to be provided by the owner:
- 4. The following items are to be provided by the contractor and the owner:

#### 1.02 CONTRACT DESCRIPTION

- 1. The contract shall be for the construction of the following items:

#### 1.03 DESCRIPTION OF ALTERATIONS WORK

- 1. The following items are to be provided by the contractor:
- 2. The following items are to be provided by the owner:
- 3. The following items are to be provided by the contractor and the owner:
- 4. The following items are to be provided by the contractor and the owner:
- 5. The following items are to be provided by the contractor and the owner:
- 6. The following items are to be provided by the contractor and the owner:
- 7. The following items are to be provided by the contractor and the owner:
- 8. The following items are to be provided by the contractor and the owner:

#### 1.04 WORK BY CONTRACTOR

- 1. The contractor shall provide the following items:
- 2. The contractor shall provide the following items:
- 3. The contractor shall provide the following items:
- 4. The contractor shall provide the following items:
- 5. The contractor shall provide the following items:
- 6. The contractor shall provide the following items:
- 7. The contractor shall provide the following items:
- 8. The contractor shall provide the following items:
- 9. The contractor shall provide the following items:
- 10. The contractor shall provide the following items:







**PART 2 PRODUCTS - NOT USED**  
**PART 3 EXECUTION - NOT USED**

[illegible]



## PART 1 GENERAL

- ☐  $\text{r}^2$  係數平方係數的平方
- ☐  $\text{r}$  係數平方係數的平方
- ☐  $\text{r}$  係數平方係數
- ☐  $\text{r}$  係數平方係數  $\text{r}$  係數平方係數  $\text{d}$  係數
- ☐  $\text{r}$  係數平方係數  $\text{r}$  係數平方
- ☐  $\text{r}$  係數平方係數  $\text{r}$  係數平方係數  $\text{d}$  係數平方係數平方
- ☐  $\text{r}$  係數平方係數平方係數平方
- ☐  $\text{r}$  係數平方係數平方係數平方
- ☐  $\text{r}$  係數平方係數平方係數平方

[illegible]

## PART 3 EXECUTION

[illegible]











3.   rr       .

☐ ☐☐☐☐    ☐☐☐☐☐    ☒r    ☐ ☐☐☐☐☐

- [illegible]

□. □□□□ □r□□ □□□ □r□□□d□r□□□

- . rrrr rrdr → -rrrrrr dr d rrrrr  
rrrrrr rr rd rrrrd r

3.  $\frac{d}{dx} \left( x^2 + 3x - 5 \right) = 2x + 3$

$\frac{d}{dx} \left( x^2 + 3x - 5 \right) = 2x + 3$

$\frac{d}{dx} \left( x^2 + 3x - 5 \right) = 2x + 3$

- [illegible]

☐ ☐ ☒ ☐



















## PART 1 GENERAL

- ☐ `0000 00r0r0 00000000`
- ☐ `0000 00r0r0 000000r0 00000000`
- ☐ `0000 00r0r0 0 0000r00000 0rr0r0`
- ☐ `0000r000r0r0000r00 0000`
- ☐ `00000000r 0000000 0d 00r000`
- ☐ `0 0000 r00 000000000000 0d 00r00000`

[illegible]

a.  $\text{r}^2 = 0.64$  and  $\text{r} = 0.8$  indicates a strong positive linear relationship between  $\text{r}^2$  and  $\text{r}$ .  $\text{r}^2 = 0.64$  means that 64% of the variance in  $\text{r}$  is explained by  $\text{r}^2$ .  
 b.  $\text{M}^2 = 0.64$  and  $\text{M} = 0.8$  indicates a strong positive linear relationship between  $\text{M}^2$  and  $\text{M}$ .  $\text{M}^2 = 0.64$  means that 64% of the variance in  $\text{M}$  is explained by  $\text{M}^2$ .

[illegible][illegible][illegible][illegible]

**PART 3 EXECUTION - NOT USED**

**M**































## PART 1 GENERAL

- $\frac{1}{2} \ln 2$  is the probability that the first coin is heads.
- $\frac{1}{2} \ln 2$  is the probability that the first coin is heads and the second coin is tails.
- $\frac{1}{2} \ln 2$  is the probability that the first coin is heads and the second coin is heads.
- $\frac{1}{2} \ln 2$  is the probability that the first coin is tails and the second coin is heads.

## 2.01 CLEANING MATERIALS

- [illegible]

[illegible]







## PART 1 GENERAL

0.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$
1.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$
2.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$
3.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$
4.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$
5.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$
6.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$
7.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$
8.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$
9.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$

[illegible][illegible][illegible][illegible]







**3.**    **r**

**2.03 PRS GUARDRAIL-POWDER COATED STEEL - IBC 20/LB/FT**

- [illegible]

## 2.04 PRS GUARDRAIL-POWDER COATED STEEL - 50 LB/FT

- [illegible]



- ## 2.05 PRS GUARDRAIL - STAINLESS STEEL- OPTION 2

- □□□ □□□□ □□□□□□  
□□□□□□M□



## 2.07 PRS WALL MOUNT GUARDRAIL

- [illegible]

## 2.08 ROOF HATCH GUARDRAIL

- [illegible]







- ### 3.03 PROTECTION

- END OF SECTION**







- . □ □□□ □□□□-□ □□□□□ □ □□□□□□□□□□□ □□□□□□ □□ □□□□□ □□□□ □□□□□□ □□□□ □□□□□□□□□□ □□□□ □ □□□□ □□□□□□□□ □□□□□□ □□□□□□.

### 3.03 ROOF-RELATED CARPENTRY

- . □□□□□□ □□□□□□□□ □□□□□□ □□□□□□ □□□□□□ □□□□□□□□□□□ □□ □□□□□□□□□□ □□□□□□ □□□□ □□ □□□□□□□□.
- . □□□□□ □□□□ □□□ □□□□□□□□□□□□□□□□□□ □□□□□□□□ □□□□□□□□ □□□□□□ □□□□□□□□. □□□ □□□□□ □□ □□□□□□□ □□□□□ □□ □ □□ □□□.

END OF SECTION



## SECTION 06 1500 - WOOD DECKING

### PART 2 PRODUCTS

#### 1.01 WOOD MATERIALS

1. Wood materials and workmanship shall conform to the following.

END OF SECTION







4. The following information was obtained from the records of the 1950-1951 season and should be included in the report of the 1950-1951 season. The following information was obtained from the records of the 1950-1951 season and should be included in the report of the 1950-1951 season.
5. The following information was obtained from the records of the 1950-1951 season and should be included in the report of the 1950-1951 season.
6. The following information was obtained from the records of the 1950-1951 season and should be included in the report of the 1950-1951 season.

**END OF SECTION**







## 1.05 SUBMITTALS

1. 2019年12月31日，甲公司“应付账款”科目贷方余额为350万元，其中200万元为欠乙公司的账款。2020年2月1日，甲公司向乙公司支付该笔款项。甲公司2020年2月1日“应付账款”科目贷方余额为350万元。
2. 2020年1月1日，甲公司“应付账款”科目贷方余额为350万元，其中200万元为欠乙公司的账款。2020年2月1日，甲公司向乙公司支付该笔款项。甲公司2020年2月1日“应付账款”科目贷方余额为350万元。
3. 2020年1月1日，甲公司“应付账款”科目贷方余额为350万元，其中200万元为欠乙公司的账款。2020年2月1日，甲公司向乙公司支付该笔款项。甲公司2020年2月1日“应付账款”科目贷方余额为350万元。
4. 2020年1月1日，甲公司“应付账款”科目贷方余额为350万元，其中200万元为欠乙公司的账款。2020年2月1日，甲公司向乙公司支付该笔款项。甲公司2020年2月1日“应付账款”科目贷方余额为350万元。
5. 2020年1月1日，甲公司“应付账款”科目贷方余额为350万元，其中200万元为欠乙公司的账款。2020年2月1日，甲公司向乙公司支付该笔款项。甲公司2020年2月1日“应付账款”科目贷方余额为350万元。

## 1.06 QUALITY ASSURANCE

1. Өзіндік жұмысқа қатысушылардың саны 5-тен кем болмауы;
2. Өзіндік жұмысқа қатысушылардың саны өзінен кем болмауы және өзінен кем болмауы;- 3. Өзіндік жұмысқа қатысушылардың саны өзінен кем болмауы және өзінен кем болмауы;- 4. Өзіндік жұмысқа қатысушылардың саны өзінен кем болмауы және өзінен кем болмауы;

## 1.07 DELIVERY, STORAGE, AND HANDLING

- [illegible]



## 1.08 PROJECT CONDITIONS

1. Өзіндік жұмысқа арналған тапсырма беріледі. Оған өзіндік жұмысқа арналған тапсырма беріледі. Оған өзіндік жұмысқа арналған тапсырма беріледі.
2. Өзіндік жұмысқа арналған тапсырма беріледі. Оған өзіндік жұмысқа арналған тапсырма беріледі. Оған өзіндік жұмысқа арналған тапсырма беріледі.
3. Өзіндік жұмысқа арналған тапсырма беріледі. Оған өзіндік жұмысқа арналған тапсырма беріледі. Оған өзіндік жұмысқа арналған тапсырма беріледі.
4. Өзіндік жұмысқа арналған тапсырма беріледі. Оған өзіндік жұмысқа арналған тапсырма беріледі. Оған өзіндік жұмысқа арналған тапсырма беріледі.

## 1.09 WARRANTY

- [illegible]

## PART 2 - PRODUCTS

## 2.01 GENERAL

- . 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2

## 2.02 WATERPROOFING MEMBRANE

- [illegible]

[illegible]

## 2.03 ACCESSORY PRODUCTS

- [illegible]



3.    □□□ □□□□ □□□□□□□□ □□□□□ □□□ □d□□□

.

- 

□.    □ □ □ □ **r** □ □ □ □ □ □ □ □ □ □ **r**

- . □□ □ □□□□□□□□□8□ r□□ □□□□□□r r□□□r□d □□□ □ d□□d □□□□ □□ □□ □□□d.

□. □r□□□□□□□□□□r□□

- □ □ □ □ □ □ □ □ □ 8 r □ □ □ □ □ □ □ □ r □ □ □ □ □ d □ □ □ □ □ d □ □ □ □ □ □ □ □ □ □ d.
- □ □ d □ r □ □ □ □ □ □ □ □ □ □ □ □ □ □ rd.

3. ☐ ☐ ☐ d ☐ ☐ r ☐ d ☐ d ☐ ☐ ☐ ☐ ☐ r ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ r ☐ d ☐ ☐ ☐ ☐

- ☐ ☒ r ☐ ☒ d

□. □r□□□□□ □□r□

1. 0000000000000000 0000000000 0000000000000000 0 0000 000000dr00000000 000rd 0000000000  
0000 0000-0d00r0r0r00000d 0000r00000000 00r0 000000d000000000d 0000 0000 0000rd 0 000  
0 0000000 000000 000r 000r0 00 00 0000r 00r0000 0 00000 0 000r 0 0000 000 000 dr000000  
00r0 0 000r0r000000 000 0 00000 00000000000r000000 00d 0000000 0r 000 0 000000r0000  
00d 00r000000000000000000000.
2. 0000000000000000 0000000000 000000 000000000000 0000 0000-0d00r0r0r000000d  
0000r00000000 00r0 000000d000000000d 0000 0000 0000rd 0 000 0 0000000 000000 000r 00r0  
000d0d 0 0000 0d00.

- [illegible]

☐ ☒☐☐☐☐☐r ☐☐☐r☐☐☐

- [illegible]

□. □□□□□□ M□□□r□□□□

- [illegible]



### 3.01 SUBSTRATE INSPECTION

□. □r□r □□ □□□ □□□□□□□□□□□□ □

- ### 3.02 SUBSTRATE PREPARATION

- ### 3.03 SYSTEM INSTALLATION

- □□□□□□□□□□  
□□□□□□□□□□



2. Most cranes equipped with a standard boom are rated to lift 35,000 pounds and have a height of 100 feet.
3. Overhead cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.
4. Overhead cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.
5. Overhead cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.
6. Overhead cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.
7. Overhead cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.
8. Overhead cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.
9. Most cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.

### 3.04 SEPARATION LAYER INSTALLATION

1. Overhead cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.
2. Overhead cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.
3. Overhead cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.

### 3.05 FLOOD TEST

1. Overhead cranes are rated to lift a standard 10 foot wide crane beam and a standard 10 foot wide crane beam.



- . Paved areas shall be a minimum of 8 inches thick.
- . Paved areas shall be constructed to a minimum of 8 inches thick.
- . Paved areas shall be constructed to a minimum of 8 inches thick.
- . Paved areas shall be constructed to a minimum of 8 inches thick.
- . Paved areas shall be constructed to a minimum of 8 inches thick.

### 3.06 PROTECTION OR DRAINAGE COURSE/INSULATION/PAVER PLACEMENT

- . Protection
  - . Paved areas shall be constructed to a minimum of 8 inches thick.
  - . Paved areas shall be constructed to a minimum of 8 inches thick.
- . Drainage
  - . Paved areas shall be constructed to a minimum of 8 inches thick.
  - . Paved areas shall be constructed to a minimum of 8 inches thick.
- 3. Paved areas shall be constructed to a minimum of 8 inches thick.
- . Insulation
  - . Paved areas shall be constructed to a minimum of 8 inches thick.
  - . Paved areas shall be constructed to a minimum of 8 inches thick.
- 3. Paved areas shall be constructed to a minimum of 8 inches thick.
- . Paver Placement
  - . Paved areas shall be constructed to a minimum of 8 inches thick.
  - . Paved areas shall be constructed to a minimum of 8 inches thick.
- 3. Paved areas shall be constructed to a minimum of 8 inches thick.

### 3.07 JOB COMPLETION

- . Paved areas shall be constructed to a minimum of 8 inches thick.
- . Paved areas shall be constructed to a minimum of 8 inches thick.



1. The following information is provided for the year ended 31 December 2019:

**END OF SECTION**



## PART 1 GENERAL

□. □□rd □□□□□□□□ □□d □□□□r □□□□□□r □□rd □□r □□□□r □□□□r □□□□d □□□□□□□□d □□□□r □□□□d □□□□

- a. 〇〇〇〇〇〇 第33回 - 〇〇〇-〇〇-〇〇〇〇 〇〇〇r〇〇〇〇 〇〇d-〇〇〇〇〇d 〇r 〇〇d 〇r 〇〇〇r〇〇〇 〇〇〇〇 〇〇d  
〇〇〇〇d 〇〇〇〇〇.
- b. 〇〇〇〇〇〇 第5回 - 〇 〇〇〇〇r 〇〇rr〇r 〇〇〇r〇〇 〇r 〇〇rr〇r 〇d 〇〇〇r r〇〇rd〇r 〇 〇〇r〇〇.
- c. 〇〇〇〇〇〇 第5回 - M〇d〇〇d 〇〇〇 〇〇〇M 〇r 〇〇〇〇 〇〇〇〇〇〇 〇〇〇〇〇d 〇 〇〇r〇〇  
r〇〇〇〇〇 〇〇〇〇〇.

- . □□□M □□□ - □□□d/r/d □□□□□□□□□□ □r M□□r□□□□□r □□□□ □d □□□d □□□r □□□□□□□□□□ □□□□.
- . □□□M □□□8 - □□□d/r/d □□□□□□□□□□ □r □□□□d □□□d □□□□□r □□□□□□□□□□r□□□ □□□r □□ □□□□□□□□ □□□d□□□□□□.
- . □□□M □□□8 - □□□d/r/d □□□□M□□□□d □r □□r□□□□ □□r□□□ □□□r□□□r□□□□ □□□□d□□ M□□□r□□□□ □□□5□.

## 2.01 MANUFACTURERS

- [illegible]

[illegible][illegible]

□. □□□□□r □□□rd□

□. □□□-d□□□□□□□r□□□rd□□□□□□r□□□□□□□M□□□8□□d□□□□□r□□□□-d□□□□□□□r□□□□□rd□□□□□r□□□□□□□M□□□8.

□. □□□□□□□□□□□□□□□□

□. □□□□□□□□ r □□□□ rd r □□□□□□□□ d □□□□□□□□ □□ 5□.



### 3.01 EXAMINATION

### 3.01 EXAMINATION

- .  $\varphi(x)$  աստիճանական ֆունկցիա է, եթե  $\varphi(x) = 0$  կամ  $\varphi(x) = 1$  ամեն  $x$ -ի համար։
- .  $\varphi(x)$  աստիճանական ֆունկցիա է, եթե  $\varphi(x) = 0$  կամ  $\varphi(x) = 1$  ամեն  $x$ -ի համար։

### 3.03 BOARD INSTALLATION OVER LOW SLOPE ROOF DECK

- [illegible]

### 3.04 PROTECTION

- . □□ □□□□r□ □□□□□□□d □□□□□□□□ □□ d□□ □□□ d rrr □□ □□ □□□□□□ □□.

**END OF SECTION**



**1.01 SECTION INCLUDES**

[illegible]

☐ 0. 3 个 r

☐ 1. r

☐ 2. d r

☐ 3.

☐ 4. M

☐ 5. 7

☐ 6. 8

☐ 7. 5 3

- .  $\frac{1}{2} \frac{d}{dt} \left( \frac{1}{2} m v^2 \right) = \frac{1}{2} m \frac{d}{dt} (v^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2)$
- .  $\frac{1}{2} \frac{d}{dt} \left( \frac{1}{2} m v^2 \right) = \frac{1}{2} m \frac{d}{dt} (v^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2)$
- .  $\frac{1}{2} \frac{d}{dt} \left( \frac{1}{2} m v^2 \right) = \frac{1}{2} m \frac{d}{dt} (v^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2)$
3.  $\frac{1}{2} \frac{d}{dt} \left( \frac{1}{2} m v^2 \right) = \frac{1}{2} m \frac{d}{dt} (v^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2) = \frac{1}{2} m \frac{d}{dt} (v_x^2 + v_y^2 + v_z^2)$

- a.  $\frac{1}{x^2} = x^{-2}$ . Using the power rule,  $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$ .
- b.  $\frac{1}{x^2} = x^{-2}$ . Using the power rule,  $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$ .











- ## 1.08 PRE-INSTALLATION CONFERENCE

- □ □    □ □ □ □ □ □ □



## 1.09 DELIVERY, HANDLING AND STORAGE

- [illegible]

## 1.10 QUALITY ASSURANCE

- [illegible]

## 1.11 WARRANTY

- [illegible]

## 1.12 LABORATORY TESTING

- . 同様に、 $r$  の逆関数  $r^{-1}$  は、 $r$  の逆関数である。すなわち、 $r^{-1} \circ r = \text{id}$  である。ここで、 $\text{id}$  は恒等写像である。すなわち、 $\text{id}(x) = x$  である。
- . 同様に、 $r$  の逆関数  $r^{-1}$  は、 $r$  の逆関数である。すなわち、 $r^{-1} \circ r = \text{id}$  である。ここで、 $\text{id}$  は恒等写像である。すなわち、 $\text{id}(x) = x$  である。



### 1.13 SITE PROTECTION

- [illegible]

## PART 2 PRODUCTS

## 2.01 GENERAL

- a. 在  $\mathbb{R}^n$  中，令  $M = \{x \in \mathbb{R}^n \mid x_1 = 0\}$ ，求  $M$  的维数。
- b. 在  $\mathbb{R}^n$  中，令  $M = \{x \in \mathbb{R}^n \mid x_1 = 0, x_2 = 0\}$ ，求  $M$  的维数。

## 2.02 VAPOR RETARDER

- . □□□-□ d□□d □□□□ □□ □□-d□r□d □□□r□r□rd□r□r□ □□r□r□ □□ □r□□□ □□□r□□□□□□ □□ □□ □□□□ □r□□□□ d□ □r□□□ □□□□ □□□□ □□□□□□□□□□ □□ □□□ □r□□□□r□□□□r□□□ □□□
- . □□□□□□□□□3□.5 □□□□.8□□□□
- . □ d□□□5 □□□□□□□□
3. □□□□□□□□33 □□□□.8□□□

### 2.03 SBS BASE MEMBRANE PLY:

- [illegible]

## 2.04 PVC MEMBRANE

1.  $\frac{1}{2} \int_0^1 x^2 dx = \frac{1}{2} \cdot \frac{1}{3} = \frac{1}{6}$
2.  $\frac{1}{2} \int_0^1 x^2 dx = \frac{1}{2} \cdot \frac{1}{3} = \frac{1}{6}$
3.  $\frac{1}{2} \int_0^1 x^2 dx = \frac{1}{2} \cdot \frac{1}{3} = \frac{1}{6}$
4.  $\frac{1}{2} \int_0^1 x^2 dx = \frac{1}{2} \cdot \frac{1}{3} = \frac{1}{6}$
5.  $\frac{1}{2} \int_0^1 x^2 dx = \frac{1}{2} \cdot \frac{1}{3} = \frac{1}{6}$

## 2.05 FASTENERS

- . **d** 的 函 数 定 义 如 下：  
$$d(x, y) = \begin{cases} 0 & \text{当 } x = y \text{ 时} \\ 1 & \text{当 } x \neq y \text{ 时} \end{cases}$$
  
其 中  $x, y$  是 任 意 的 实 数。求  $d$  是 否 是 度 量？
- . **M** 的 函 数 定 义 如 下：  
$$M(x, y) = \begin{cases} 0 & \text{当 } x = y \text{ 时} \\ 1 & \text{当 } x \neq y \text{ 时} \end{cases}$$
  
其 中  $x, y$  是 任 意 的 实 数。求  $M$  是 否 是 度 量？
- . 函 数  $d$  和  $M$  是 否 是 度 量？







- Material or thickness of steel M is 3mm

## 2.10 PVC COATED METAL

- The thickness of the PVC coating on the metal surface shall be not less than 0.1mm.
- The thickness of the metal shall be not less than 3mm.
- The thickness of the metal shall be not less than 3.08mm.
- The thickness of the metal shall be not less than 3.08mm.
- The thickness of the metal shall be not less than 3.08mm.
- The thickness of the metal shall be not less than 3.08mm.

## 2.11 MISCELLANEOUS

- The thickness of the metal shall be not less than 3mm.
- The thickness of the metal shall be not less than 3mm.
- The thickness of the metal shall be not less than 3mm.
- The thickness of the metal shall be not less than 3mm.

## PART 3 EXECUTION

### 3.01 SURFACE INSPECTION AND PREPARATION

- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.

### 3.02 SURFACE PREPARATION

- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.

### 3.03 INSTALLATION

- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.
- The surface of the metal shall be free from oil, dirt, rust, and other contaminants.

### 3.04 EQUIPMENT

- Material or thickness of steel M is 3mm



- [illegible]

### 3.05 ASPHALT PRIMER APPLICATION

- [illegible]

### 3.06 VAPOR RETARDER INSTALLATION

- [illegible]

### 3.07 WOOD BLOCKING

- [illegible]

### 3.08 INSTALLATION OF INSULATION WITH ADHESIVE

- [illegible]







- [illegible]

### 3.13 FLASHINGS

- a.  $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$   $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$   $\frac{1}{8} \times \frac{1}{2} = \frac{1}{16}$   $\frac{1}{16} \times \frac{1}{2} = \frac{1}{32}$   $\frac{1}{32} \times \frac{1}{2} = \frac{1}{64}$   $\frac{1}{64} \times \frac{1}{2} = \frac{1}{128}$   $\frac{1}{128} \times \frac{1}{2} = \frac{1}{256}$   $\frac{1}{256} \times \frac{1}{2} = \frac{1}{512}$   $\frac{1}{512} \times \frac{1}{2} = \frac{1}{1024}$   $\frac{1}{1024} \times \frac{1}{2} = \frac{1}{2048}$   $\frac{1}{2048} \times \frac{1}{2} = \frac{1}{4096}$   $\frac{1}{4096} \times \frac{1}{2} = \frac{1}{8192}$   $\frac{1}{8192} \times \frac{1}{2} = \frac{1}{16384}$   $\frac{1}{16384} \times \frac{1}{2} = \frac{1}{32768}$   $\frac{1}{32768} \times \frac{1}{2} = \frac{1}{65536}$   $\frac{1}{65536} \times \frac{1}{2} = \frac{1}{131072}$   $\frac{1}{131072} \times \frac{1}{2} = \frac{1}{262144}$   $\frac{1}{262144} \times \frac{1}{2} = \frac{1}{524288}$   $\frac{1}{524288} \times \frac{1}{2} = \frac{1}{1048576}$   $\frac{1}{1048576} \times \frac{1}{2} = \frac{1}{2097152}$   $\frac{1}{2097152} \times \frac{1}{2} = \frac{1}{4194304}$   $\frac{1}{4194304} \times \frac{1}{2} = \frac{1}{8388608}$   $\frac{1}{8388608} \times \frac{1}{2} = \frac{1}{16777216}$   $\frac{1}{16777216} \times \frac{1}{2} = \frac{1}{33554432}$   $\frac{1}{33554432} \times \frac{1}{2} = \frac{1}{67108864}$   $\frac{1}{67108864} \times \frac{1}{2} = \frac{1}{134217728}$   $\frac{1}{134217728} \times \frac{1}{2} = \frac{1}{268435456}$   $\frac{1}{268435456} \times \frac{1}{2} = \frac{1}{536870912}$   $\frac{1}{536870912} \times \frac{1}{2} = \frac{1}{1073741824}$   $\frac{1}{1073741824} \times \frac{1}{2} = \frac{1}{2147483648}$   $\frac{1}{2147483648} \times \frac{1}{2} = \frac{1}{4294967296}$   $\frac{1}{4294967296} \times \frac{1}{2} = \frac{1}{8589934592}$   $\frac{1}{8589934592} \times \frac{1}{2} = \frac{1}{17179869184}$   $\frac{1}{17179869184} \times \frac{1}{2} = \frac{1}{34359738368}$   $\frac{1}{34359738368} \times \frac{1}{2} = \frac{1}{68719476736}$   $\frac{1}{68719476736} \times \frac{1}{2} = \frac{1}{137438953472}$   $\frac{1}{137438953472} \times \frac{1}{2} = \frac{1}{274877906944}$   $\frac{1}{274877906944} \times \frac{1}{2} = \frac{1}{549755813888}$   $\frac{1}{549755813888} \times \frac{1}{2} = \frac{1}{1099511627776}$   $\frac{1}{1099511627776} \times \frac{1}{2} = \frac{1}{2199023255552}$   $\frac{1}{2199023255552} \times \frac{1}{2} = \frac{1}{4398046511104}$   $\frac{1}{4398046511104} \times \frac{1}{2} = \frac{1}{8796093022208}$   $\frac{1}{8796093022208} \times \frac{1}{2} = \frac{1}{17592186044416}$   $\frac{1}{17592186044416} \times \frac{1}{2} = \frac{1}{35184372088832}$   $\frac{1}{35184372088832} \times \frac{1}{2} = \frac{1}{70368744177664}$   $\frac{1}{70368744177664} \times \frac{1}{2} = \frac{1}{140737488355328}$   $\frac{1}{140737488355328} \times \frac{1}{2} = \frac{1}{281474976710656}$   $\frac{1}{281474976710656} \times \frac{1}{2} = \frac{1}{562949953421312}$   $\frac{1}{562949953421312} \times \frac{1}{2} = \frac{1}{1125899906842624}$   $\frac{1}{1125899906842624} \times \frac{1}{2} = \frac{1}{2251799813685248}$   $\frac{1}{2251799813685248} \times \frac{1}{2} = \frac{1}{4503599627370496}$   $\frac{1}{4503599627370496} \times \frac{1}{2} = \frac{1}{9007199254740992}$   $\frac{1}{9007199254740992} \times \frac{1}{2} = \frac{1}{18014398509481984}$   $\frac{1}{18014398509481984} \times \frac{1}{2} = \frac{1}{36028797018963968}$   $\frac{1}{36028797018963968} \times \frac{1}{2} = \frac{1}{72057594037927936}$   $\frac{1}{72057594037927936} \times \frac{1}{2} = \frac{1}{144115188075855872}$   $\frac{1}{144115188075855872} \times \frac{1}{2} = \frac{1}{288230376151711744}$   $\frac{1}{288230376151711744} \times \frac{1}{2} = \frac{1}{576460752303423488}$   $\frac{1}{576460752303423488} \times \frac{1}{2} = \frac{1}{1152921504606846976}$   $\frac{1}{1152921504606846976} \times \frac{1}{2} = \frac{1}{2305843009213693952}$   $\frac{1}{2305843009213693952} \times \frac{1}{2} = \frac{1}{4611686018427387904}$   $\frac{1}{4611686018427387904} \times \frac{1}{2} = \frac{1}{9223372036854775808}$   $\frac{1}{9223372036854775808} \times \frac{1}{2} = \frac{1}{18446744073709551616}$   $\frac{1}{18446744073709551616} \times \frac{1}{2} = \frac{1}{36893488147419103232}$   $\frac{1}{36893488147419103232} \times \frac{1}{2} = \frac{1}{73786976294838206464}$   $\frac{1}{73786976294838206464} \times \frac{1}{2} = \frac{1}{147573952589676412928}$   $\frac{1}{147573952589676412928} \times \frac{1}{2} = \frac{1}{295147905179352825856}$   $\frac{1}{295147905179352825856} \times \frac{1}{2} = \frac{1}{590295810358705651712}$   $\frac{1}{590295810358705651712} \times \frac{1}{2} = \frac{1}{1180591620717411303424}$   $\frac{1}{1180591620717411303424} \times \frac{1}{2} = \frac{1}{2361183241434822606848}$   $\frac{1}{2361183241434822606848} \times \frac{1}{2} = \frac{1}{4722366482869645213696}$   $\frac{1}{4722366482869645213696} \times \frac{1}{2} = \frac{1}{9444732965739290427392}$   $\frac{1}{9444732965739290427392} \times \frac{1}{2} = \frac{1}{18889465931478580854784}$   $\frac{1}{18889465931478580854784} \times \frac{1}{2} = \frac{1}{37778931862957161709568}$   $\frac{1}{37778931862957161709568} \times \frac{1}{2} = \frac{1}{75557863725914323419136}$   $\frac{1}{75557863725914323419136} \times \frac{1}{2} = \frac{1}{151115727451828646838272}$   $\frac{1}{151115727451828646838272} \times \frac{1}{2} = \frac{1}{302231454903657293676544}$   $\frac{1}{302231454903657293676544} \times \frac{1}{2} = \frac{1}{604462909807314587353088}$   $\frac{1}{604462909807314587353088} \times \frac{1}{2} = \frac{1}{1208925819614629174706176}$   $\frac{1}{1208925819614629$

### 3.14 WALKWAYS

- [illegible]

### 3.15 SHEET METAL

- .  $\frac{1}{2} \ln 2$  是 函数  $f(x) = \ln x$  在  $x = 1$  处的切线方程  $y = \frac{1}{2} \ln 2$  与  $x$  轴的交点。
- . 函数  $f(x) = \ln x$  在  $x = 1$  处的切线方程  $y = \frac{1}{2} \ln 2$  与  $x$  轴的交点。
- . 函数  $f(x) = \ln x$  在  $x = 1$  处的切线方程  $y = \frac{1}{2} \ln 2$  与  $x$  轴的交点。

### 3.16 WATER CUT-OFF

- [illegible]

### 3.17 CLEANING

- ☐ 1. 下列各句中，加粗的“**而**”字，用法与“**而**”字用法相同的一项是（ ）  
A. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。  
B. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。  
C. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。  
D. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。
- ☐ 2. 下列各句中，加粗的“**而**”字，用法与“**而**”字用法相同的一项是（ ）  
A. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。  
B. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。  
C. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。  
D. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。
- ☐ 3. 下列各句中，加粗的“**而**”字，用法与“**而**”字用法相同的一项是（ ）  
A. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。  
B. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。  
C. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。  
D. 臣死且不避，**而**庸人见狱吏则头抢地，视徒隸心心心而心。

### 3.18 PROTECTION

- [illegible]







## PART 1 GENERAL

**d r d**

### 1.03 REFERENCE STANDARDS

4. M 3 M - d rd r rd

8 - dd rrrr

## 2.01 ROOFING - UNBALLASTED APPLICATIONS

- [illegible]

- .  $M$  是  $\mathbb{R}$  上的  $n$  阶实对称矩阵, 且  $M^2 = M$ .
  - .  $M$  的特征值只能是 0 或 1.
  - .  $M$  的秩为  $r$ , 则  $M$  的迹为  $r$ .
  3.  $M$  的列向量组中任意  $r$  个向量都是线性无关的.
  - .  $M$  的列向量组中任意  $r+1$  个向量都是线性相关的.
- .  $M$  是  $\mathbb{R}$  上的  $n$  阶实对称矩阵, 且  $M^2 = M$ .
  - .  $M$  的特征值只能是 0 或 1.
  - .  $M$  的秩为  $r$ , 则  $M$  的迹为  $r$ .
  3.  $M$  的列向量组中任意  $r$  个向量都是线性无关的.
  - .  $M$  的列向量组中任意  $r+1$  个向量都是线性相关的.
- .  $M$  是  $\mathbb{R}$  上的  $n$  阶实对称矩阵, 且  $M^2 = M$ .
  - .  $M$  的特征值只能是 0 或 1.
  - .  $M$  的秩为  $r$ , 则  $M$  的迹为  $r$ .
  3.  $M$  的列向量组中任意  $r$  个向量都是线性无关的.
  - .  $M$  的列向量组中任意  $r+1$  个向量都是线性相关的.
- .  $M$  是  $\mathbb{R}$  上的  $n$  阶实对称矩阵, 且  $M^2 = M$ .
  - .  $M$  的特征值只能是 0 或 1.
  - .  $M$  的秩为  $r$ , 则  $M$  的迹为  $r$ .
  3.  $M$  的列向量组中任意  $r$  个向量都是线性无关的.
  - .  $M$  的列向量组中任意  $r+1$  个向量都是线性相关的.

[illegible]



## SECTION 07 5419 - FULLY ADHERED PVC

### PART 1 GENERAL

#### 1.01 RELATED DOCUMENTS

- 1. Section 07 5419 Fully Adhered PVC

#### 1.02 SCOPE OF WORK

- 1. Provide and install fully adhered PVC flooring in the areas indicated on the drawings.
- 2. Prepare and install a 1/2" thick concrete subfloor over the existing floor.
- 3. Prepare and install a 1/2" thick concrete subfloor over the existing floor.
- 4. Prepare and install a 1/2" thick concrete subfloor over the existing floor.
- 5. Prepare and install a 1/2" thick concrete subfloor over the existing floor.

#### 1.03 SUMMARY

- 1. Fully Adhered PVC
  - 1. Fully Adhered PVC
  - 2. Fully Adhered PVC
  - 3. Fully Adhered PVC
  - 4. Fully Adhered PVC
  - 5. Fully Adhered PVC
  - 6. Fully Adhered PVC
  - 7. Fully Adhered PVC
  - 8. Fully Adhered PVC
  - 9. Fully Adhered PVC
- 2. Fully Adhered PVC
  - 1. Fully Adhered PVC
  - 2. Fully Adhered PVC
  - 3. Fully Adhered PVC
  - 4. Fully Adhered PVC
  - 5. Fully Adhered PVC
  - 6. Fully Adhered PVC
  - 7. Fully Adhered PVC
  - 8. Fully Adhered PVC
  - 9. Fully Adhered PVC

#### 1.04 DEFINITIONS

- 1. Fully Adhered PVC is defined as a fully adhered PVC flooring system.

#### 1.05 PERFORMANCE REQUIREMENTS

- 1. Fully Adhered PVC flooring shall be installed in accordance with the manufacturer's instructions.
- 2. Fully Adhered PVC flooring shall be installed in accordance with the manufacturer's instructions.



- ## 1.06 ACTION SUBMITTALS

- \_\_\_\_\_











- [illegible]

## 1.11 PROJECT CONDITIONS

- [illegible]

## 1.12 WARRANTY

- [illegible]

## PART 2 PRODUCTS

## 2.01 PVC MEMBRANE ROOFING

- [illegible]











- [illegible]

### 3.03 VAPOR/AIR-RETARDER/ TEMPORARY ROOF INSTALLATION

- [illegible]

### 3.04 INSULATION INSTALLATION

- [illegible]



### 3.05 ADHERED MEMBRANE ROOFING INSTALLATION

01. **addition** is the process of combining two or more numbers and writing the result. Addition is a mathematical operation.
02. It is the process of combining two or more numbers and writing the result. Addition is a mathematical operation.
03. Addition is the process of combining two or more numbers and writing the result. Addition is a mathematical operation.
04. Addition is the process of combining two or more numbers and writing the result. Addition is a mathematical operation.
05. Addition is the process of combining two or more numbers and writing the result. Addition is a mathematical operation.
06. Addition is the process of combining two or more numbers and writing the result. Addition is a mathematical operation.
07. Addition is the process of combining two or more numbers and writing the result. Addition is a mathematical operation.
08. Addition is the process of combining two or more numbers and writing the result. Addition is a mathematical operation.
09. Addition is the process of combining two or more numbers and writing the result. Addition is a mathematical operation.
10. Addition is the process of combining two or more numbers and writing the result. Addition is a mathematical operation.

[illegible]

- a.  $\text{arr}[\text{rd} + 1] = \text{arr}[\text{rd}] + \text{dr}$  であるならば  $\text{arr}[\text{rd}] = \text{arr}[\text{rd} + 1] - \text{dr}$  であるから  $\text{arr}[\text{rd}]$  を  $\text{arr}[\text{rd} + 1]$  に置き換えて  $\text{rd}$  を  $\text{rd} + 1$  に更新する。
- b.  $\text{arr}[\text{rd} + 1] = \text{arr}[\text{rd}] + \text{dr}$  であるならば  $\text{arr}[\text{rd}] = \text{arr}[\text{rd} + 1] - \text{dr}$  であるから  $\text{arr}[\text{rd}]$  を  $\text{arr}[\text{rd} + 1]$  に置き換えて  $\text{rd}$  を  $\text{rd} + 1$  に更新する。また、 $\text{arr}[\text{rd}] = \text{arr}[\text{rd} + 1] + \text{dr}$  であるならば  $\text{arr}[\text{rd}]$  を  $\text{arr}[\text{rd} + 1]$  に置き換えて  $\text{rd}$  を  $\text{rd} - 1$  に更新する。また、 $\text{arr}[\text{rd}] = \text{arr}[\text{rd} + 1]$  であるならば  $\text{rd}$  を  $\text{rd} + 1$  に更新する。以上を繰り返して  $\text{rd} = \text{rd} + 1$  であるまで繰り返す。

### 3.06 BASE FLASHING INSTALLATION

1. **Umsatzsteigerung:** Durch gezielte Marketingmaßnahmen und den Einsatz von Social Media konnte der Umsatz in den ersten drei Monaten um 15% gesteigert werden.
2. **Kostenreduzierung:** Durch die Optimierung der Beschaffungskette und die Einführung von Energieeffizienzmaßnahmen wurden die operativen Kosten um 8% gesenkt.
3. **Neukundengewinnung:** Durch gezielte Werbekampagnen und den Einsatz von Influencern konnten 10.000 neue Kunden gewonnen werden.
4. **Produktentwicklung:** Durch intensive Forschung und Entwicklung wurde ein neues Produkt entwickelt, das die Bedürfnisse der Kunden besser erfüllt.
5. **Personalisierung:** Durch die Analyse des Kundenverhaltens und die Nutzung von Daten konnten die Marketingmaßnahmen besser auf die Zielgruppe zugeschnitten werden.

### 3.07 WALKWAY INSTALLATION

- [illegible]

### 3.08 FIELD QUALITY CONTROL

- [illegible]



- . odd( $\frac{1}{2}$ ) = 1, odd( $\frac{1}{4}$ ) = 1, odd( $\frac{1}{8}$ ) = 1, odd( $\frac{1}{16}$ ) = 1, odd( $\frac{1}{32}$ ) = 1, odd( $\frac{1}{64}$ ) = 1, odd( $\frac{1}{128}$ ) = 1, odd( $\frac{1}{256}$ ) = 1, odd( $\frac{1}{512}$ ) = 1, odd( $\frac{1}{1024}$ ) = 1, odd( $\frac{1}{2048}$ ) = 1, odd( $\frac{1}{4096}$ ) = 1, odd( $\frac{1}{8192}$ ) = 1, odd( $\frac{1}{16384}$ ) = 1, odd( $\frac{1}{32768}$ ) = 1, odd( $\frac{1}{65536}$ ) = 1, odd( $\frac{1}{131072}$ ) = 1, odd( $\frac{1}{262144}$ ) = 1, odd( $\frac{1}{524288}$ ) = 1, odd( $\frac{1}{1048576}$ ) = 1, odd( $\frac{1}{2097152}$ ) = 1, odd( $\frac{1}{4194304}$ ) = 1, odd( $\frac{1}{8388608}$ ) = 1, odd( $\frac{1}{16777216}$ ) = 1, odd( $\frac{1}{33554432}$ ) = 1, odd( $\frac{1}{67108864}$ ) = 1, odd( $\frac{1}{134217728}$ ) = 1, odd( $\frac{1}{268435456}$ ) = 1, odd( $\frac{1}{536870912}$ ) = 1, odd( $\frac{1}{1073741824}$ ) = 1, odd( $\frac{1}{2147483648}$ ) = 1, odd( $\frac{1}{4294967296}$ ) = 1, odd( $\frac{1}{8589934592}$ ) = 1, odd( $\frac{1}{17179869184}$ ) = 1, odd( $\frac{1}{34359738368}$ ) = 1, odd( $\frac{1}{68719476736}$ ) = 1, odd( $\frac{1}{137438953472}$ ) = 1, odd( $\frac{1}{274877906944}$ ) = 1, odd( $\frac{1}{549755813888}$ ) = 1, odd( $\frac{1}{1099511627776}$ ) = 1, odd( $\frac{1}{2199023255552}$ ) = 1, odd( $\frac{1}{4398046511104}$ ) = 1, odd( $\frac{1}{8796093022208}$ ) = 1, odd( $\frac{1}{17592186044416}$ ) = 1, odd( $\frac{1}{35184372088832}$ ) = 1, odd( $\frac{1}{70368744177664}$ ) = 1, odd( $\frac{1}{140737488355328}$ ) = 1, odd( $\frac{1}{281474976710656}$ ) = 1, odd( $\frac{1}{562949953421312}$ ) = 1, odd( $\frac{1}{1125899906842624}$ ) = 1, odd( $\frac{1}{2251799813685248}$ ) = 1, odd( $\frac{1}{4503599627370496}$ ) = 1, odd( $\frac{1}{9007199254740992}$ ) = 1, odd( $\frac{1}{18014398509481984}$ ) = 1, odd( $\frac{1}{36028797018963968}$ ) = 1, odd( $\frac{1}{72057594037927936}$ ) = 1, odd( $\frac{1}{144115188075855872}$ ) = 1, odd( $\frac{1}{288230376151711744}$ ) = 1, odd( $\frac{1}{576460752303423488}$ ) = 1, odd( $\frac{1}{1152921504606846976}$ ) = 1, odd( $\frac{1}{2305843009213693952}$ ) = 1, odd( $\frac{1}{4611686018427387904}$ ) = 1, odd( $\frac{1}{9223372036854775808}$ ) = 1, odd( $\frac{1}{18446744073709551616}$ ) = 1, odd( $\frac{1}{36893488147419103232}$ ) = 1, odd( $\frac{1}{73786976294838206464}$ ) = 1, odd( $\frac{1}{147573952589676412928}$ ) = 1, odd( $\frac{1}{295147905179352825856}$ ) = 1, odd( $\frac{1}{590295810358705651712}$ ) = 1, odd( $\frac{1}{1180591620717411303424}$ ) = 1, odd( $\frac{1}{2361183241434822606848}$ ) = 1, odd( $\frac{1}{4722366482869645213696}$ ) = 1, odd( $\frac{1}{9444732965739290427392}$ ) = 1, odd( $\frac{1}{18889465931478580854784}$ ) = 1, odd( $\frac{1}{37778931862957161709568}$ ) = 1, odd( $\frac{1}{75557863725914323419136}$ ) = 1, odd( $\frac{1}{151115727451828646838272}$ ) = 1, odd( $\frac{1}{302231454903657293676544}$ ) = 1, odd( $\frac{1}{604462909807314587353088}$ ) = 1, odd( $\frac{1}{1208925819614629174706176}$ ) = 1, odd( $\frac{1}{2417851639229258349412352}$ ) = 1, odd( $\frac{1}{4835703278458516698824704}$ ) = 1, odd( $\frac{1}{9671406556917033397649408}$ ) = 1, odd( $\frac{1}{19342813113834066795298816}$ ) = 1, odd( $\frac{1}{38685626227668133590597632}$ ) = 1, odd( $\frac{1}{77371252455336267181195264}$ ) = 1, odd( $\frac{1}{154742504910672534362390528}$ ) = 1, odd( $\frac{1}{309485009821345068724781056}$ ) = 1, odd( $\frac{1}{618970019642690137449562112}$ ) = 1, odd( $\frac{1}{1237940039285380274899124224}$ ) = 1, odd( $\frac{1}{2475880078570760549798248448}$ ) = 1, odd( $\frac{1}{4951760157141521099596496896}$ ) = 1, odd( $\frac{1}{9903520314283042199192993792}$ ) = 1, odd( $\frac{1}{19807040628566084398385987584}$ ) = 1, odd( $\frac{1}{39614081257132168796771975168}$ ) = 1, odd( $\frac{1}{79228162514264337593543950336}$ ) = 1, odd( $\frac{1}{158456325028528675187087900672}$ ) = 1, odd( $\frac{1}{316912650057057350374175801344}$ ) = 1, odd( $\frac{1}{633825300114114700748351602688}$ ) = 1, odd( $\frac{1}{1267650600228229401496703205376}$ ) = 1, odd( $\frac{1}{2535301200456458802993406410752}$ ) = 1, odd( $\frac{1}{5070602400912917605986812821504}$ ) = 1, odd( $\frac{1}{10141204801825835211973625643008}$ ) = 1, odd( $\frac{1}{20282409603651670423947251286016}$ ) = 1, odd( $\frac{1}{40564819207303340847894502572032}$ ) = 1, odd( $\frac{1}{81129638414606681695789005144064}$ ) = 1, odd( $\frac{1}{162259276829213363391578010288128}$ ) = 1, odd( $\frac{1}{324518553658426726783156020576256}$ ) = 1, odd( $\frac{1}{649037107316853453566312041152512}$ ) = 1, odd( $\frac{1}{1298074214633706907132624082305024}$ ) = 1, odd( $\frac{1}{2596148429267413814265248164610048}$ ) = 1, odd( $\frac{1}{5192296858534827628530496329220096}$ ) = 1, odd( $\frac{1}{10384593717069655257060992658440192}$ ) = 1, odd( $\frac{1}{20769187434139310514121985316880384}$ ) = 1, odd( $\frac{1}{41538374868278621028243970633760768}$ ) = 1, odd( $\frac{1}{83076749736557242056487941267521536}$ ) = 1, odd( $\frac{1}{166153499473114484112975882535043072}$ ) = 1, odd( $\frac{1}{332306998946228968225951765070086144}$ ) = 1, odd( $\frac{1}{664613997892457936451903530140172288}$ ) = 1, odd( $\frac{1}{1329227995784915872903807060280344576}$ ) = 1, odd( $\frac{1}{2658455991569831745807614120560689152}</$

### 3.09 PROTECTING AND CLEANING

- [illegible]

### 3.10 ROOFING INSTALLER'S WARRANTY

- [illegible]



- END OF SECTION**







## PART 2 PRODUCTS

## 2.01 SHEET MATERIALS

- [illegible]

## 2.02 ACCESSORIES

1.  $\lim_{x \rightarrow 0} \frac{1}{x} = \infty$  である。
2.  $\lim_{x \rightarrow 0} \frac{1}{x} = \infty$  である。
3.  $\lim_{x \rightarrow 0} \frac{1}{x} = \infty$  である。
4.  $\lim_{x \rightarrow 0} \frac{1}{x} = \infty$  である。

## 2.03 FABRICATION

- [illegible]

## 2.04 GUTTER AND DOWNSPOUT FABRICATION

- [illegible]

## PART 3 EXECUTION

### 3.01 EXAMINATION

- . □□r□□r□□□□□□□□□□r□□□□□□□□□□d□□□□□□d □□□□□ □r□□□□r□□□□r□ □□d□ □□□r□□□□□□  
□□□□□□□□d □□□□□□ □r□□□ □□□□□d.
- . □□r□□□r□□□□□□□ □r□ □□□□□□ □□d □□□□□ □□□□□□□□□□r□ □□□□□□□□□□d□□□□□ □□□□r□.

### 3.02 PREPARATION

- [illegible]

### 3.03 INSTALLATION

- . 倘若 $r$ 是正数, 那么 $r$ 的平方根是 $\sqrt{r}$ 和 $-\sqrt{r}$ . 倘若 $r$ 是负数, 那么 $\sqrt{r}$ 和 $-\sqrt{r}$ 都是虚数. 倘若 $r$ 是零, 那么 $\sqrt{r}$ 和 $-\sqrt{r}$ 都是零. 倘若 $r$ 是正数, 那么 $\sqrt{r}$ 和 $-\sqrt{r}$ 都是实数. 倘若 $r$ 是负数, 那么 $\sqrt{r}$ 和 $-\sqrt{r}$ 都是虚数. 倘若 $r$ 是零, 那么 $\sqrt{r}$ 和 $-\sqrt{r}$ 都是零.















### 3.03 INSTALLATION

- a. Mount the Mounting Bracket on the wall using the screws provided. The Mounting Bracket should be mounted to a wall that is made of concrete, brick, or stone. Do not mount the Mounting Bracket on a wall that is made of drywall or plaster.
- b. Remove the Mounting Bracket from the wall and attach the Mounting Bracket to the back of the device. The Mounting Bracket should be attached to the back of the device in the center of the device. The Mounting Bracket should be attached to the back of the device in the center of the device. The Mounting Bracket should be attached to the back of the device in the center of the device.
- c. Mount the device to the wall using the screws provided. The device should be mounted to the wall in the center of the wall. The device should be mounted to the wall in the center of the wall. The device should be mounted to the wall in the center of the wall.
- d. The device should be mounted to the wall in the center of the wall. The device should be mounted to the wall in the center of the wall. The device should be mounted to the wall in the center of the wall.
- e. The device should be mounted to the wall in the center of the wall. The device should be mounted to the wall in the center of the wall. The device should be mounted to the wall in the center of the wall.
- f. The device should be mounted to the wall in the center of the wall. The device should be mounted to the wall in the center of the wall. The device should be mounted to the wall in the center of the wall.

### 3.04 CLEANING

- a. The device should be cleaned with a soft, dry cloth. Do not use any cleaning products or solvents. Do not use any cleaning products or solvents. Do not use any cleaning products or solvents.
- b. The device should be cleaned with a soft, dry cloth. Do not use any cleaning products or solvents. Do not use any cleaning products or solvents. Do not use any cleaning products or solvents.
- c. The device should be cleaned with a soft, dry cloth. Do not use any cleaning products or solvents. Do not use any cleaning products or solvents. Do not use any cleaning products or solvents.

### 3.05 TROUBLESHOOTING

- a. The device should be cleaned with a soft, dry cloth. Do not use any cleaning products or solvents. Do not use any cleaning products or solvents. Do not use any cleaning products or solvents.

END OF SECTION







# ROOFING REPLACEMENT

## CENTRAL DETENTION FACILITY

1901 D STREET, SE  
WASHINGTON DC



BLUEFIN LLC CORPORATE OFFICE  
6312 S. Fiddlers Green Circle Suite 100E  
Greenwood Village, CO 80111  
TEL: 866-735-0728

MID-ATLANTIC OFFICE  
2134 Espey Court Suite 14  
Crofton, MD 21114  
TEL: 410-881-0221

## DISTRICT OF COLUMBIA DEPARTMENT OF CORRECTIONS



AERIAL SITE PHOTO

### DRAWING INDEX

- C1.0 COVER PAGE
- R1.0 KEY ROOF PLAN - PHASES AND ROOF TYPES
- R1.1 PHASE 2 ROOF PLANS
- R1.2 PHASE 3 ROOF PLANS
- R1.3 PHASE 4 ROOF PLANS
- R1.4 ROOF DETAILS - TYPE 1 ROOF
- R1.5 ROOF / TYPICAL DETAILS - TYPE 3 ROOF
- R1.6 ROOF DETAILS - TYPE 2 ROOF
- R1.7 TYPICAL ROOF DETAILS - TYPE 1 ROOF
- R1.8 TYPICAL ROOF DETAILS - TYPE 2 ROOF

DRAWING TITLE  
**COVER PAGE**

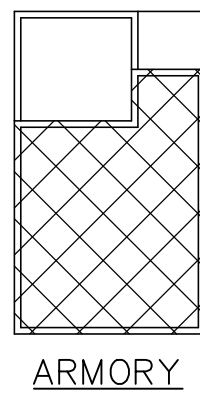
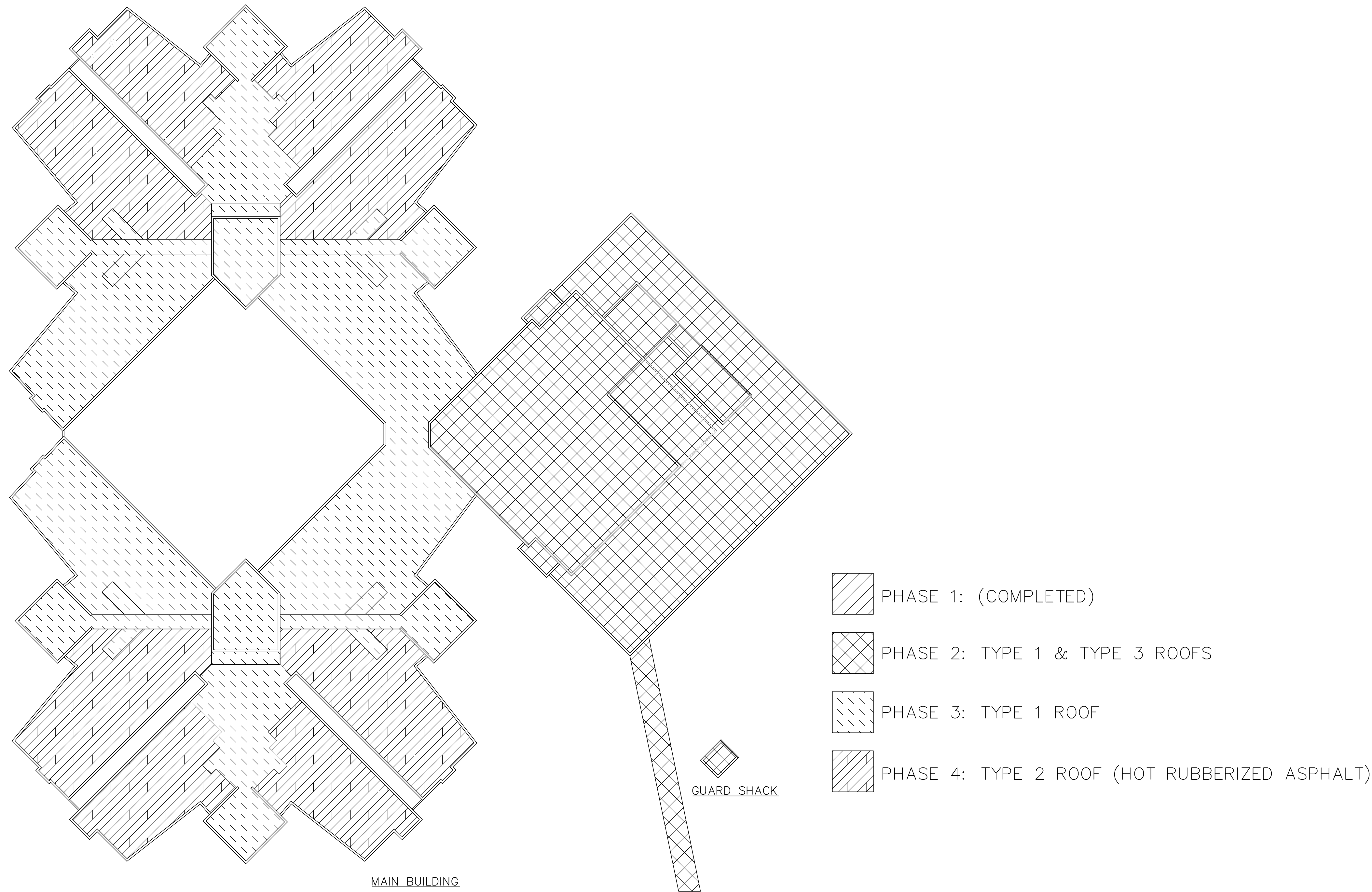
SHEET NUMBER  
**C1.0**



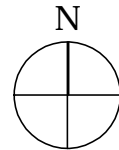
PROJECT  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

**District of Columbia  
Department of Corrections**



**KEY ROOF PLAN**  
N.T.S



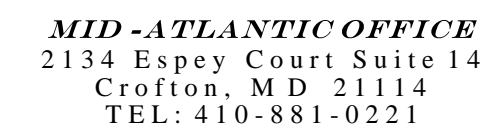
DRAWING DATES		
NUMBER	DATE	COMMENTS

- 
- 
- 
- 
- 
- 
- 
- 

DRAWING TITLE  
**KEY ROOF PLAN  
PHASES AND  
ROOF TYPES**

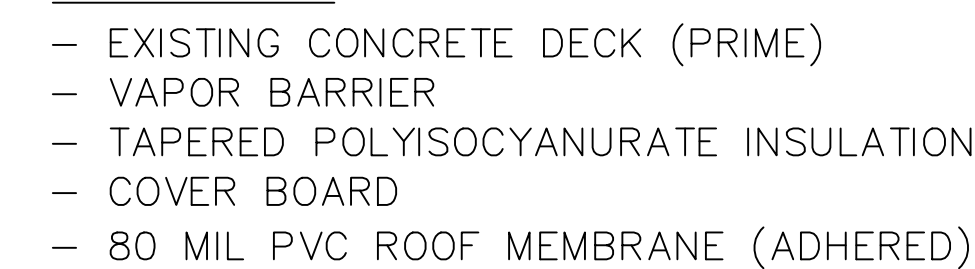
SHEET NUMBER  
**R1.0**





**Central Detention Facility**  
1901 D Street, SE  
Washington DC

**District of Columbia  
Department of Corrections**



GUARD SHACK ROOF AREA  
TYPE 3 ROOF

ARMORY ROOF AREA  
TYPE 3 ROOF

	— ROOF AREA DESIGNATION
	— ROOF DRAIN
	— THRU-WALL SCUPPER
	— ROOF EDGE SCUPPER
	— GUTTER EDGE
	— CURBED OPENING
	— H.V.A.C. CURB
	— ROOF HATCH
	— SKYLIGHT
	— CURBED STACK
	— CHIMNEY
	— PIPE PORTAL CURB
	— ROOF LADDER
	— PIPE VENT
	— SOIL STACK
	— SMALL PIPE PENETRATION
	— PITCH PAN
	— EXPANSION JOINT
	— SLOPE TRANSITION
	— ABANDONED EQUIPMENT

DRAWING DATES		
NUMBER	DATE	COMMENTS

DRAWING TITLE

## PHASE 2 ROOF PLANS

SHEET NUMBER

## R1.1

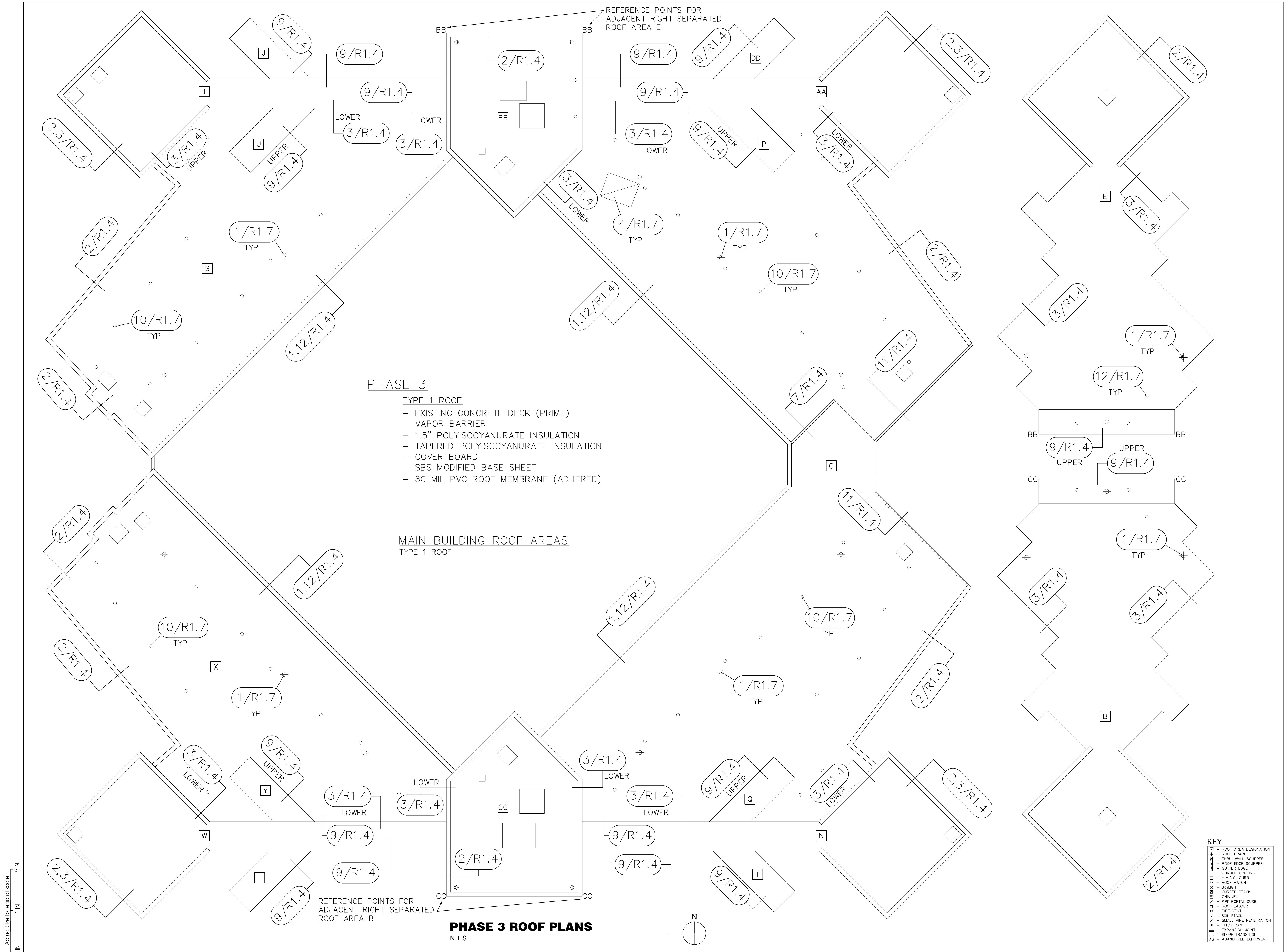
Actual Size to read at scale



PROJECT  
**ROOFING REPLACEMENT**

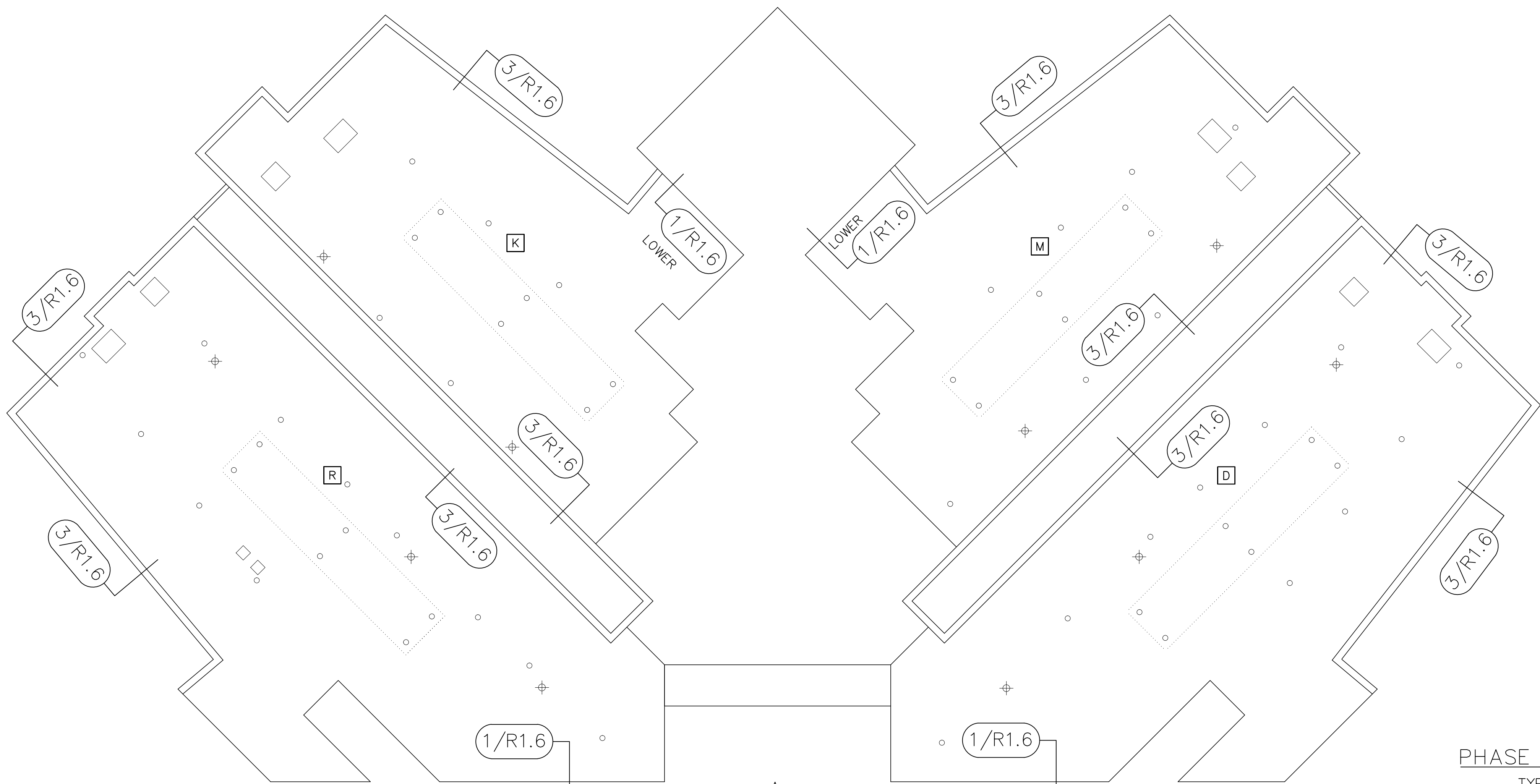
Central Detention Facility  
1901 D Street, SE  
Washington DC

**District of Columbia  
Department of Corrections**

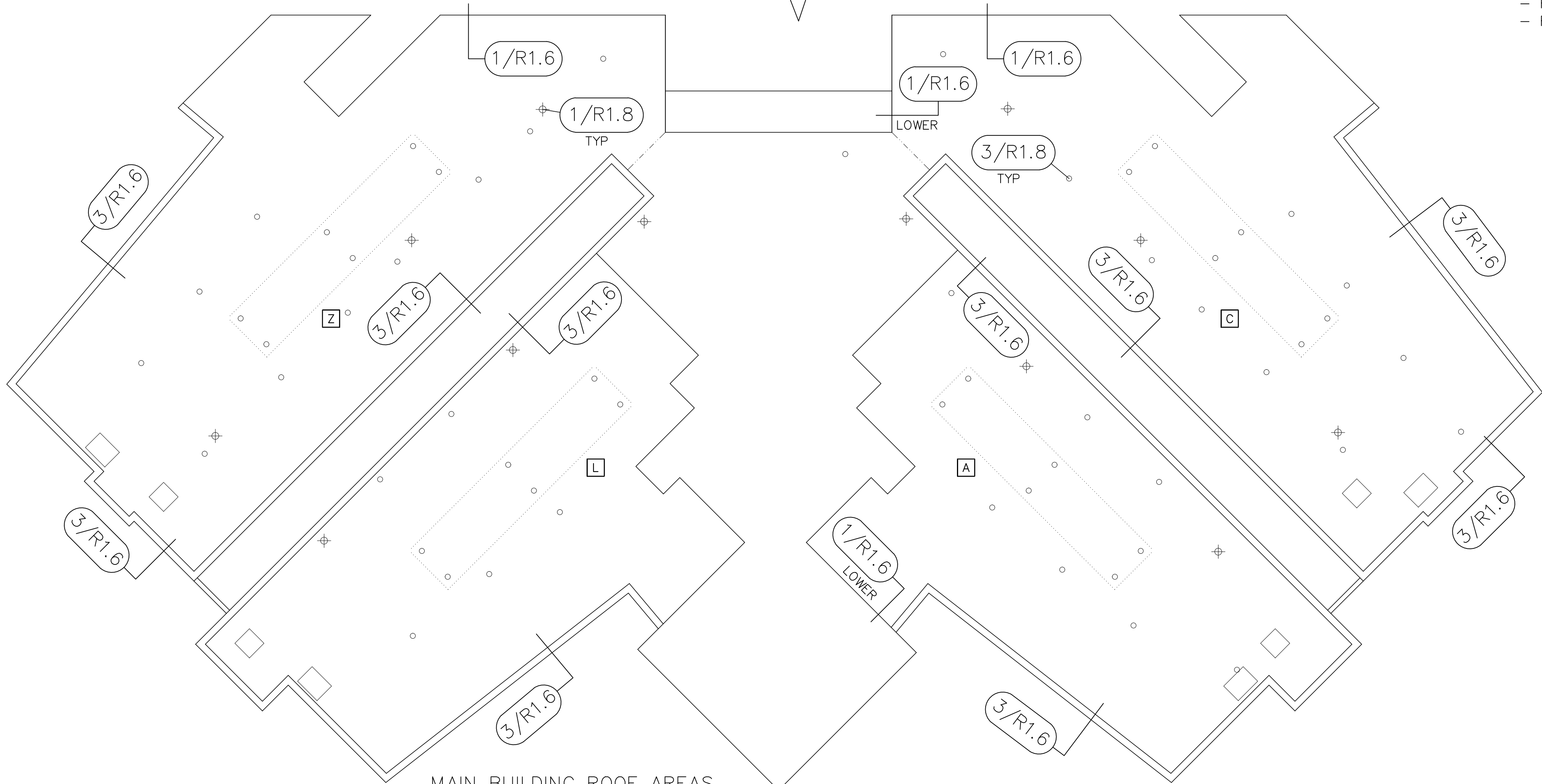




PROJECT  
**ROOFING REPLACEMENT**  
Central Detention Facility  
1901 D Street, SE  
Washington DC  
**District of Columbia  
Department of Corrections**



PHASE 4  
TYPE 2 ROOF  
- EXISTING CONCRETE DECK (PRIME)  
- HOT RUBBERIZED ASPHALT  
- REINFORCED HFA SYSTEM WITH SBS CAP SHEET



MAIN BUILDING ROOF AREAS  
TYPE 2 ROOF

**PHASE 4 ROOF PLANS**  
N.T.S

KEY			
□	-	ROOF AREA DESIGNATION	
+	-	ROOF DRAIN	
+	-	THRU-WALL SCUPPER	
+	-	ROOF EDGE SCUPPER	
+	-	GUTTER EDGE	
+	-	CURBED OPENING	
+	-	H.V.A.C. CURB	
+	-	ROOF HATCH	
+	-	SKYLIGHT	
+	-	CURBED STACK	
+	-	CHIMNEY	
+	-	PIPE PORTAL CURB	
+	-	ROOF LADDER	
+	-	PIPE VENT	
+	-	SOIL STACK	
+	-	SMALL PIPE PENETRATION	
+	-	PITCH PAN	
+	-	EXPANSION JOINT	
+	-	SLOPE TRANSITION	
+	-	ABANDONED EQUIPMENT	

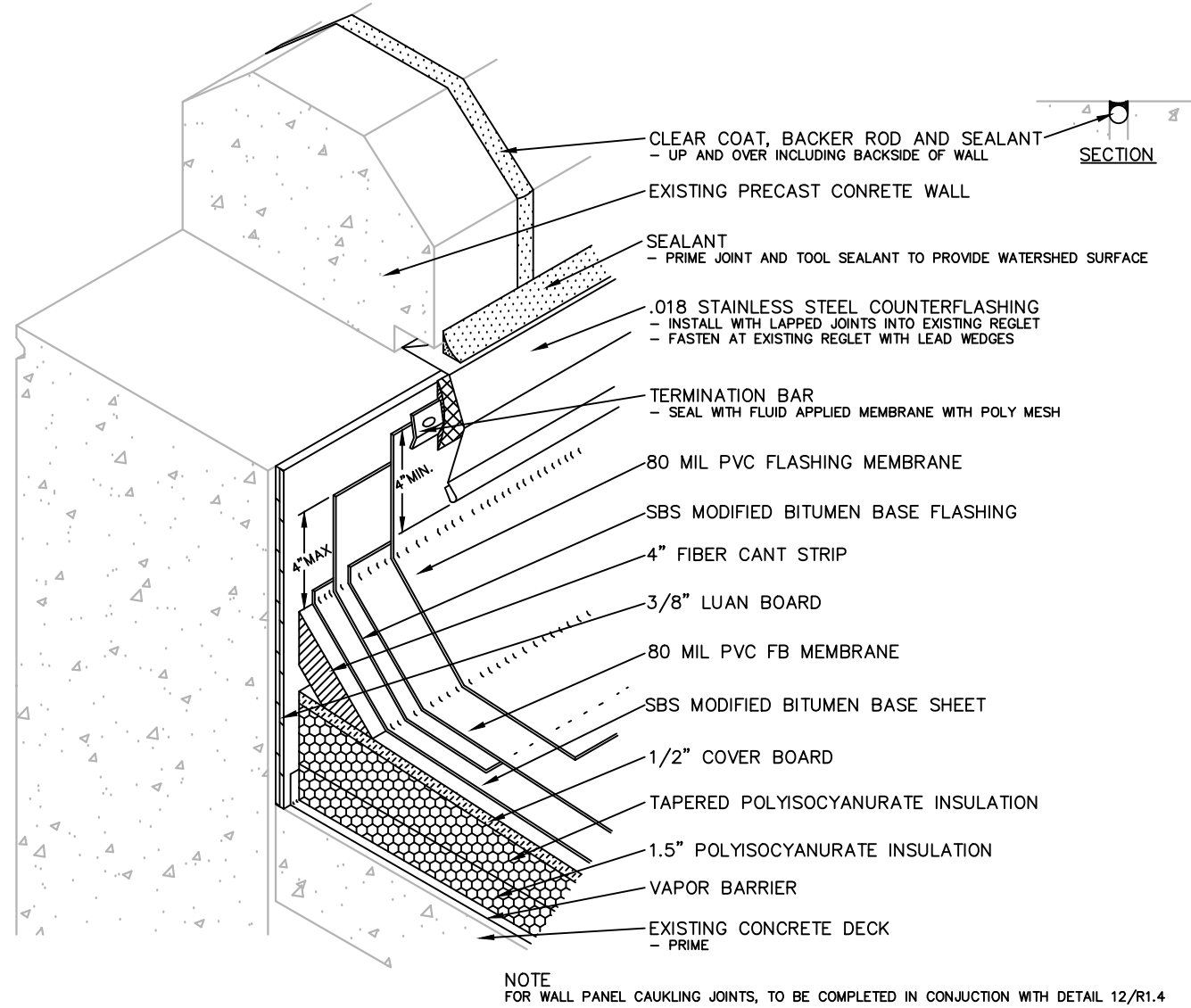
DRAWING DATES		
NUMBER	DATE	COMMENTS
DRAWING TITLE		
<b>PHASE 4</b>		
<b>ROOF PLANS</b>		
SHEET NUMBER		
<b>R1.3</b>		



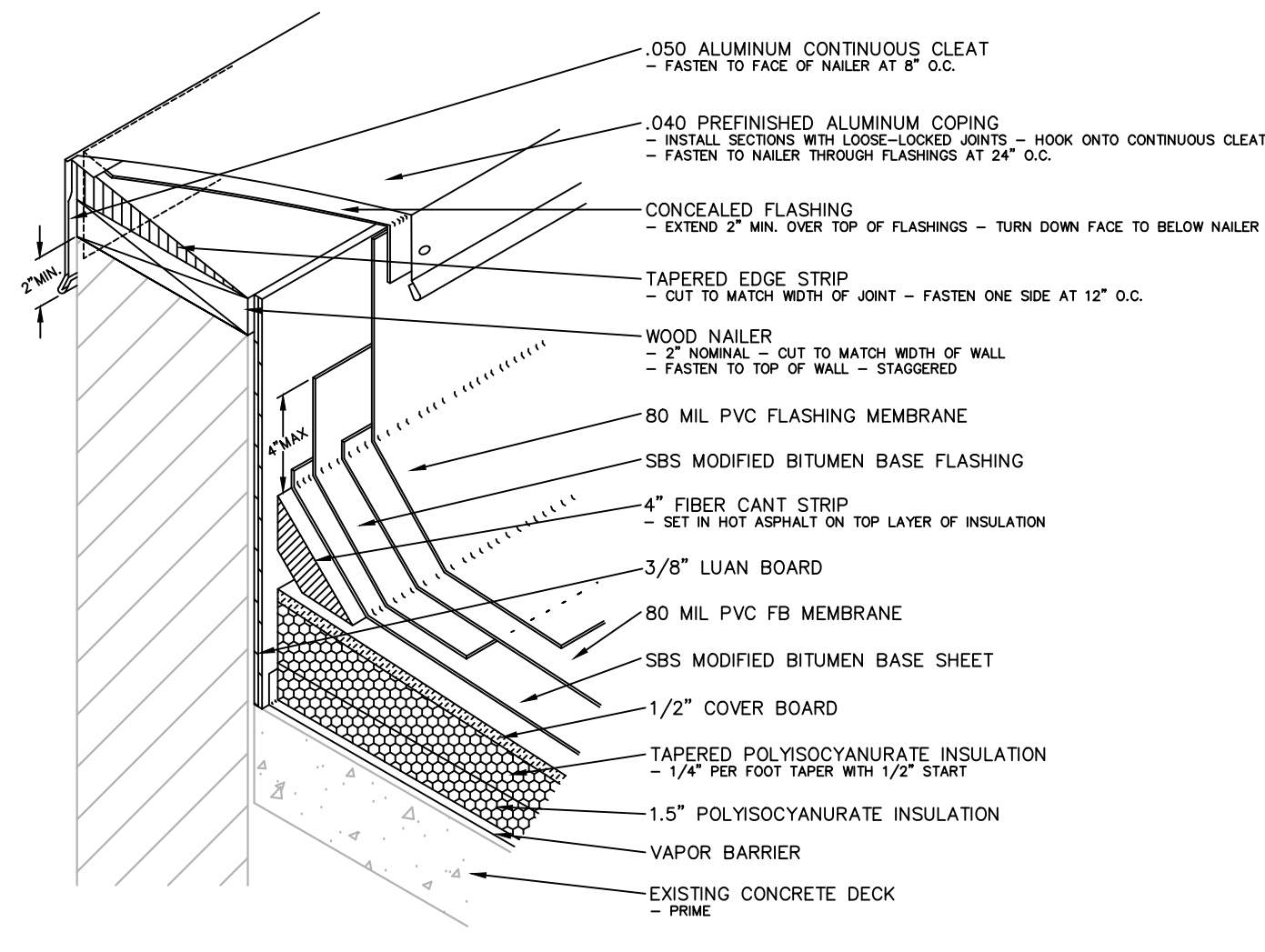
PROJECT  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

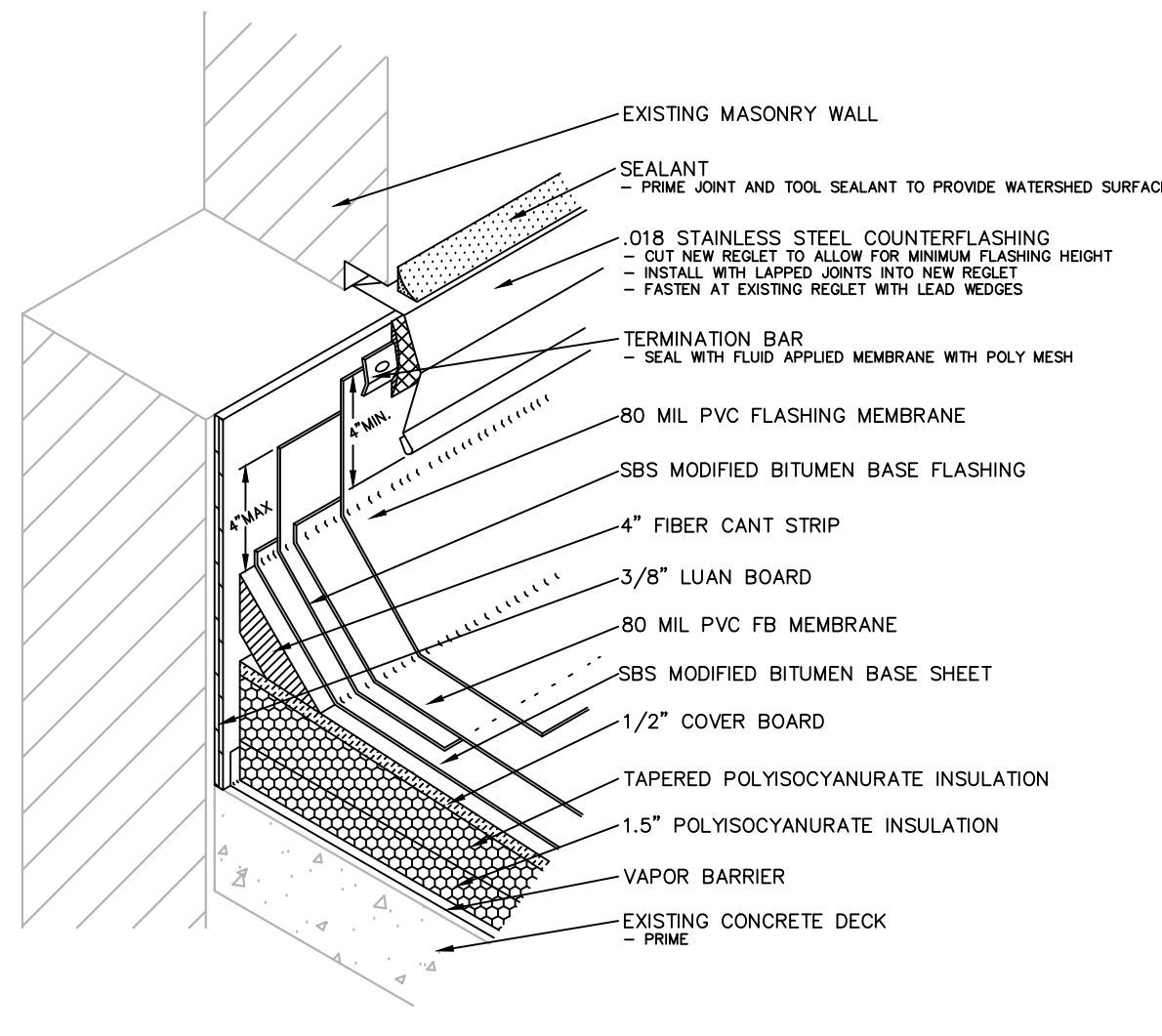
**District of Columbia  
Department of Corrections**



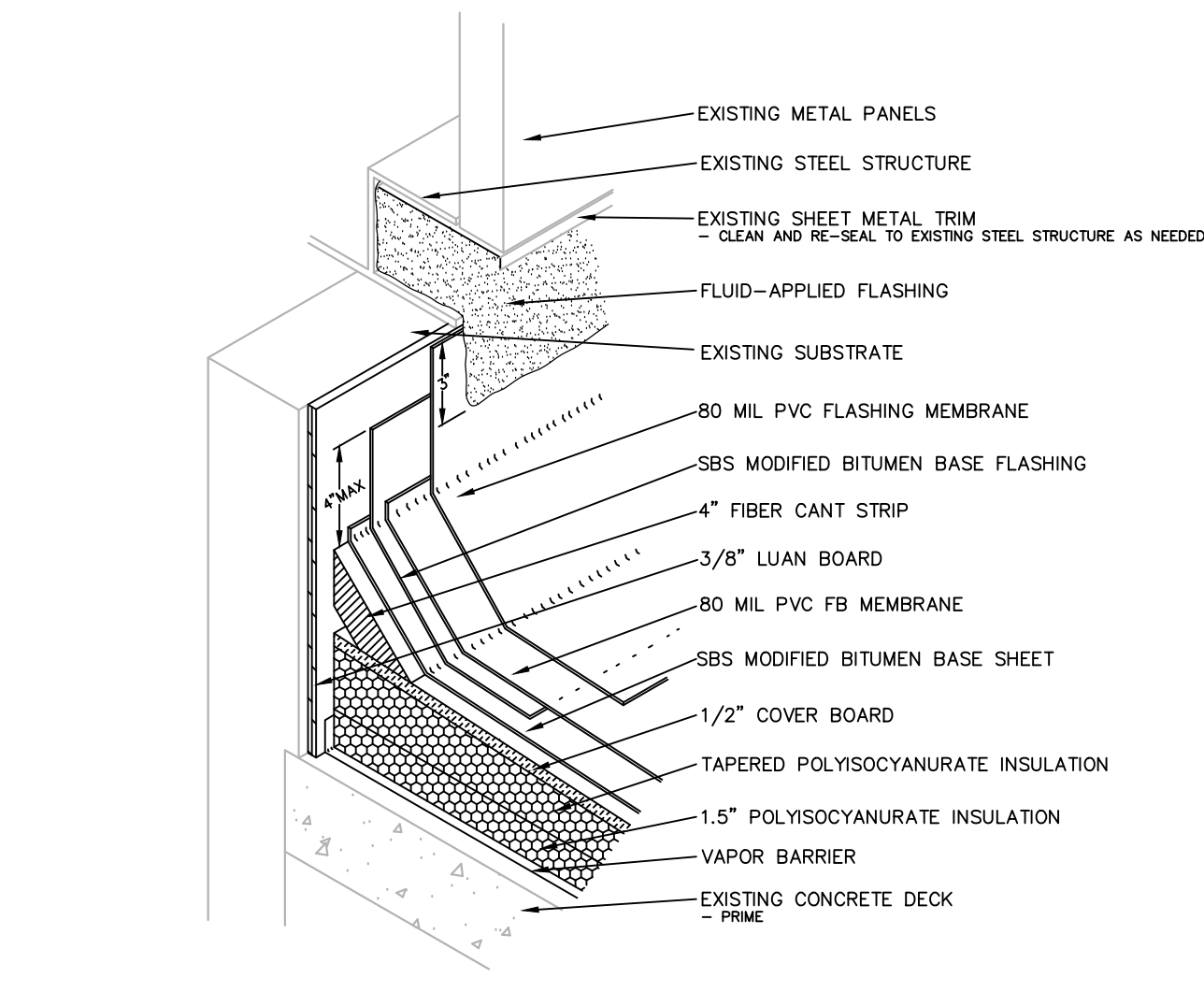
**1 PARAPET FLASHING PHASE 1 ONLY**  
N.T.S



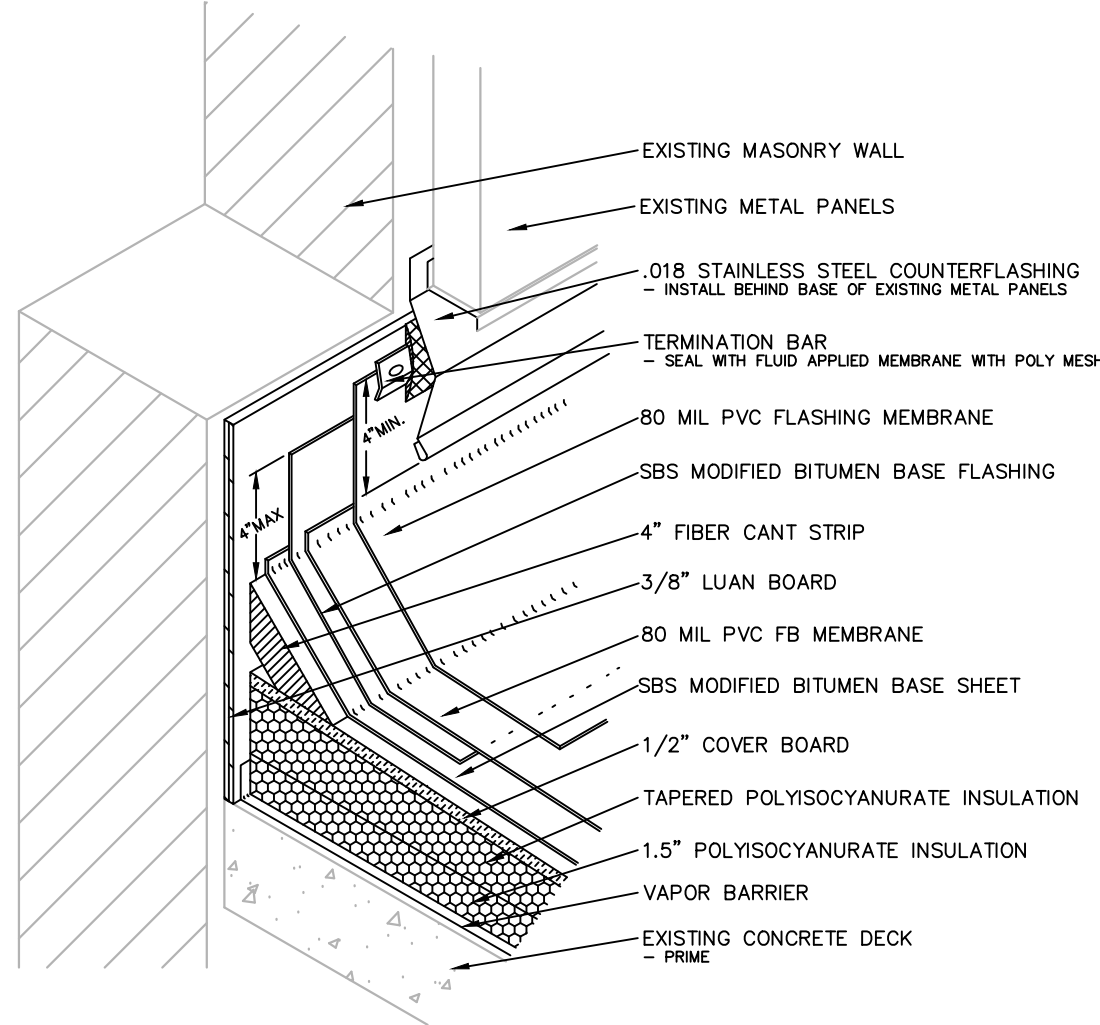
**2 PARAPET FLASHING**  
N.T.S



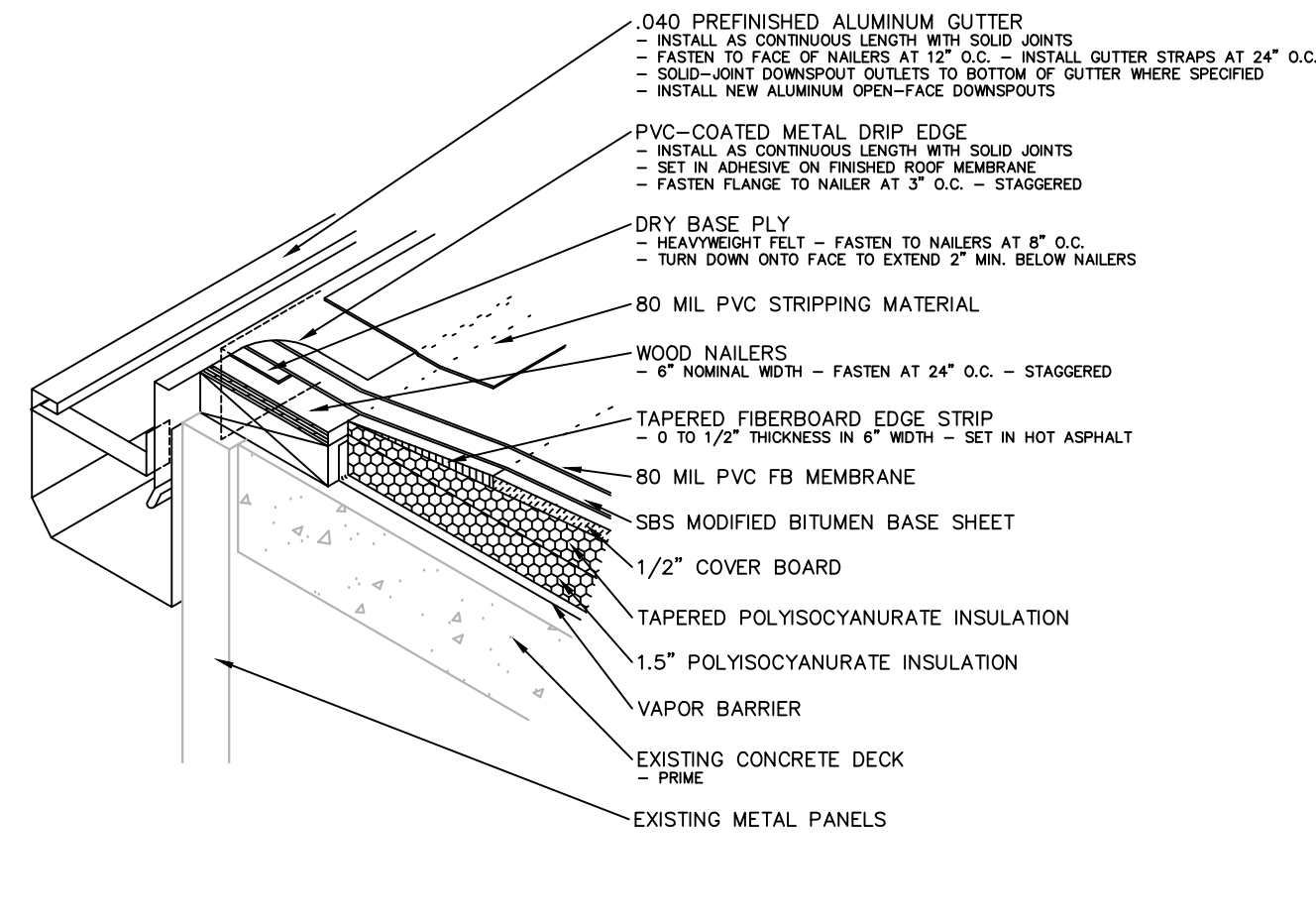
**3 WALL FLASHING**  
N.T.S



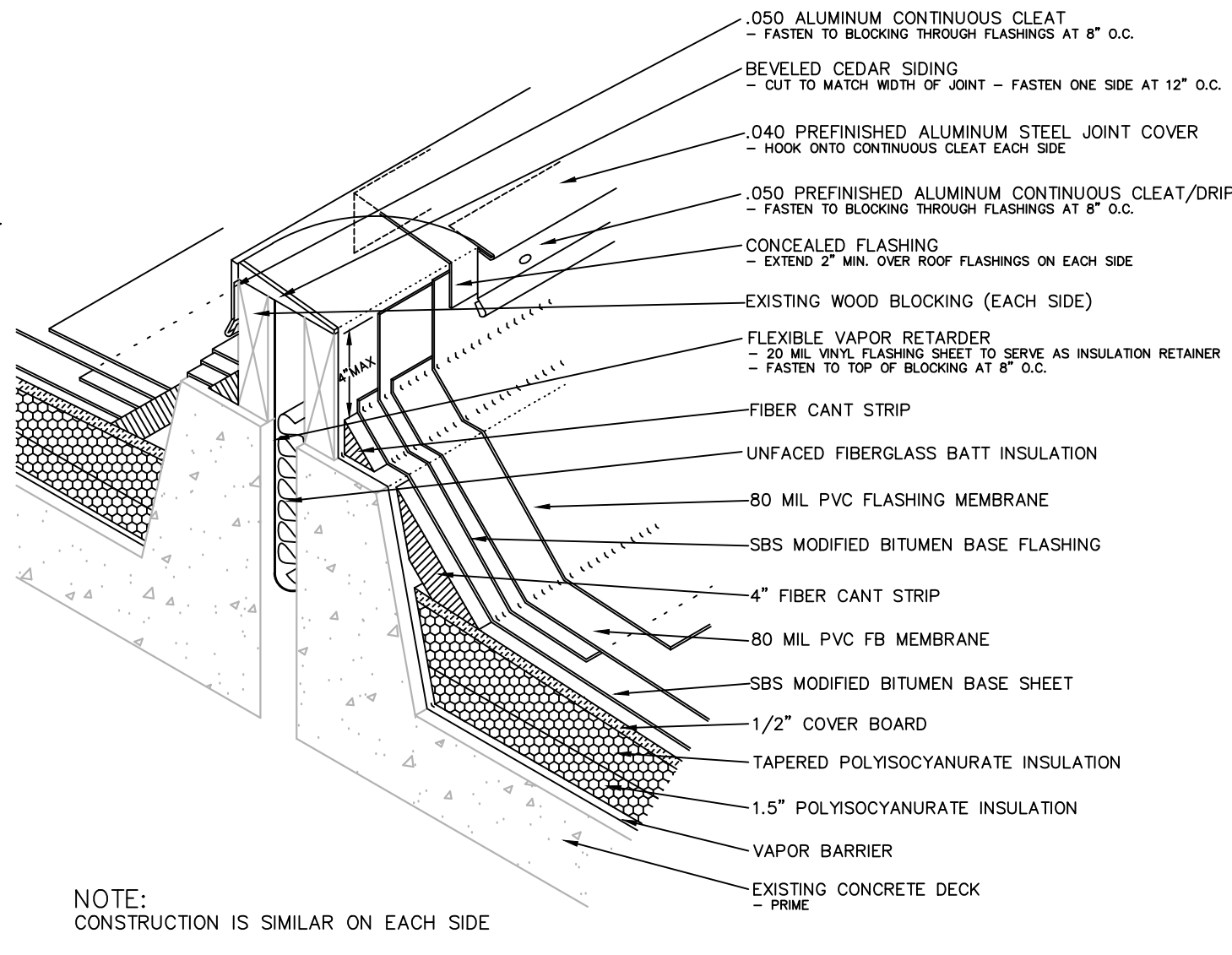
**4 WALL FLASHING**  
N.T.S



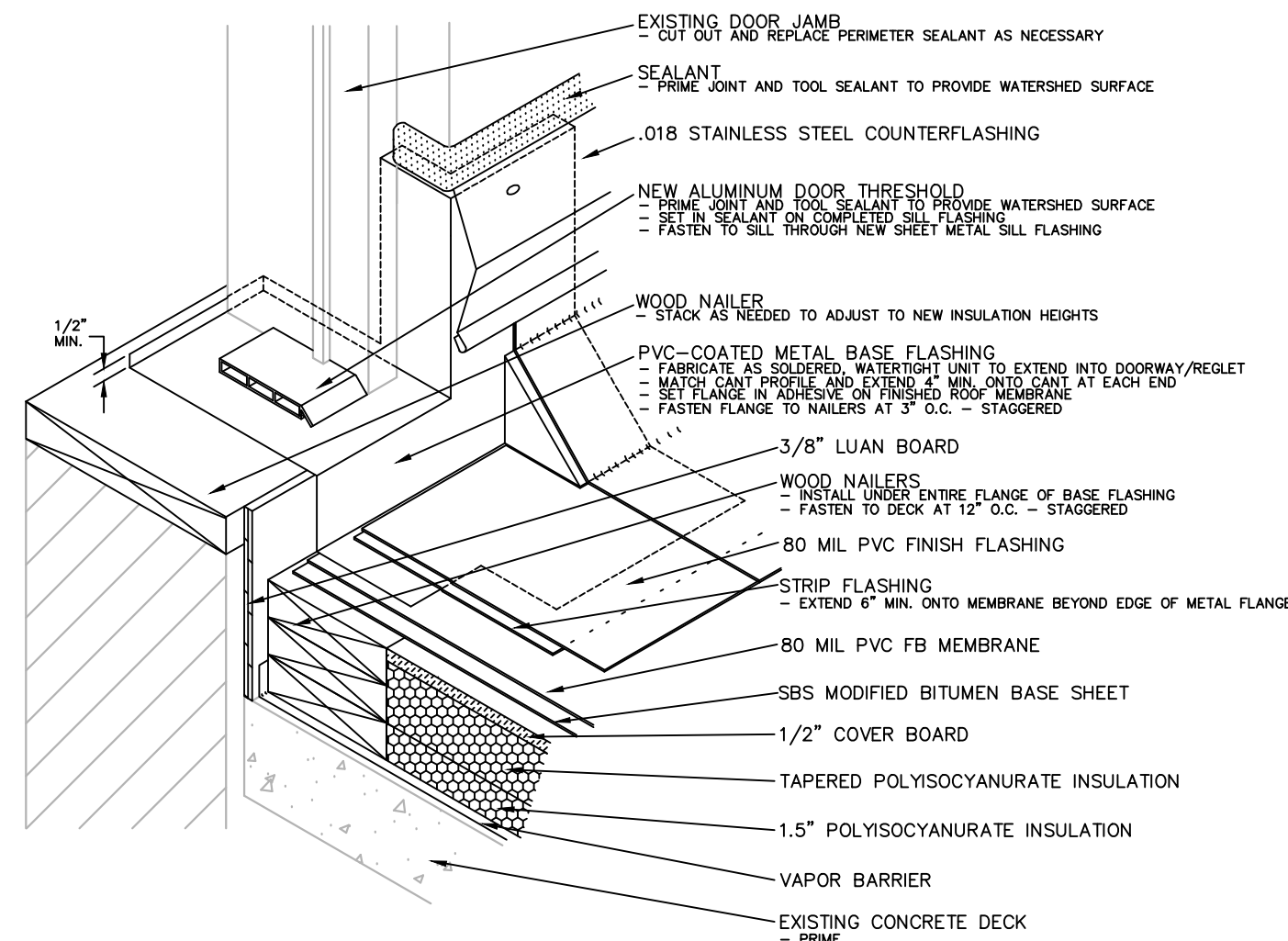
**5 WALL FLASHING**  
N.T.S



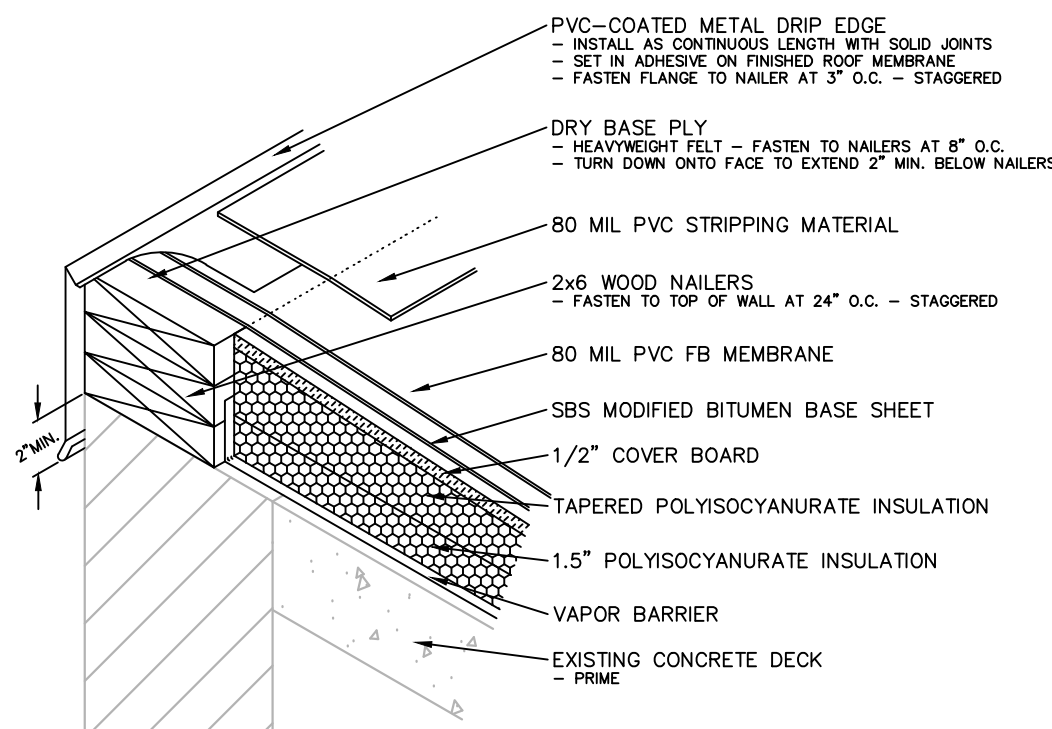
**6 GUTTER EDGE**  
N.T.S



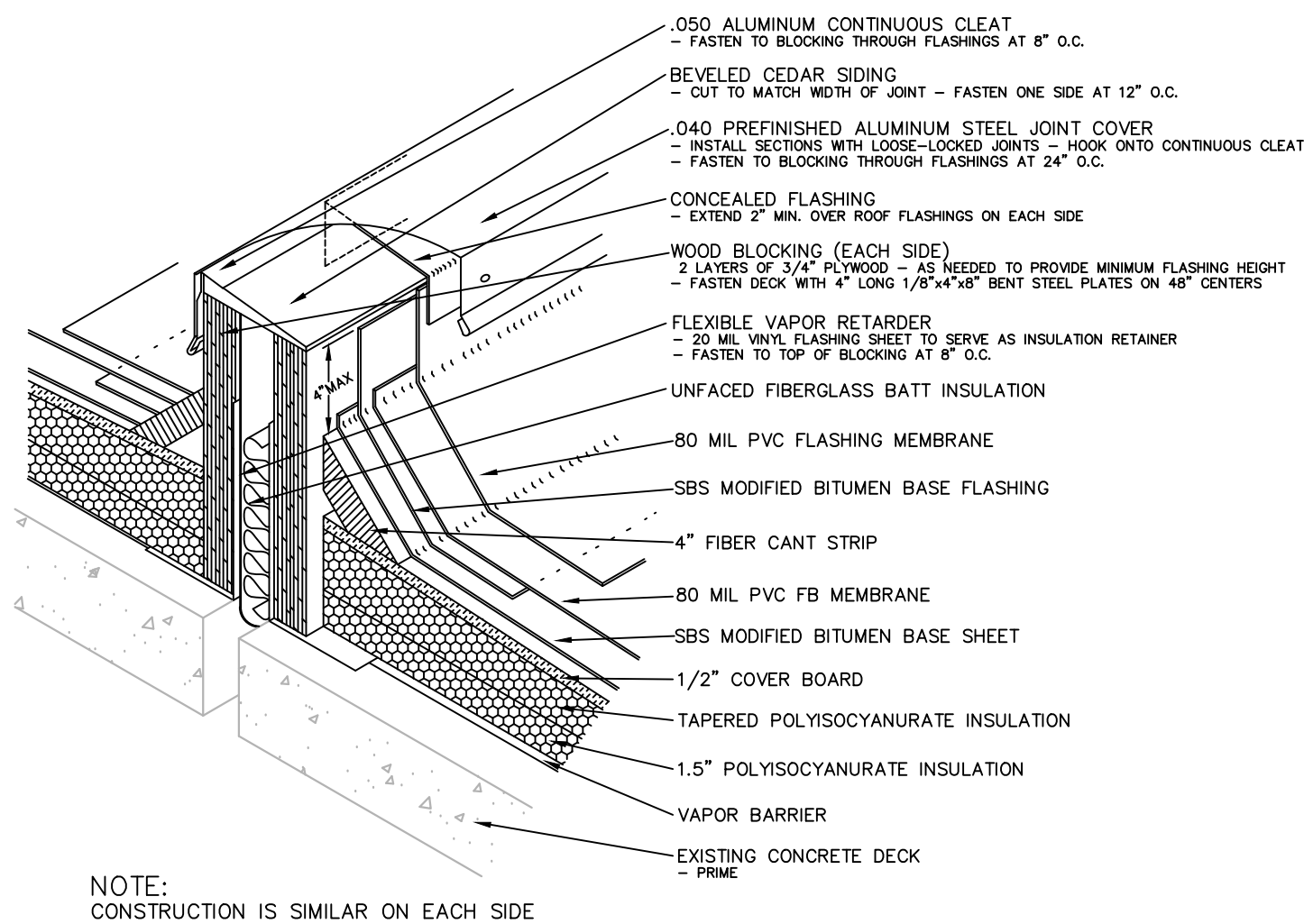
**7 EXPANSION JOINT FLASHING**  
N.T.S



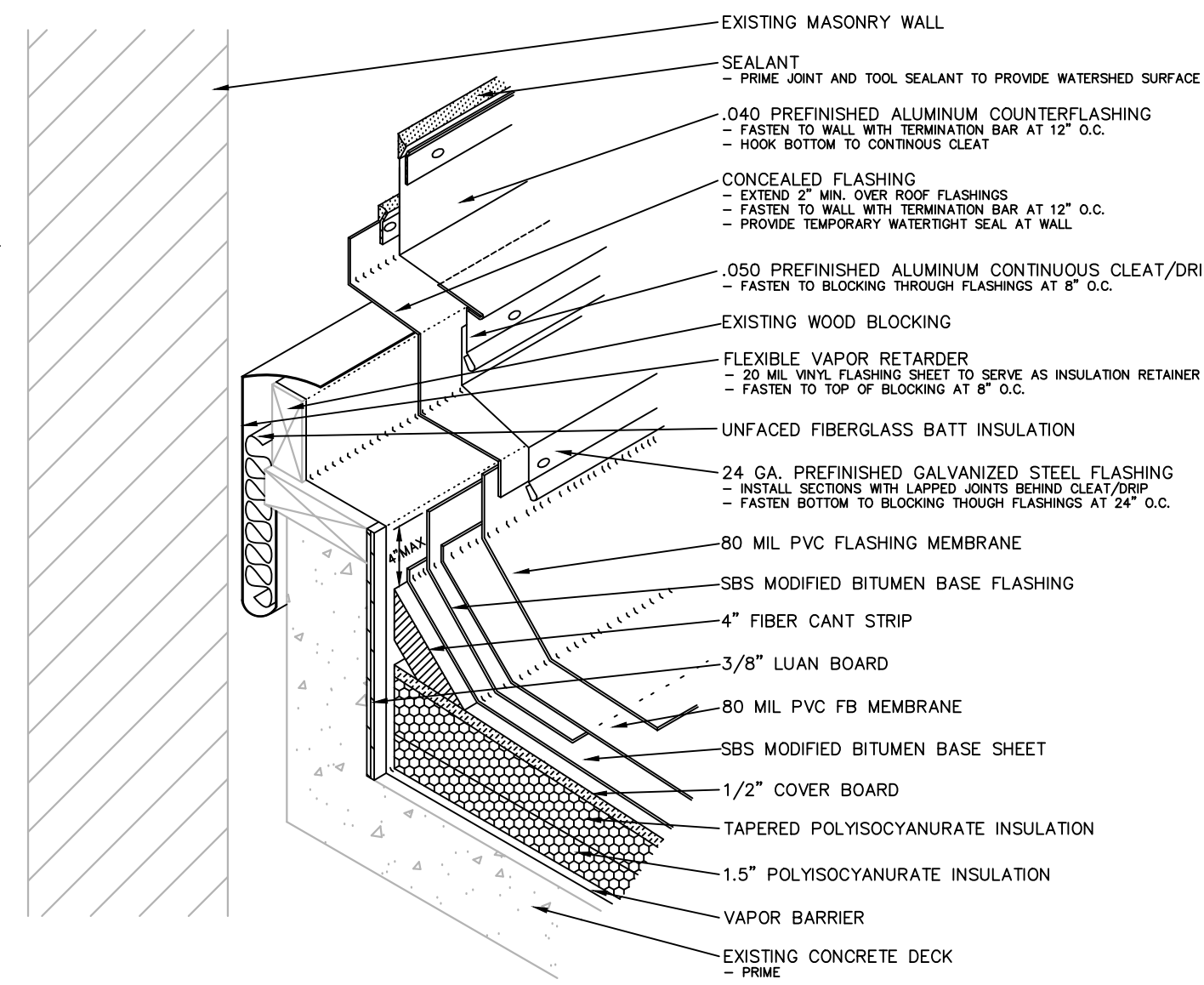
**8 DOOR THRESHOLD FLASHING**  
N.T.S



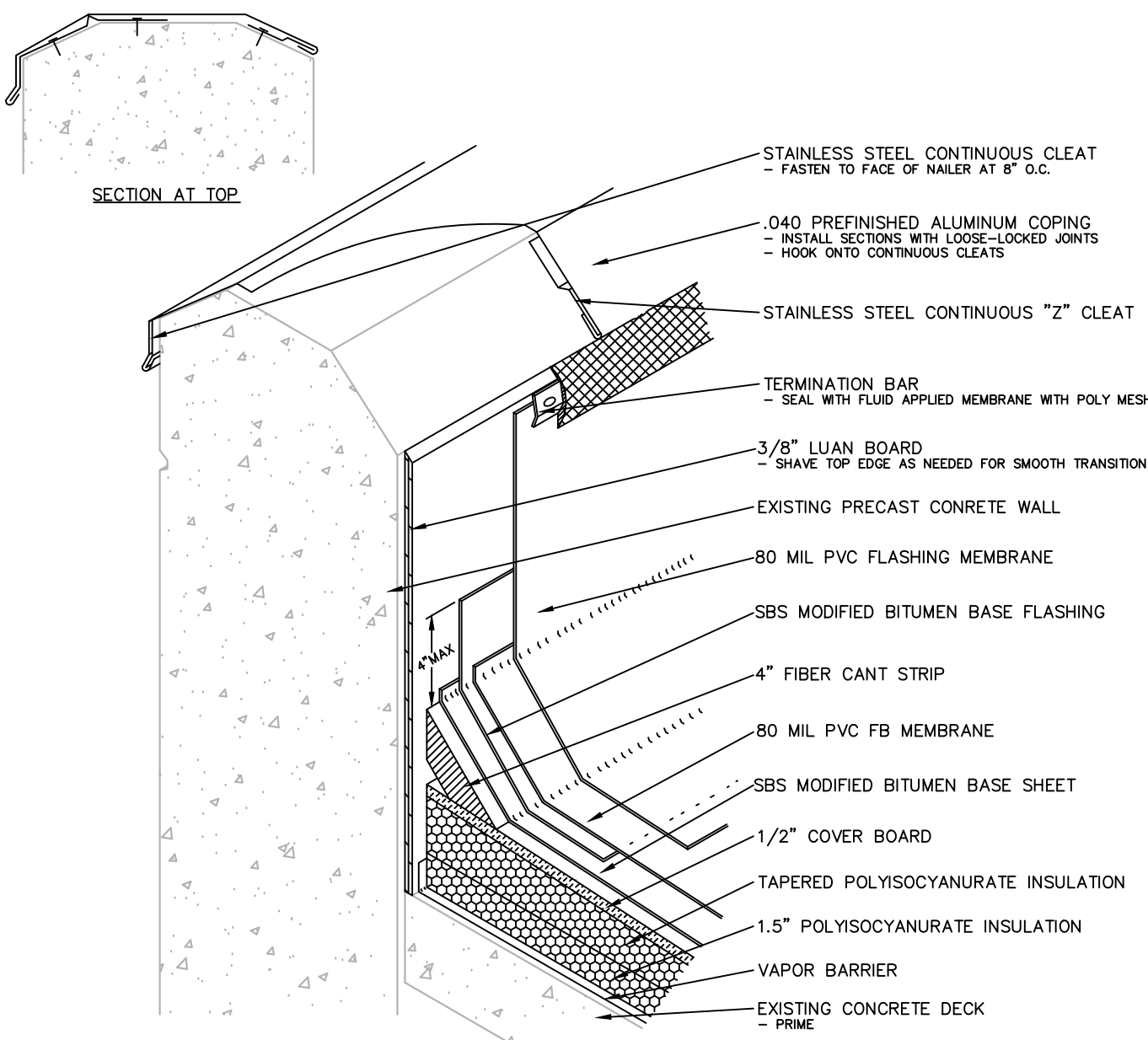
**9 ROOF EDGE FLASHING**  
N.T.S



**10 CONTROL JOINT FLASHING**  
N.T.S



**11 WALL EXPANSION JOINT FLASHING**  
N.T.S



**12 PARAPET FLASHING**  
N.T.S

DRAWING DATES		
NUMBER	DATE	COMMENTS

DRAWING TITLE  
**ROOF DETAILS -  
TYPE 1 ROOF**

SHEET NUMBER

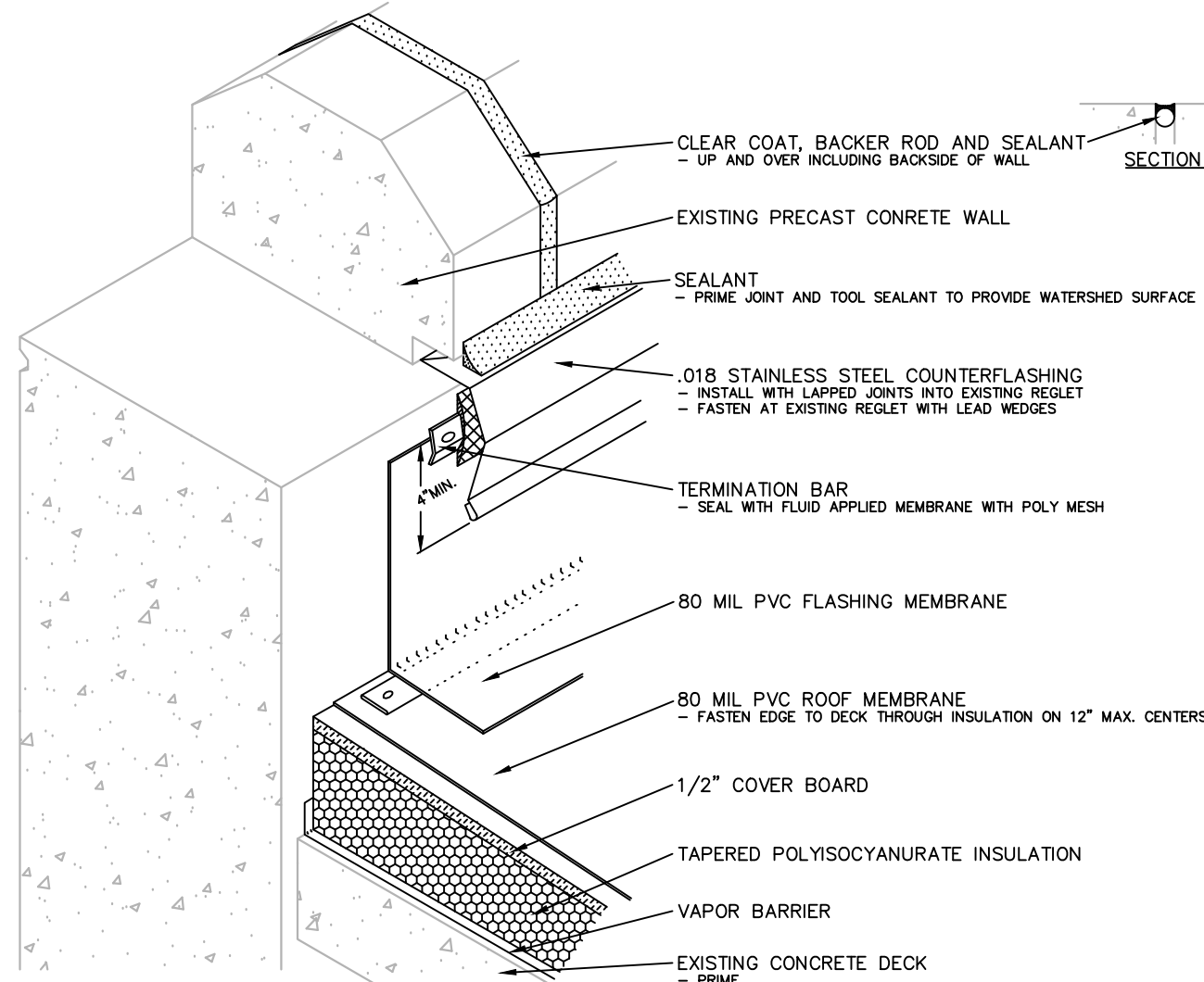
**R1.4**



PROJECT  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

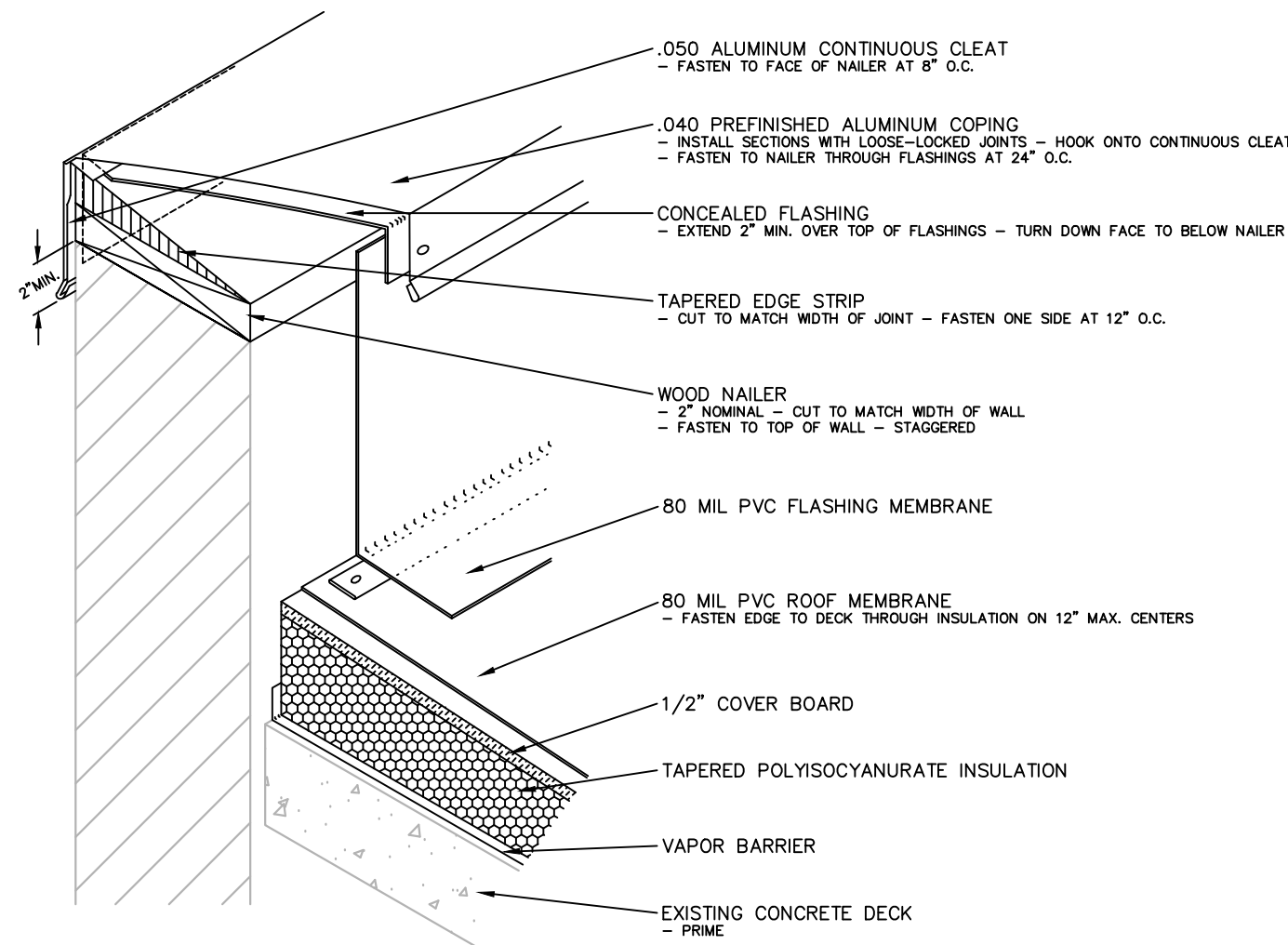
**District of Columbia  
Department of Corrections**



NOTES:  
- DETAIL IS TO DENOTE THE SEALANT JOINT REPLACEMENT THROUGHOUT THE PROJECT  
- PRIOR TO THE INSTALLATION OF THE NEW COPING SHEET METAL  
- FOR WALL PANEL CAULKING JOINTS, TO BE COMPLETED IN CONNECTION WITH DETAIL 12/R1.4

**1 PARAPET FLASHING**

N.T.S



**2 PARAPET FLASHING**

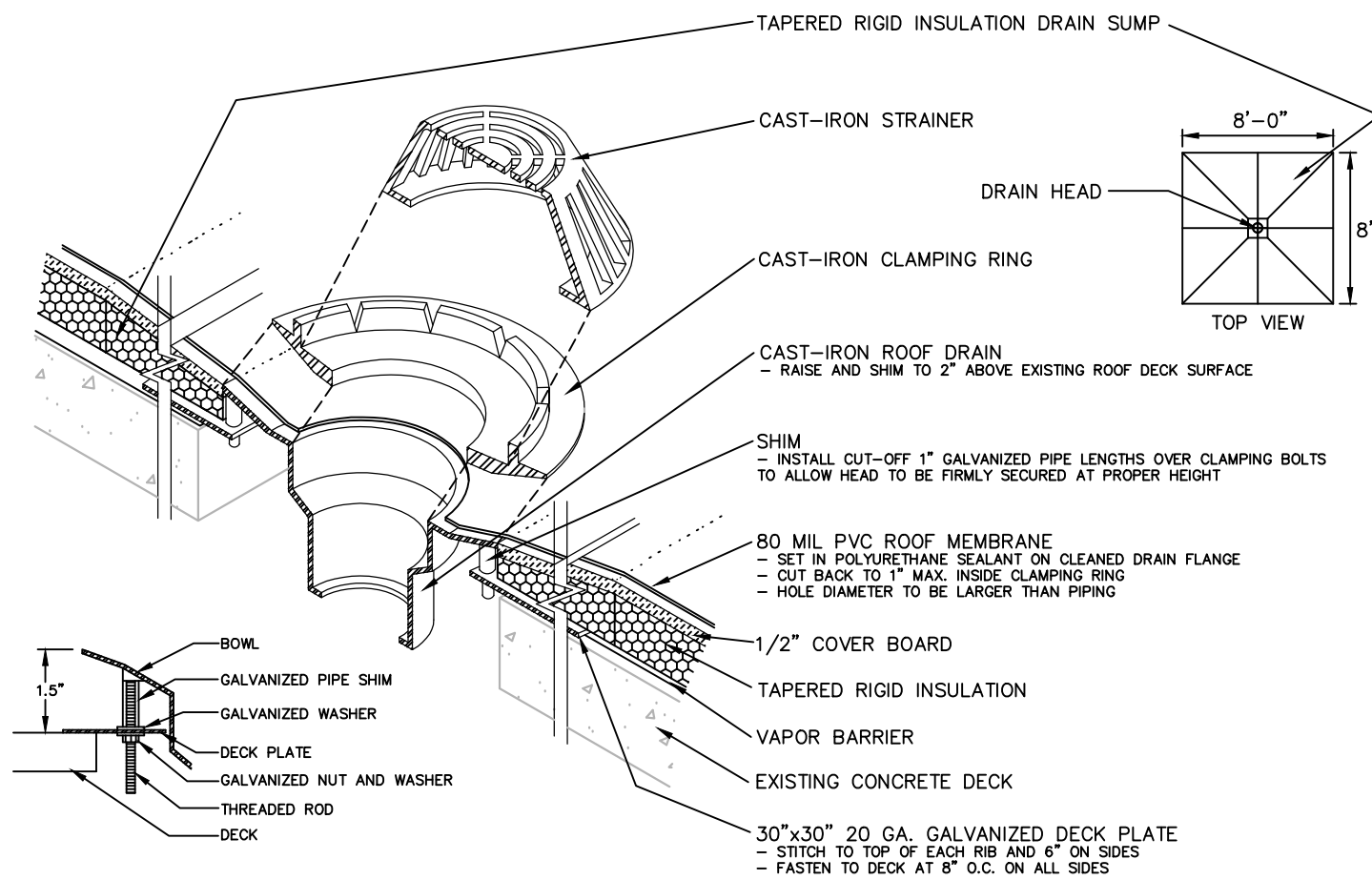
N.T.S

**3 NOT USED**

N.T.S

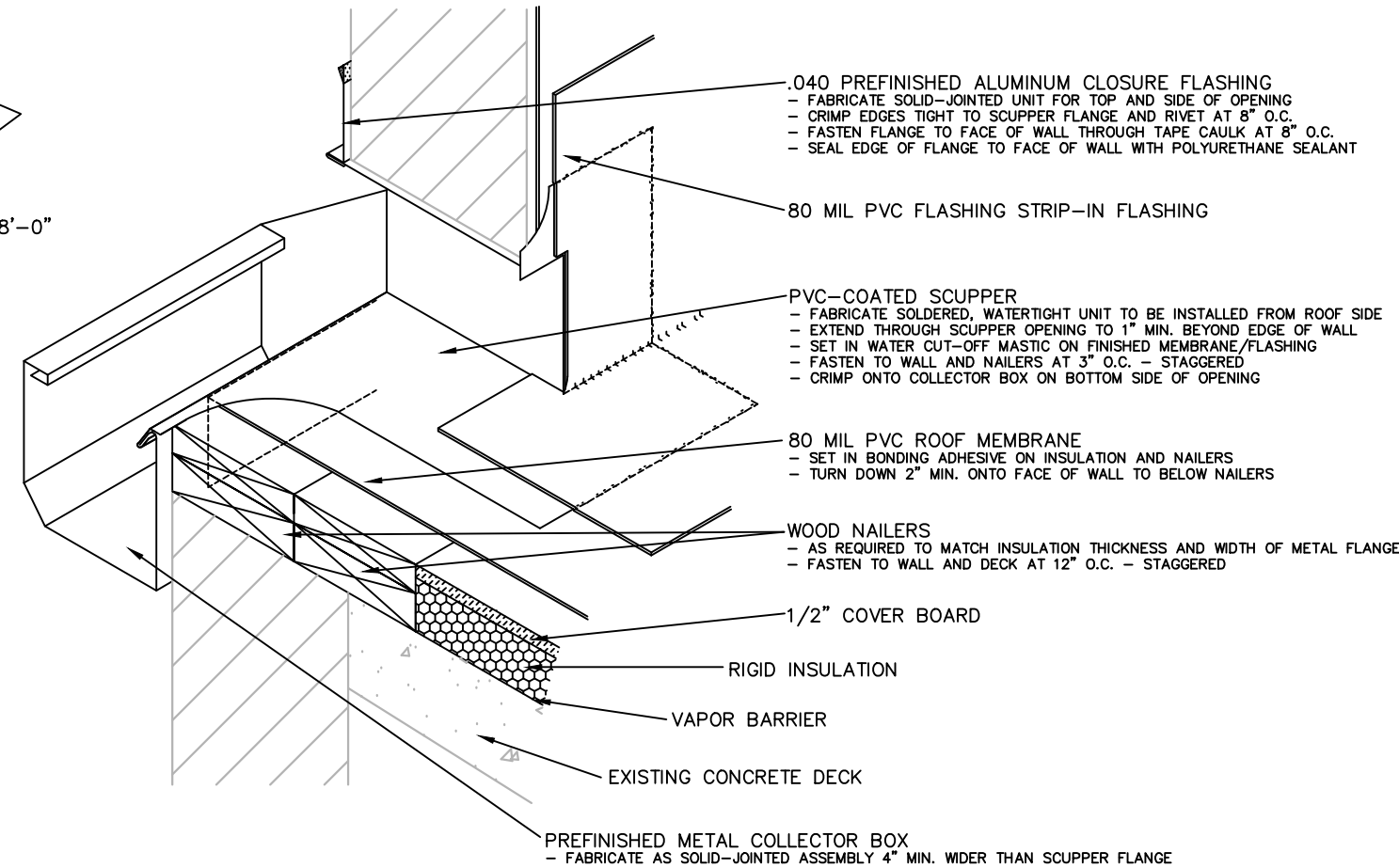
**4 NOT USED**

N.T.S



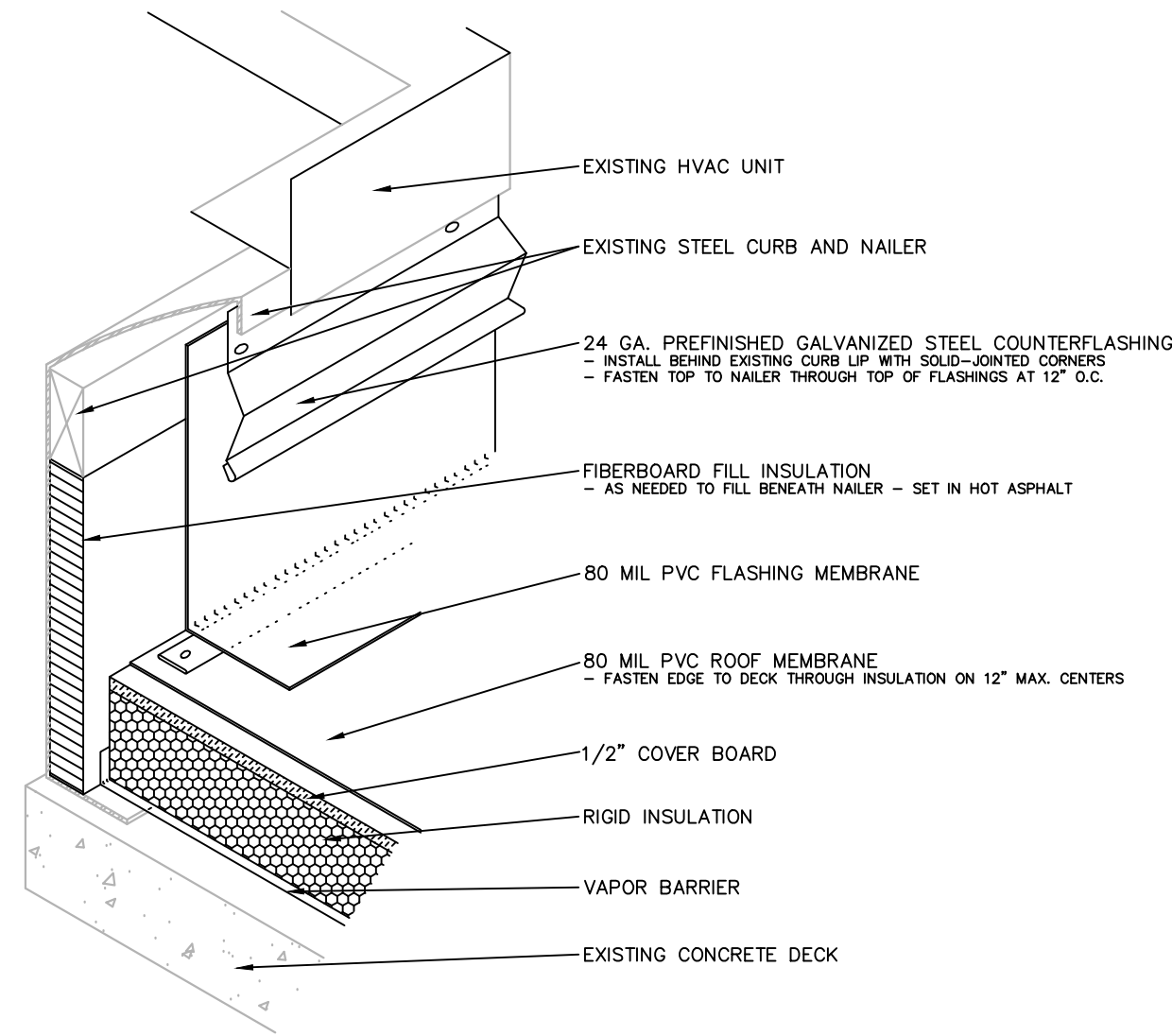
**5 TYPICAL ROOF DRAIN**

N.T.S



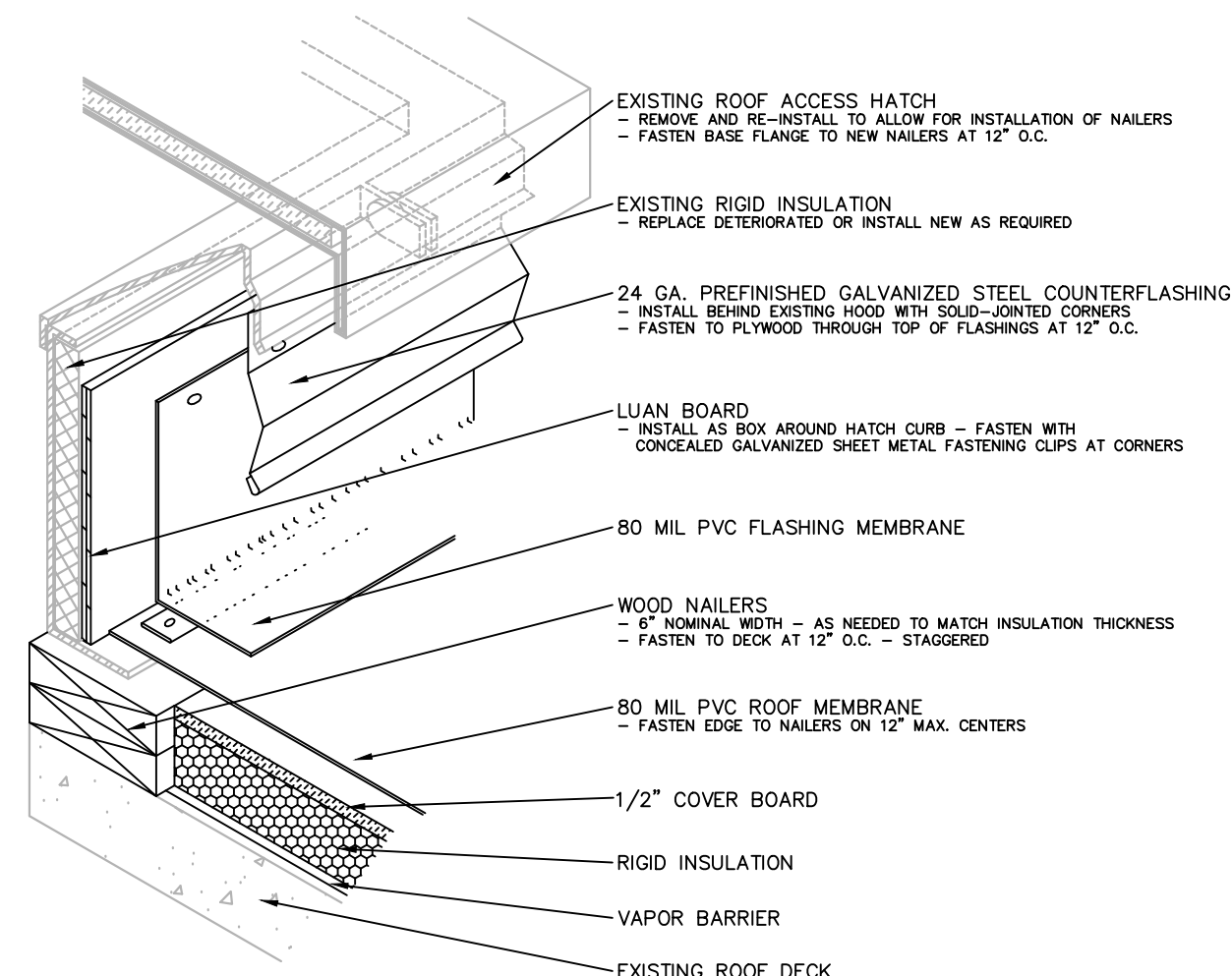
**6 TYPICAL SCUPPER**

N.T.S



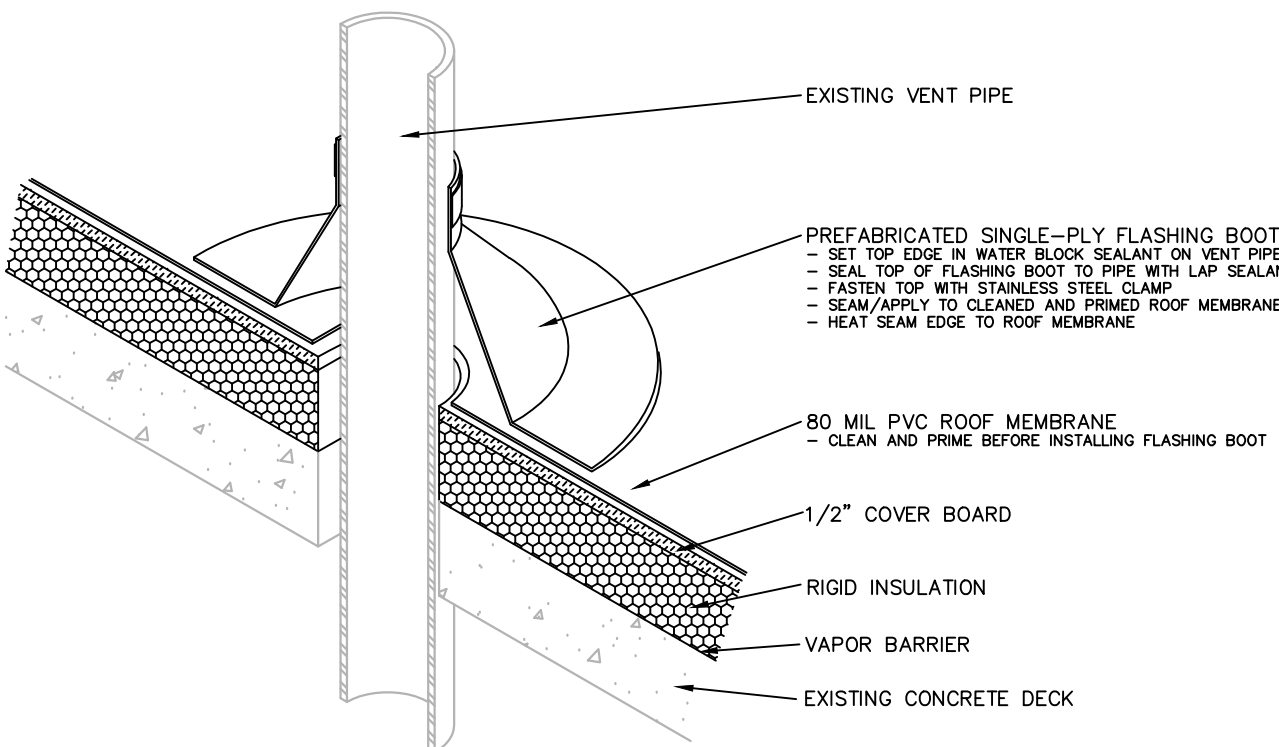
**7 TYPICAL HVAC CURB**

N.T.S



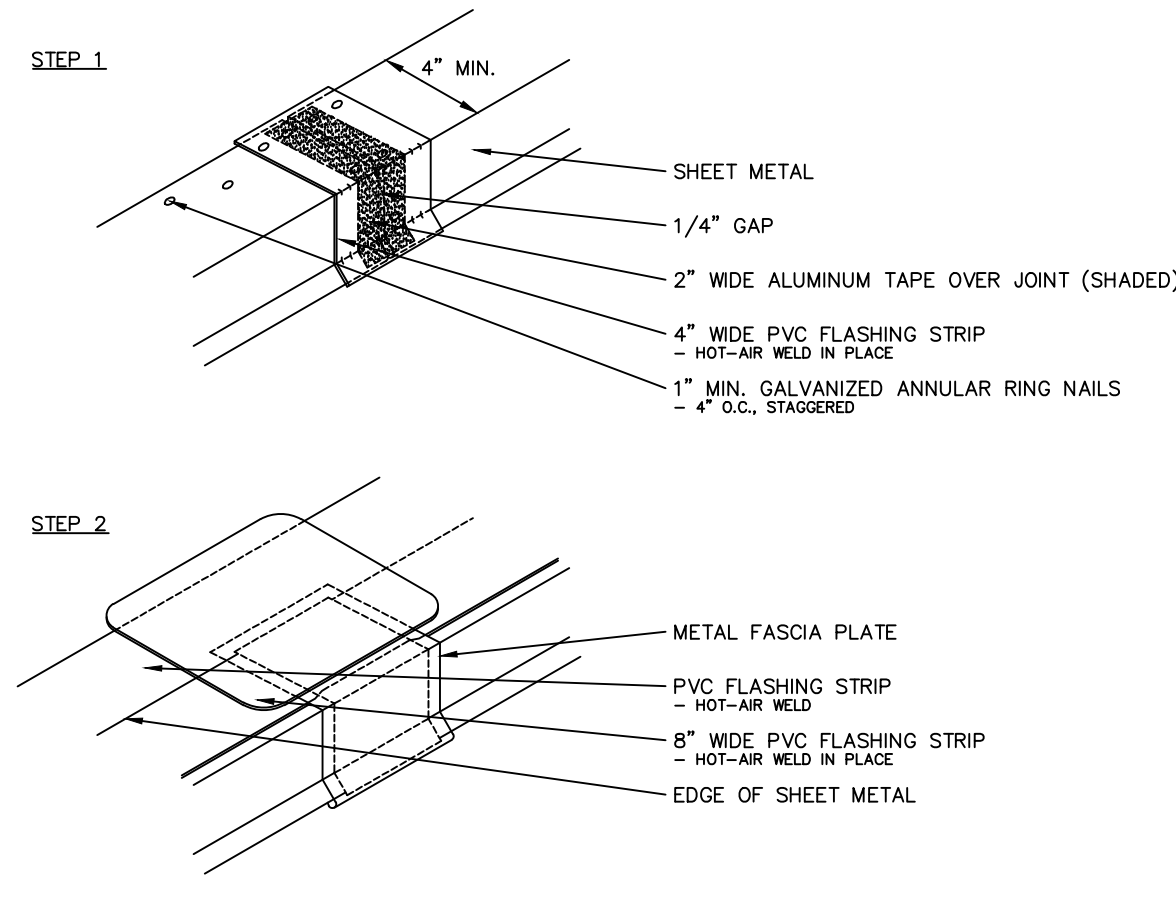
**8 TYPICAL ROOF HATCH**

N.T.S



**9 TYPICAL VENT PIPE**

N.T.S



**10 TYPICAL METAL JOINT FABRICATION**

N.T.S

**11 NOT USED**

N.T.S

**12 NOT USED**

N.T.S

DRAWING DATES		
NUMBER	DATE	COMMENTS

•  
•  
•  
•  
•  
•  
•  
•  
•  
•

DRAWING TITLE  
**ROOF / TYPICAL  
DETAILS -  
TYPE 3 ROOF**

SHEET NUMBER

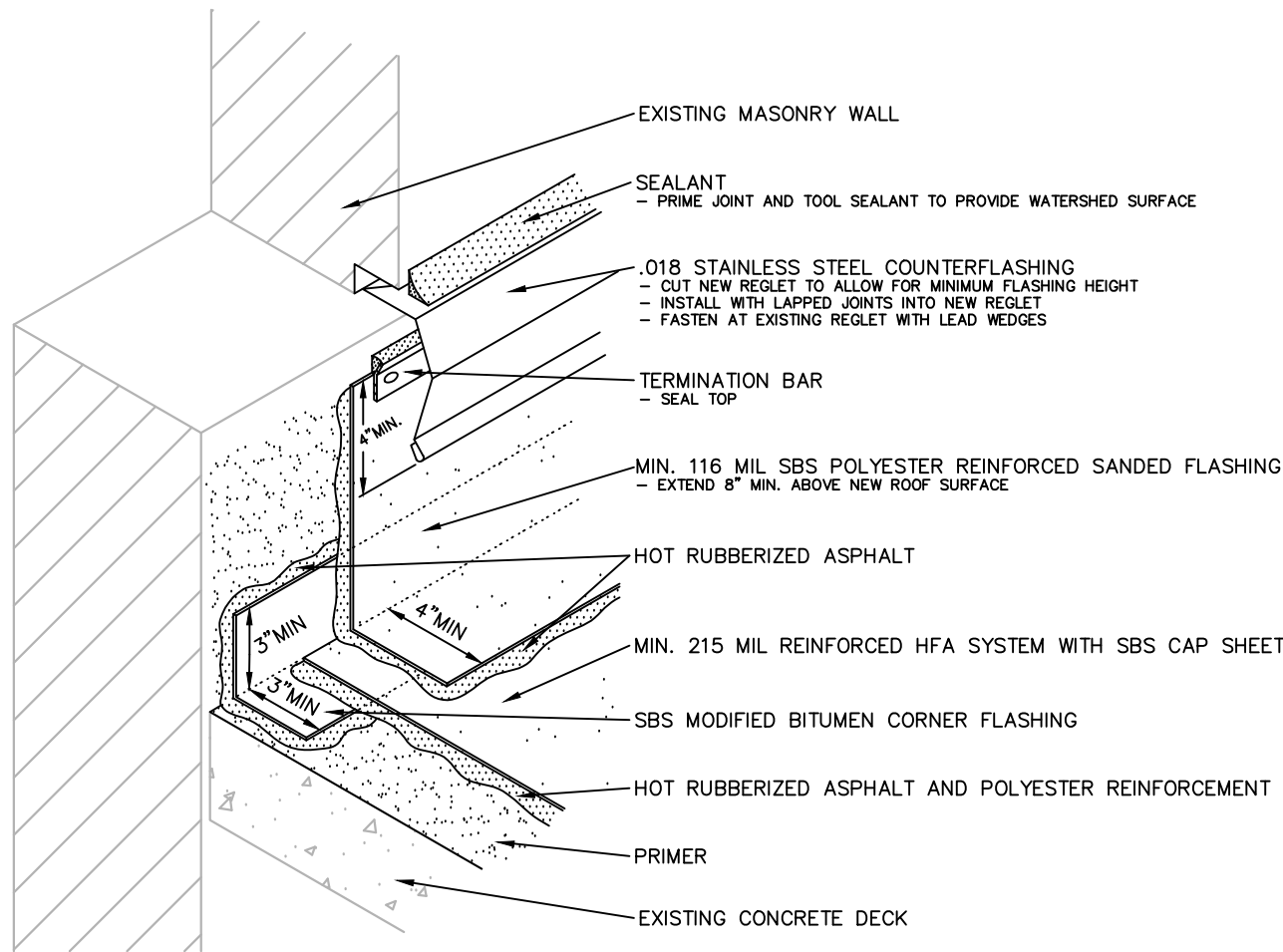
**R1.5**



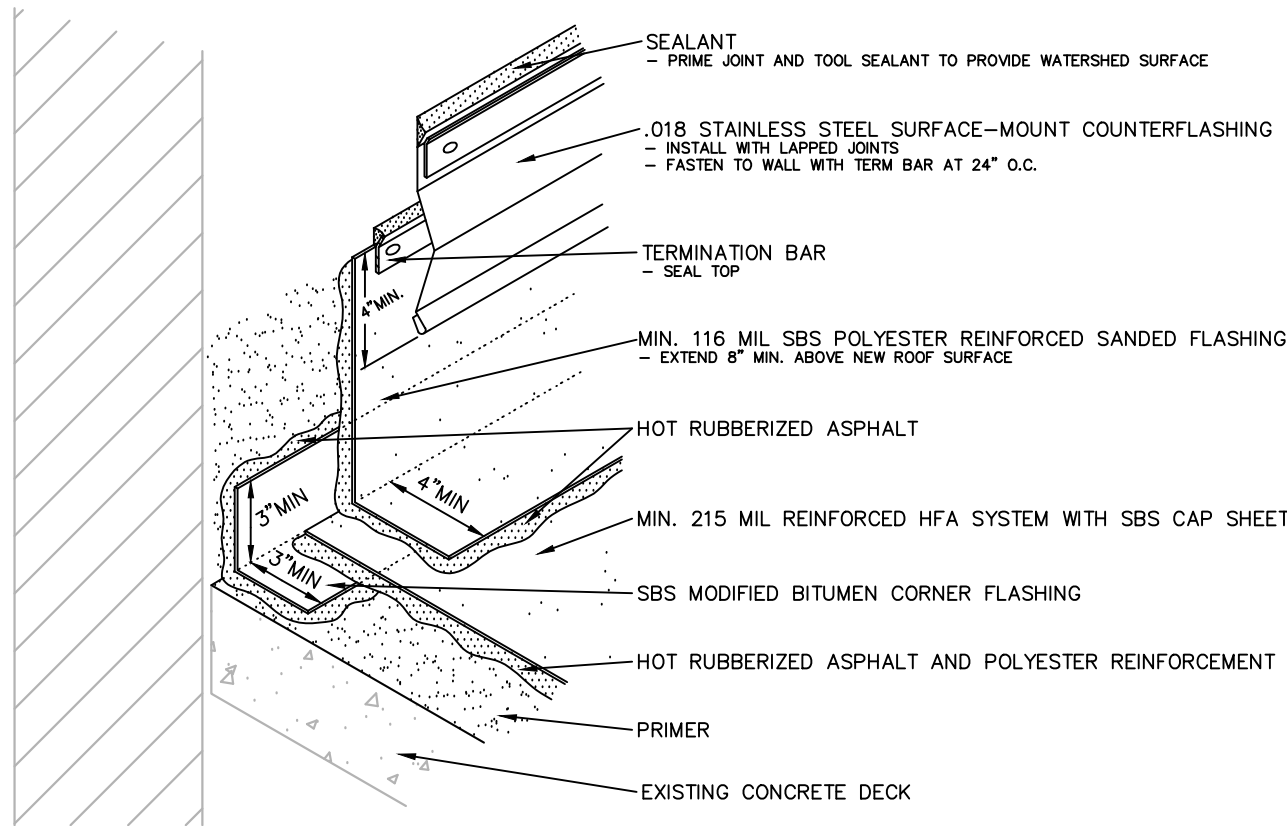
PROJECT  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

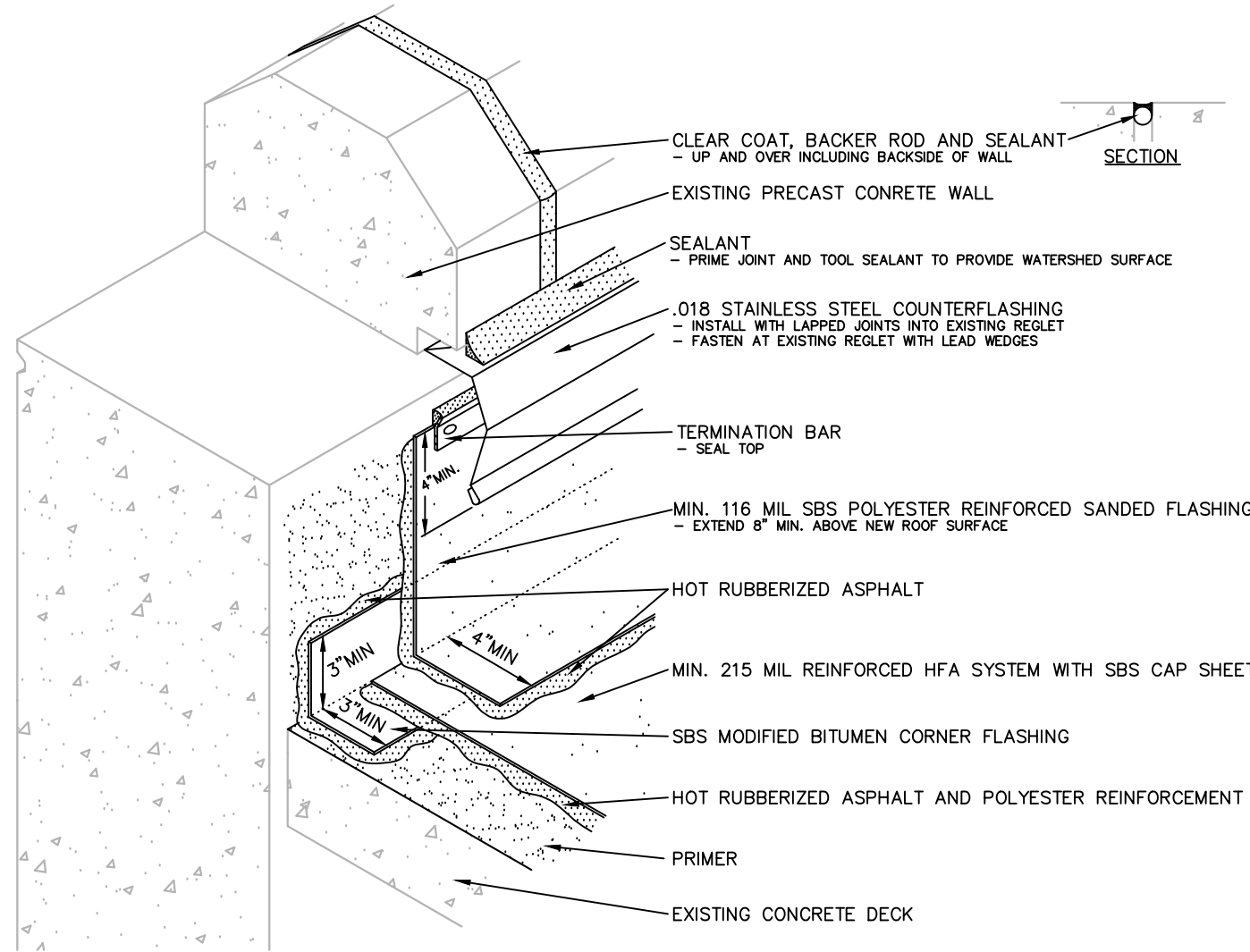
**District of Columbia  
Department of Corrections**



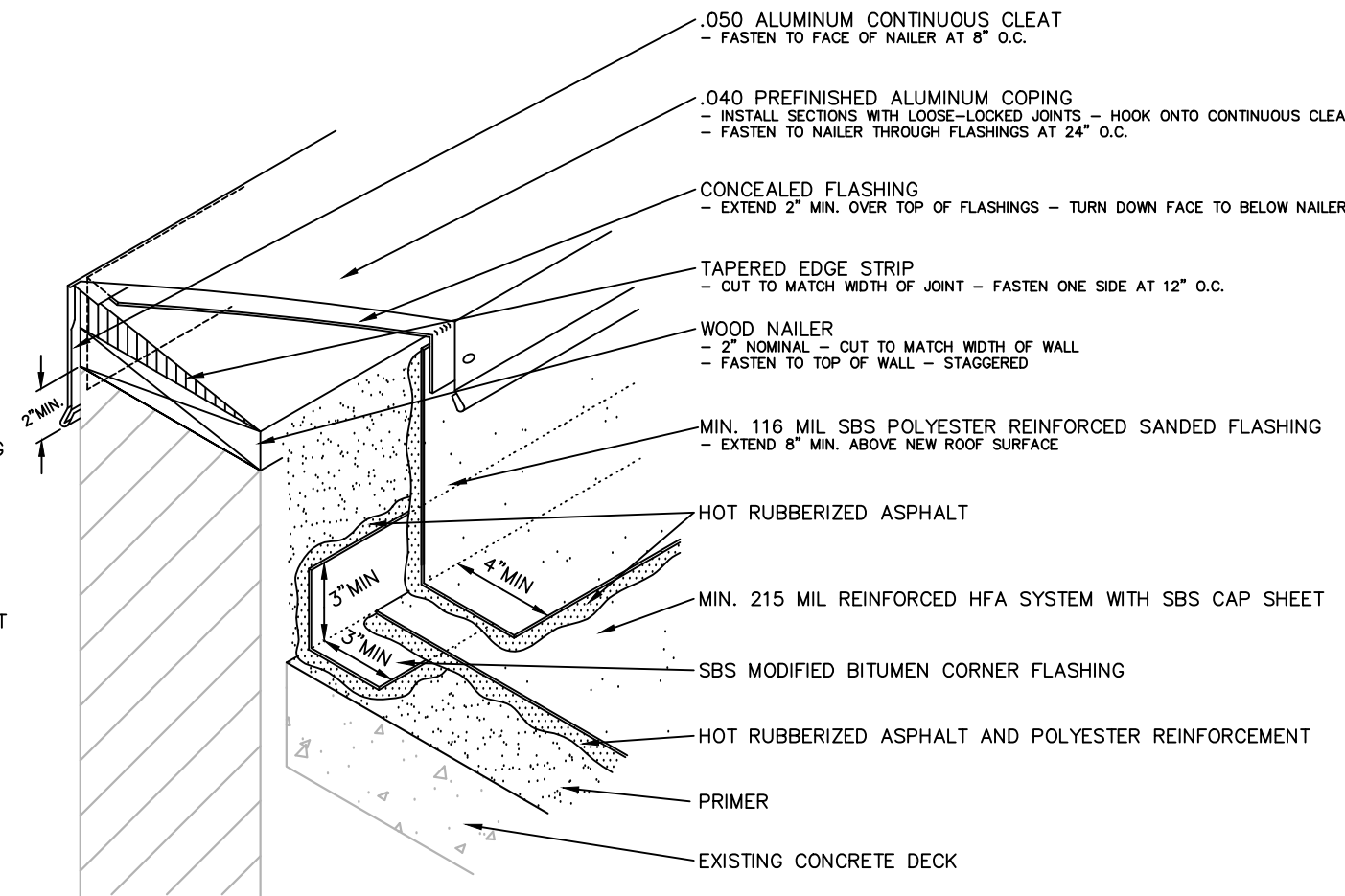
**1 WALL FLASHING**  
N.T.S



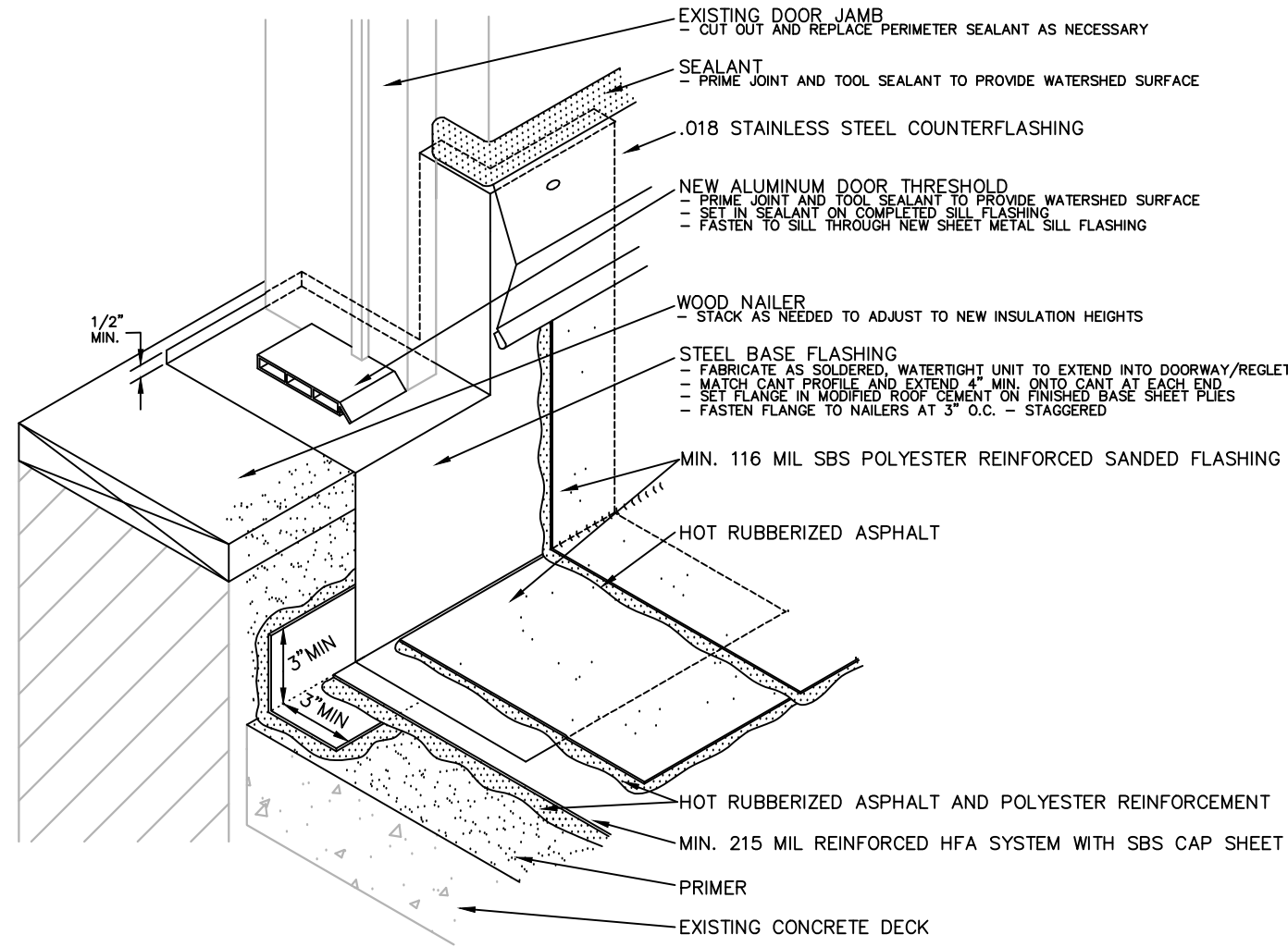
**2 WALL FLASHING**  
N.T.S



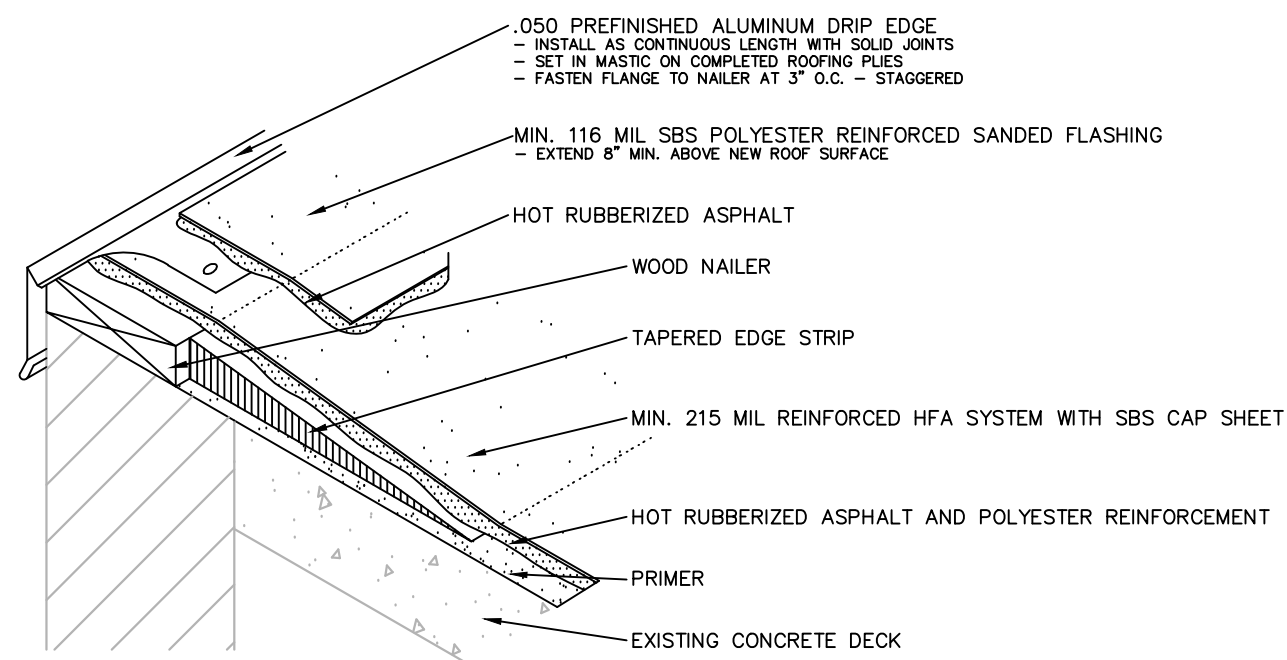
**3 PARAPET FLASHING**  
N.T.S



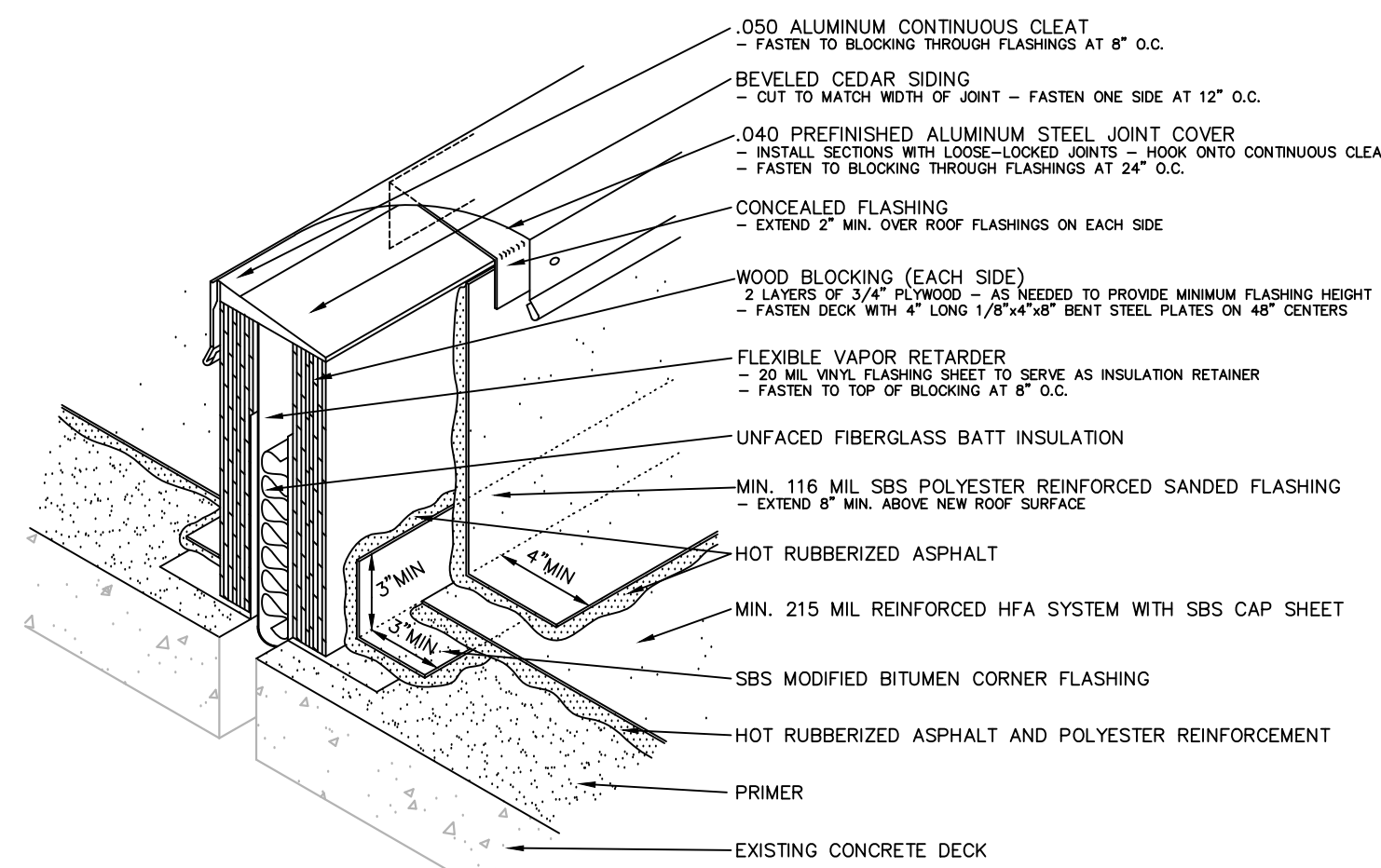
**4 PARAPET FLASHING**  
N.T.S



**5 DOOR THRESHOLD FLASHING**  
N.T.S



**6 ROOF EDGE FLASHING**  
N.T.S



NOTE:  
CONSTRUCTION IS SIMILAR ON EACH SIDE

**7 CONTROL JOINT FLASHING**  
N.T.S

**8 NOT USED**  
N.T.S

**9 NOT USED**  
N.T.S

**10 NOT USED**  
N.T.S

**11 NOT USED**  
N.T.S

**12 NOT USED**  
N.T.S

DRAWING DATES		
NUMBER	DATE	COMMENTS

•  
•  
•  
•  
•  
•  
•  
•  
•  
•

DRAWING TITLE  
**ROOF DETAILS -  
TYPE 2 ROOF**

SHEET NUMBER

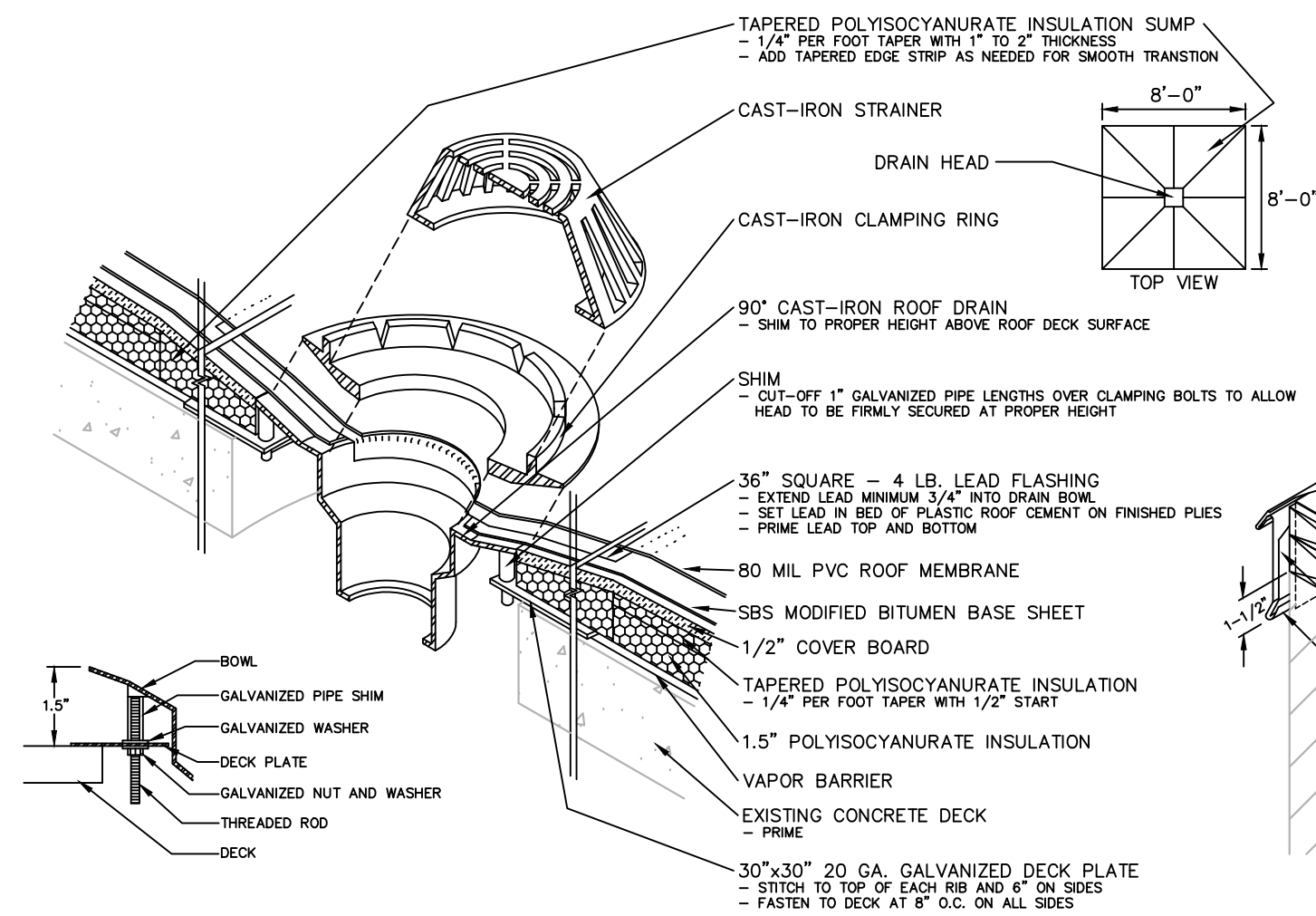
**R1.6**



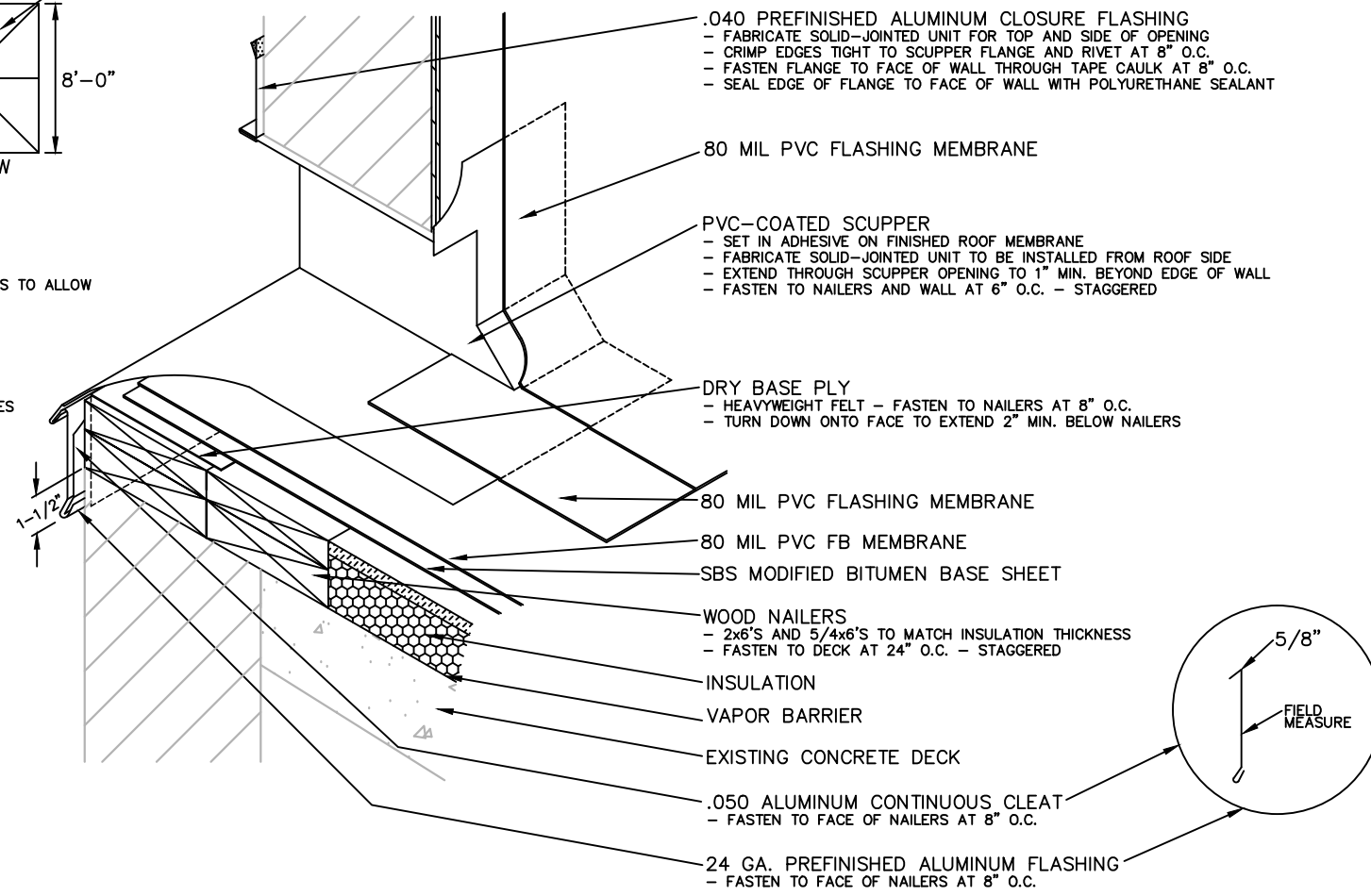
**PROJECT**  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

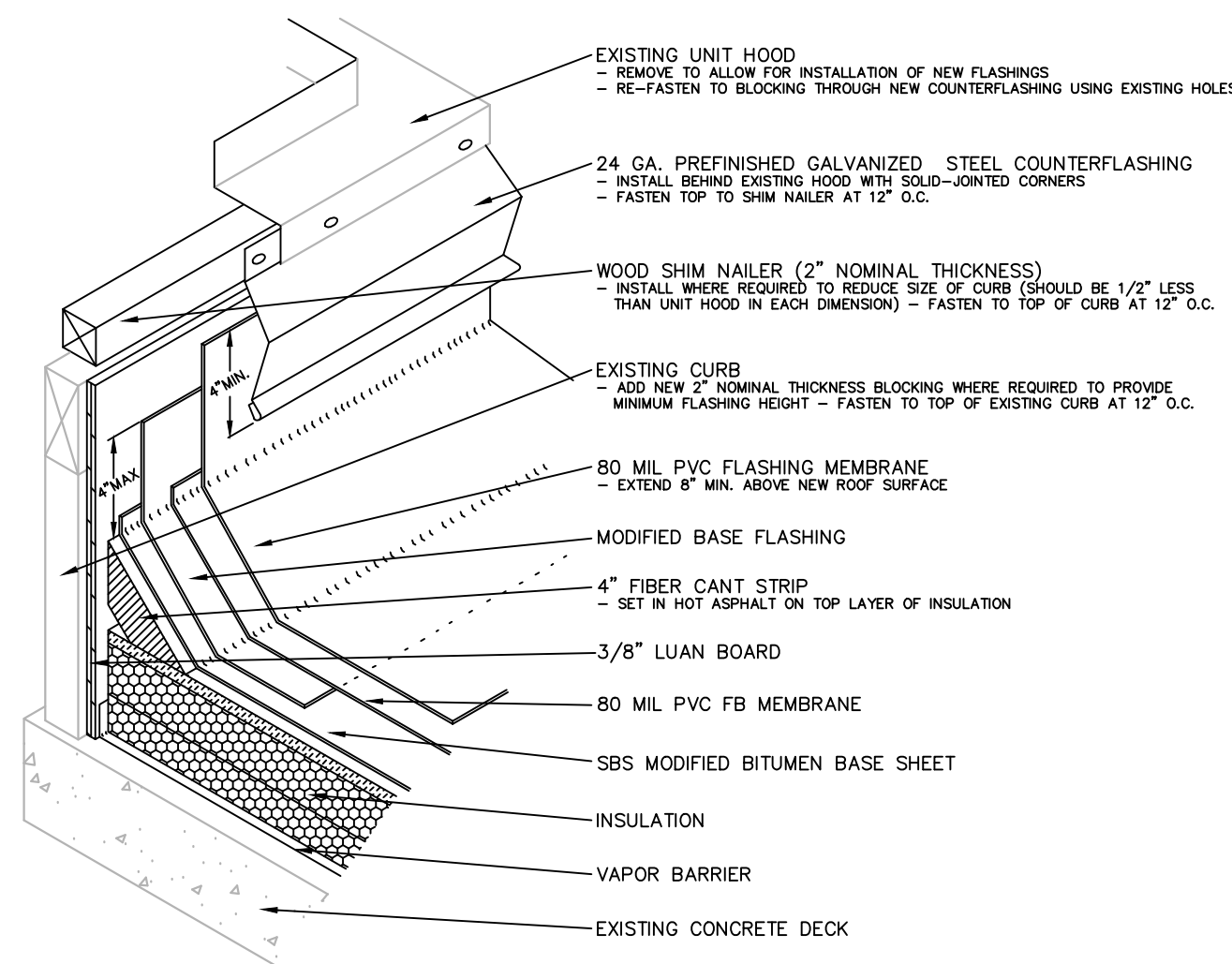
**District of Columbia**  
**Department of Corrections**



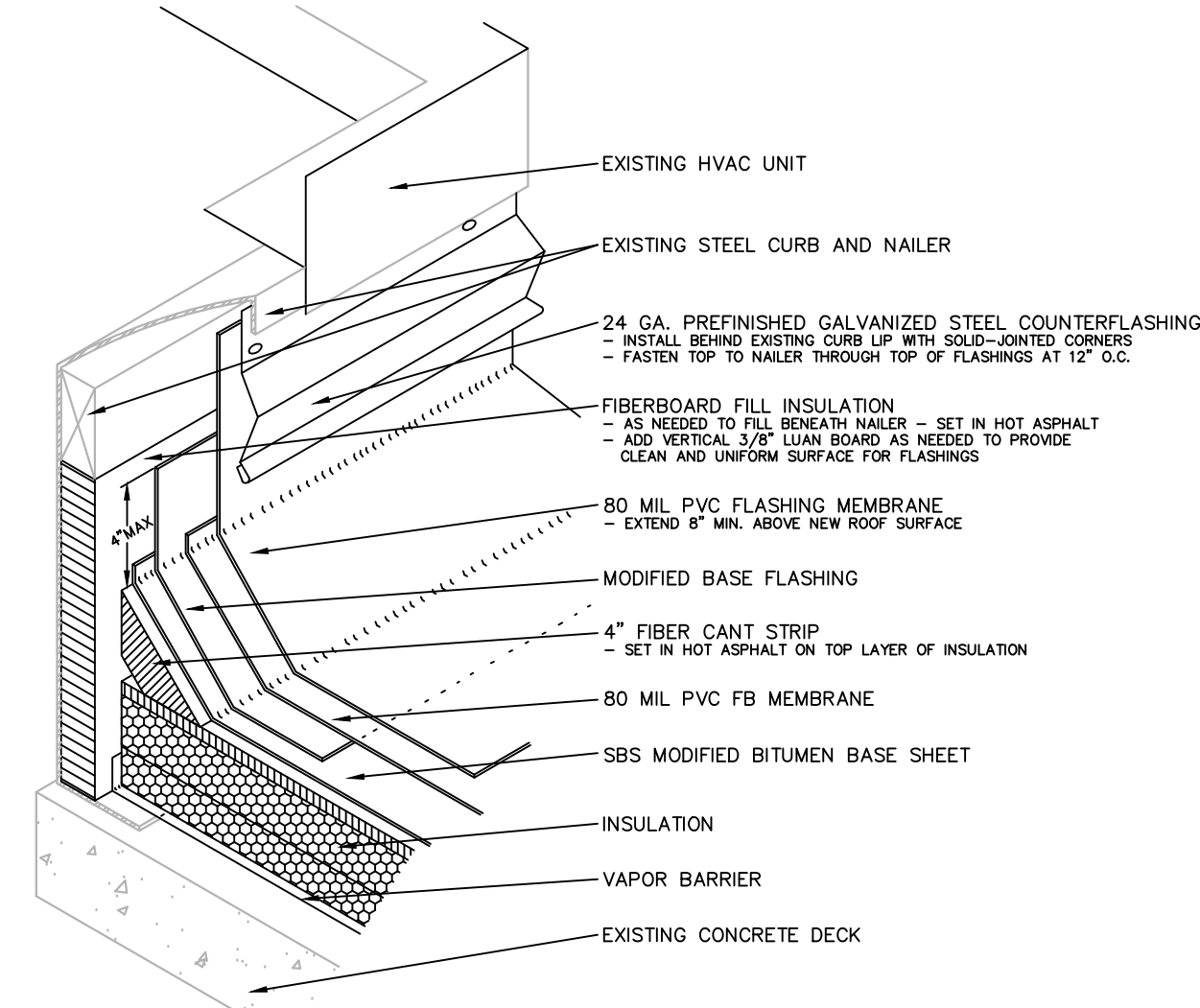
**1 TYPICAL ROOF DRAIN**  
N.T.S.



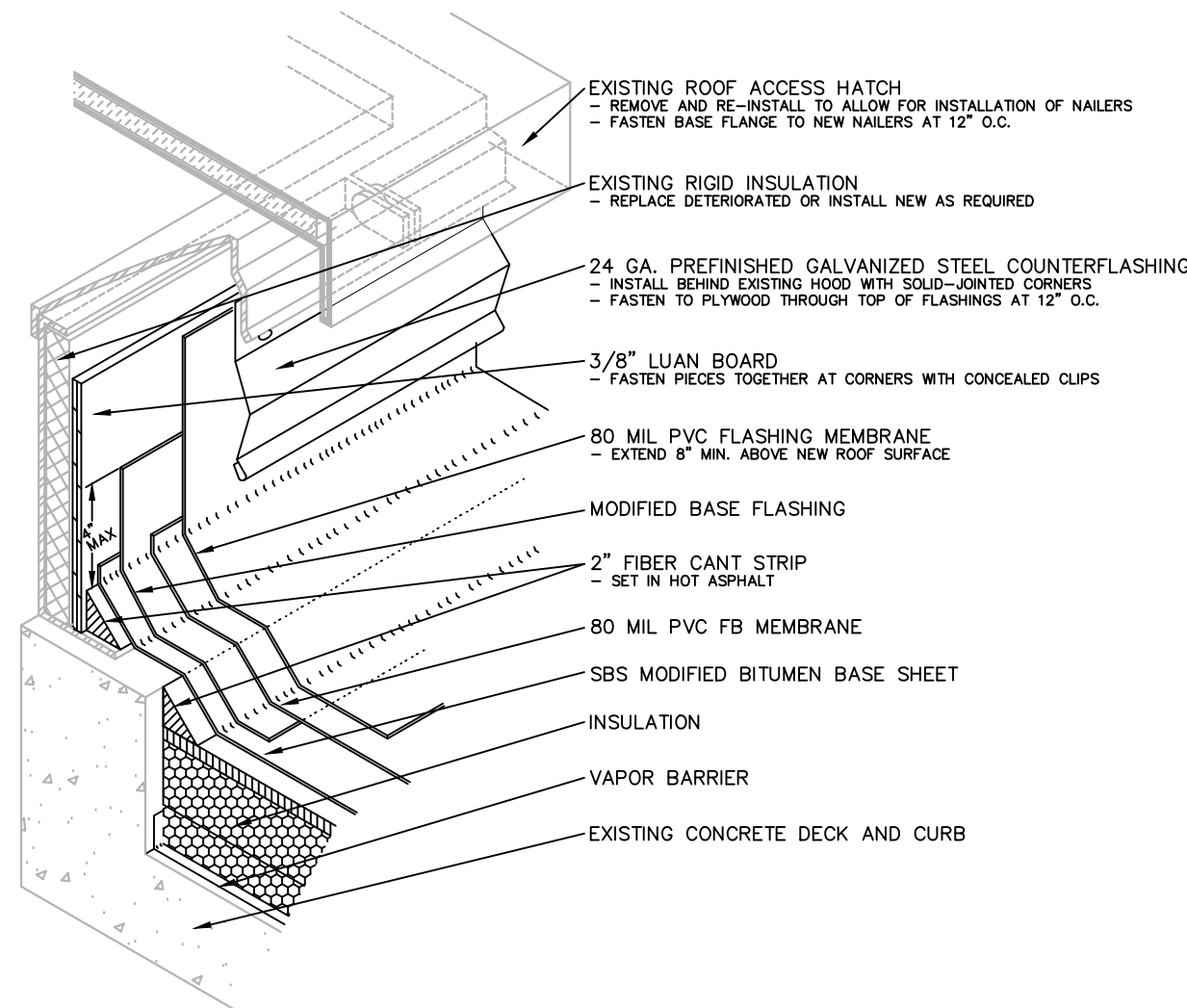
**2 TYPICAL SCUPPER**  
N.T.S.



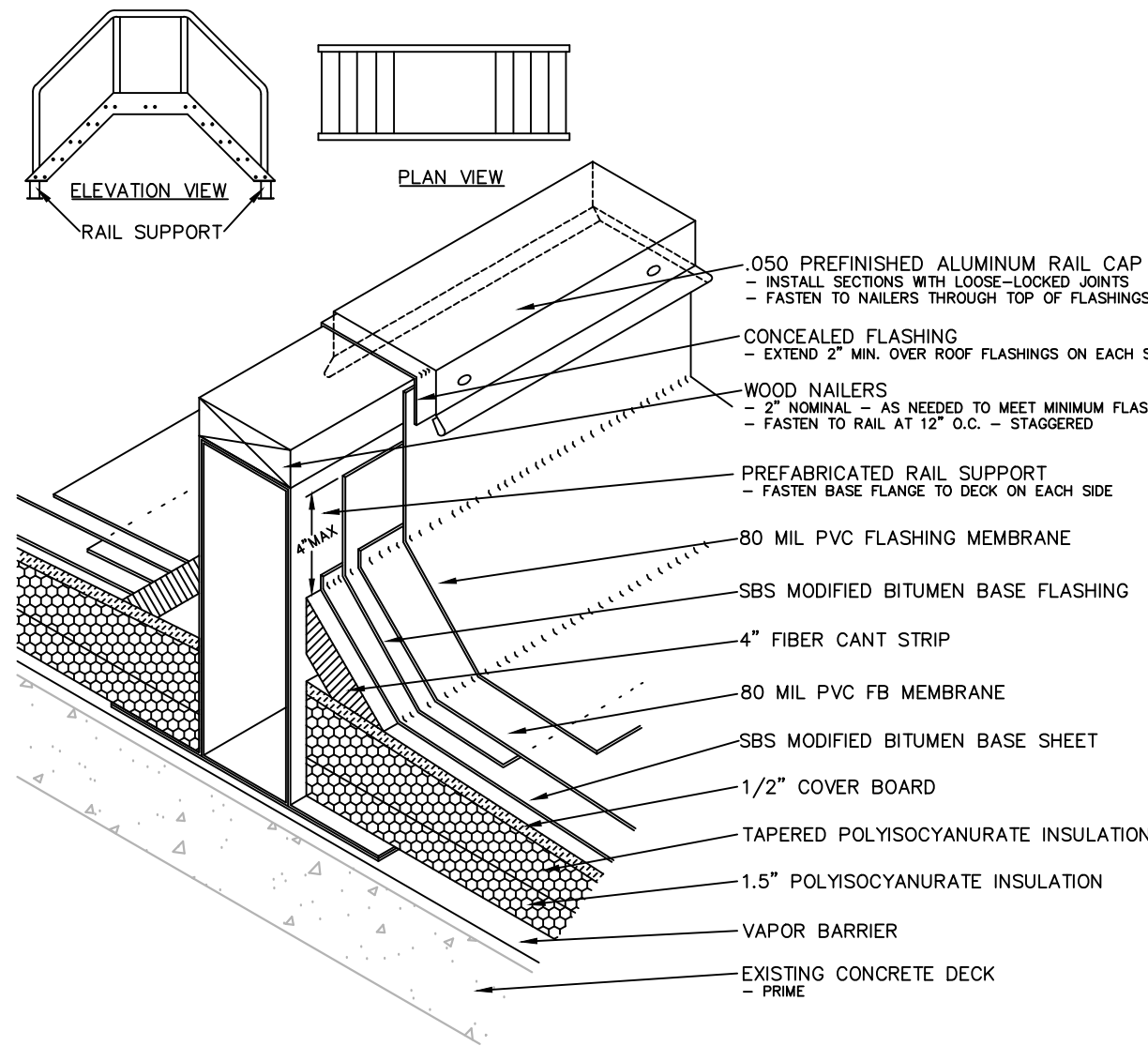
**3 TYPICAL EXHAUST CURB**  
N.T.S.



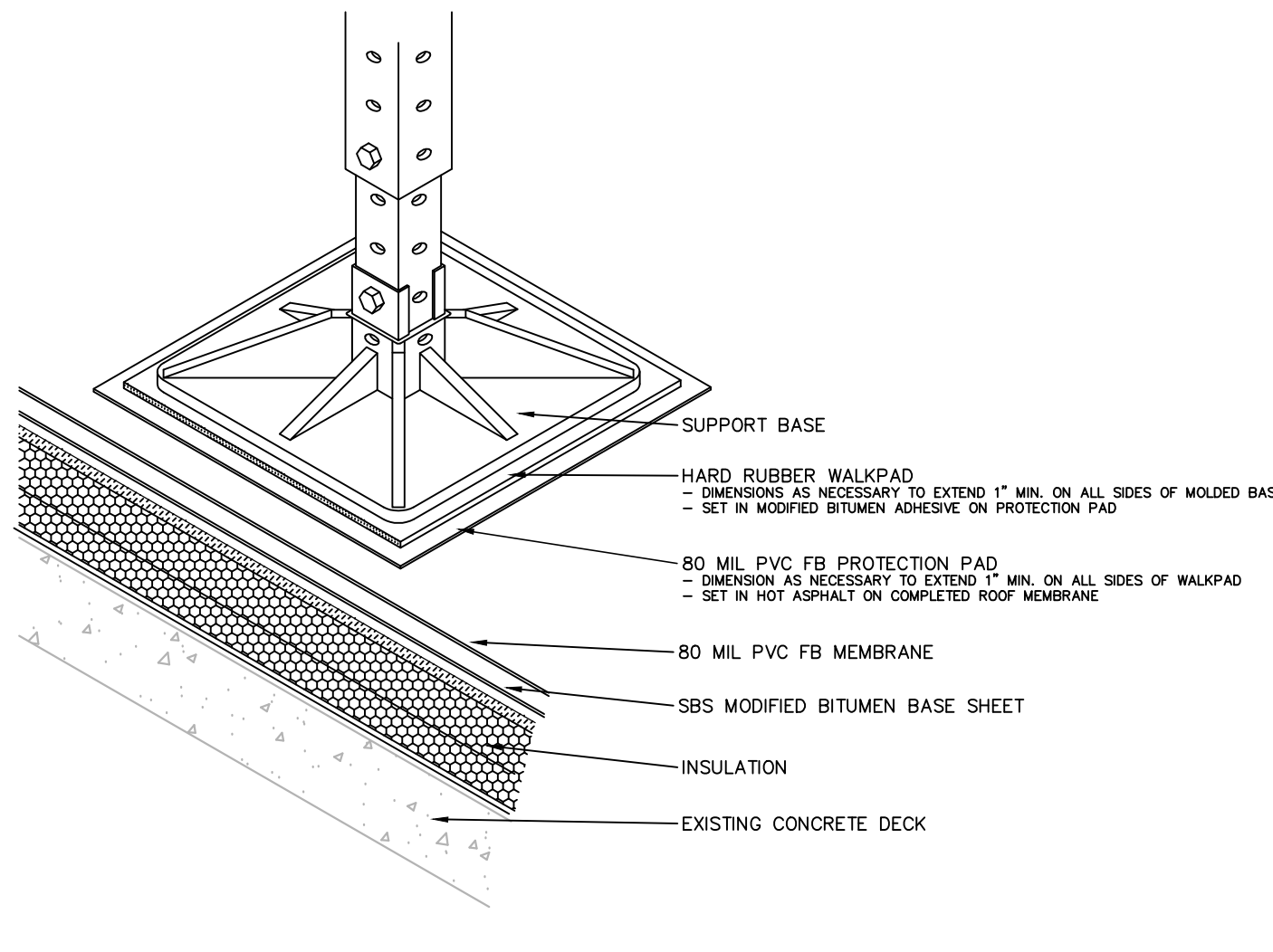
**4 TYPICAL HVAC CURB**  
N.T.S.



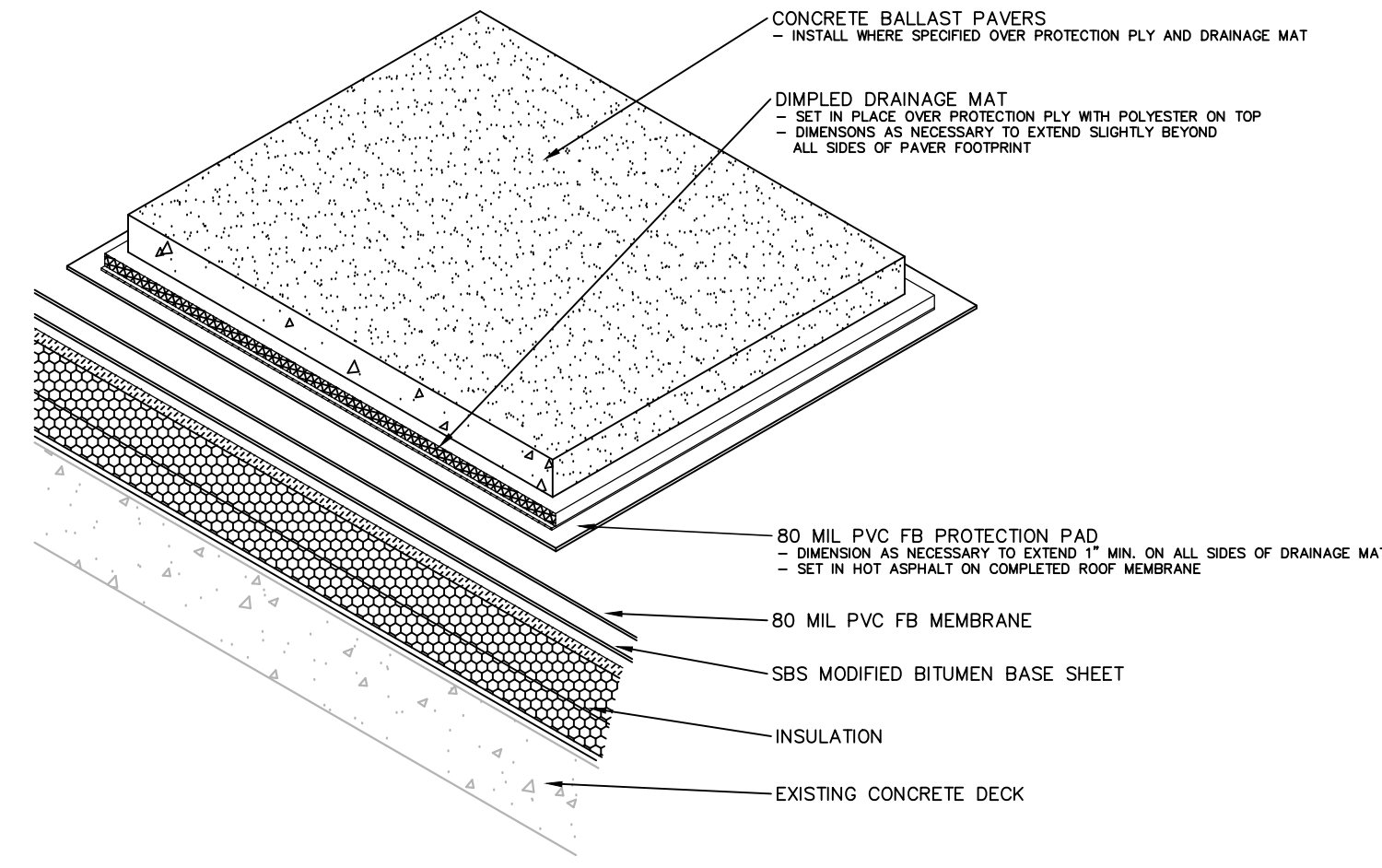
**5 ROOF HATCH FLASHING**  
N.T.S.



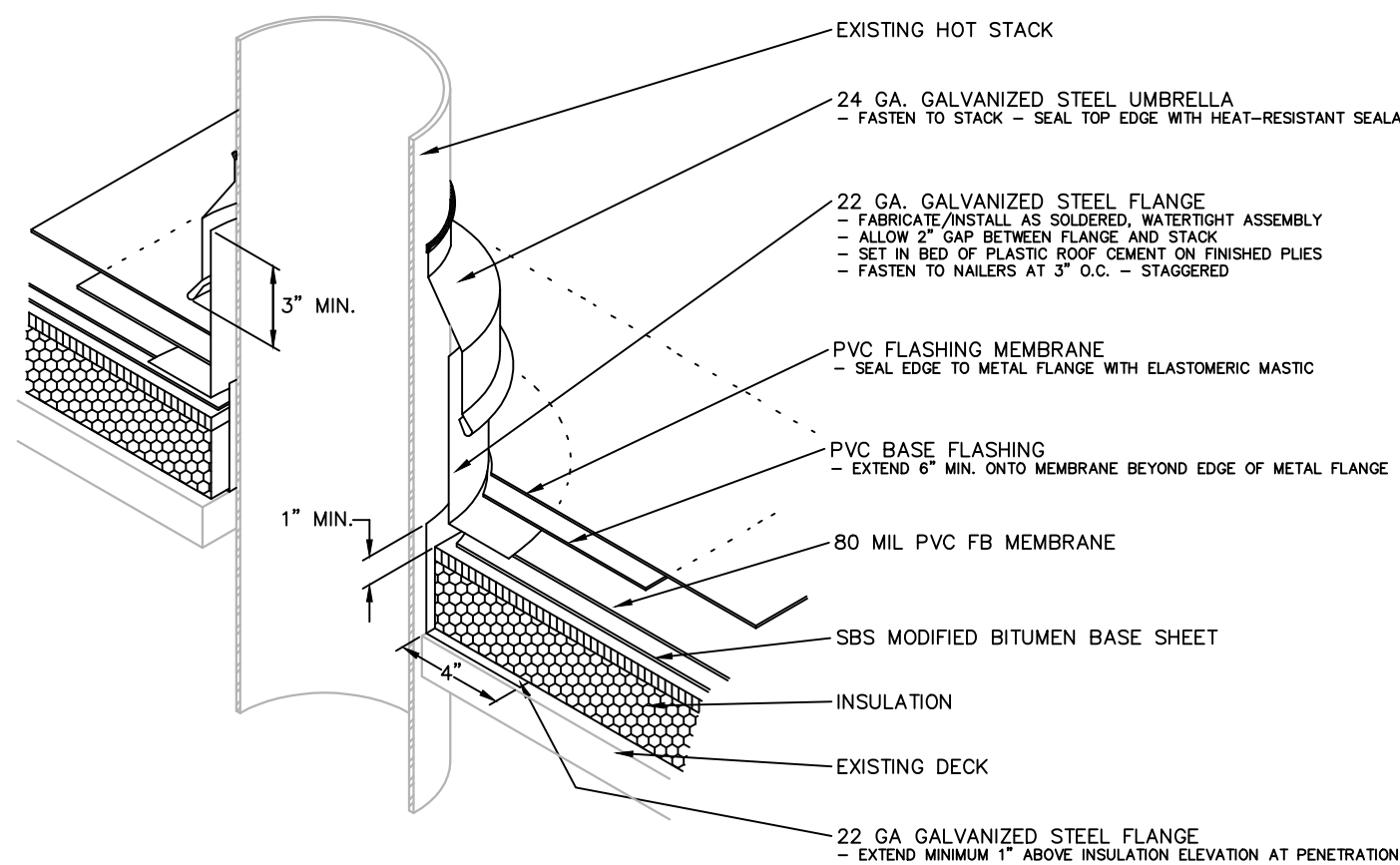
**6 RAIL CURB SUPPORT**  
N.T.S.



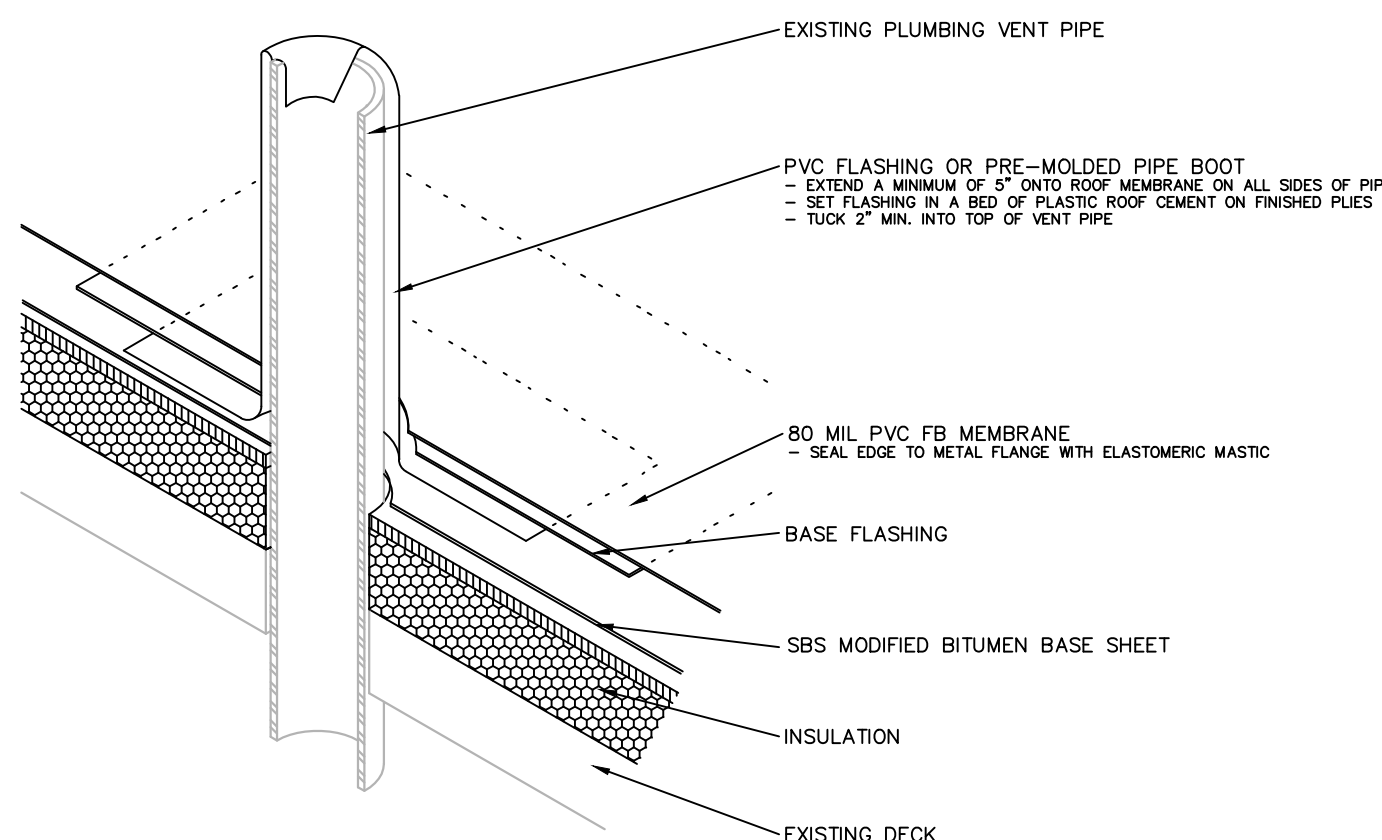
**7 SUPPORT BASE**  
N.T.S.



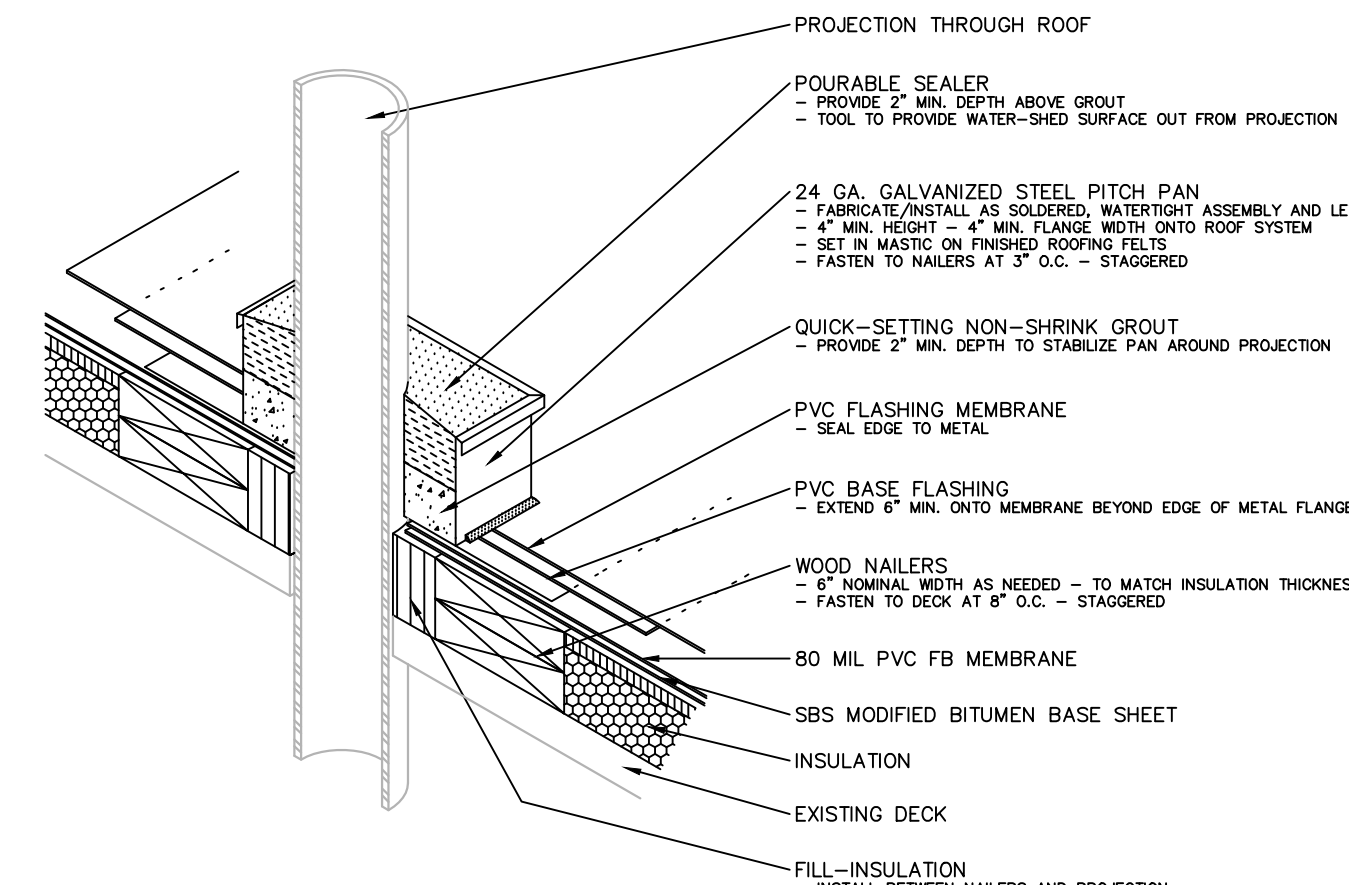
**8 PAVER MEMBRANE PROTECTION**  
N.T.S.



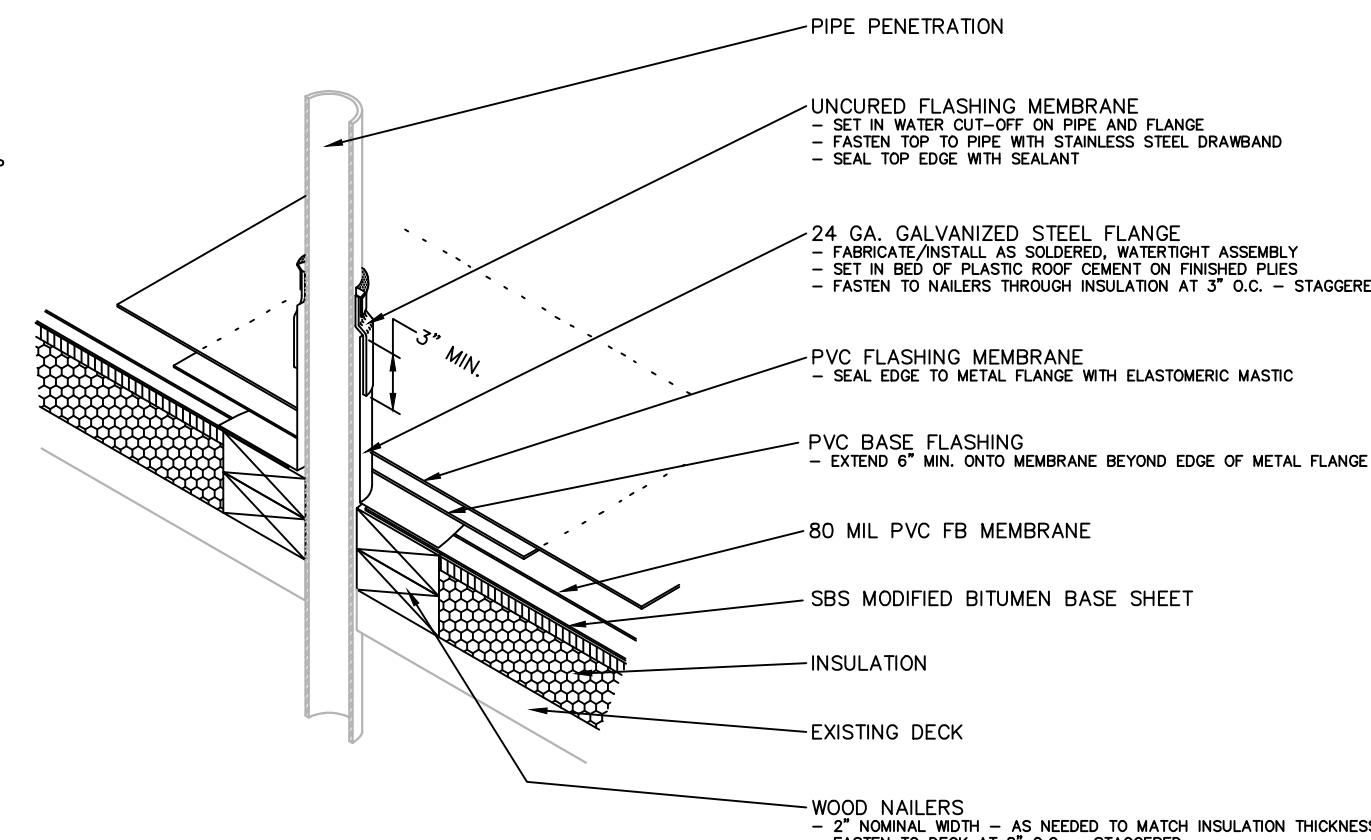
**9 TYPICAL HOT STACK**  
N.T.S.



**10 TYPICAL SOIL STACK**  
N.T.S.



**11 TYPICAL PITCH PAN**  
N.T.S.



**12 TYPICAL PIPE PENETRATION**  
N.T.S.

NUMBER	DATE	COMMENTS

DRAWING TITLE

**TYPICAL**  
**ROOF DETAILS -**  
**TYPE 1 ROOF**

SHEET NUMBER

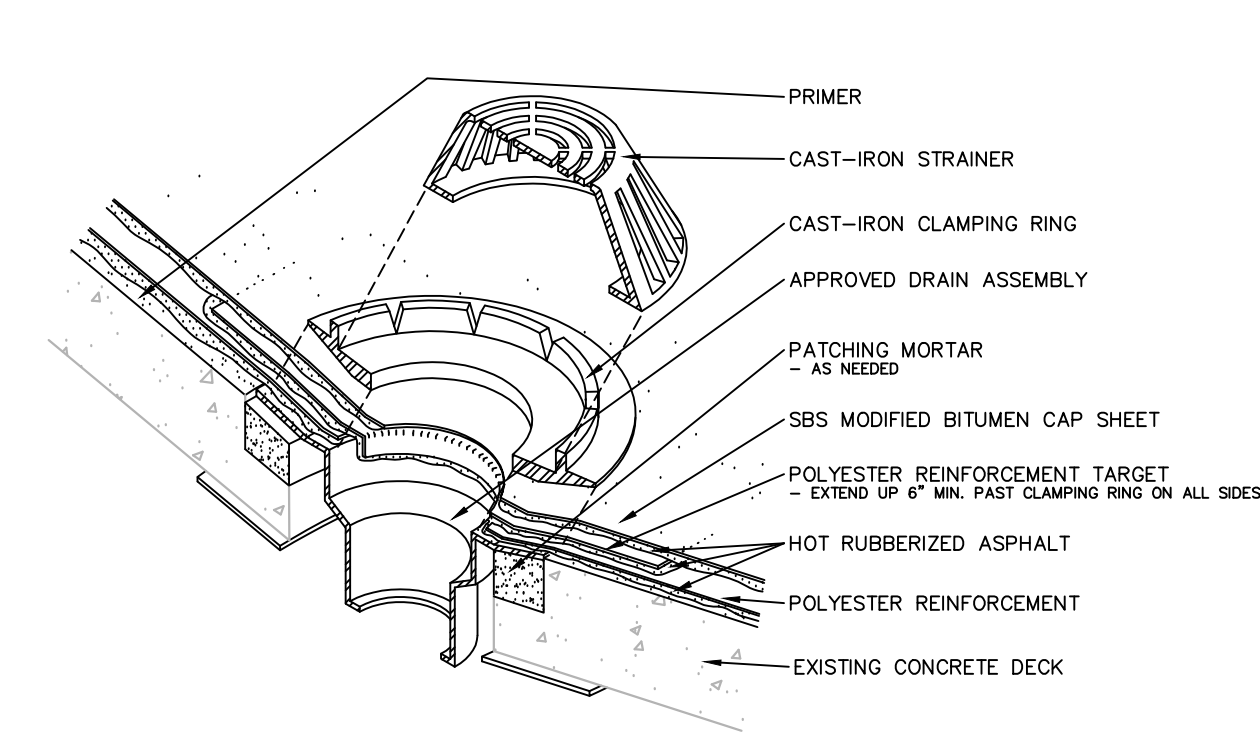
**R1.7**



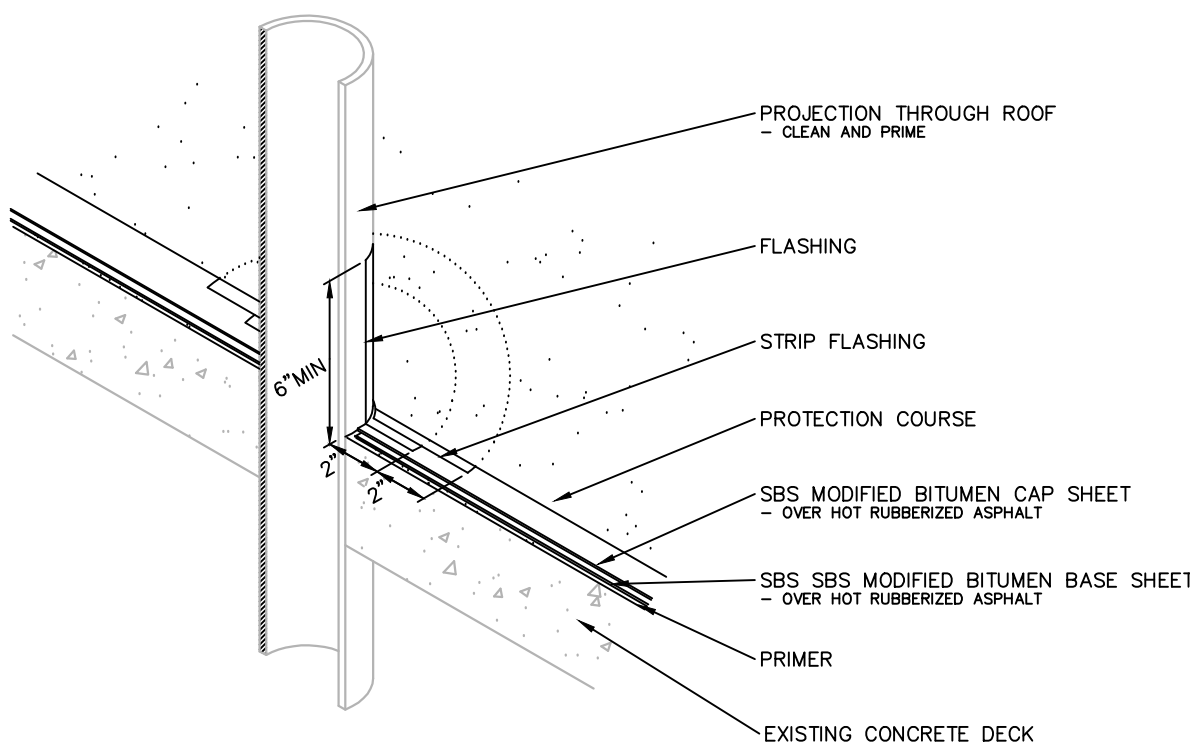
PROJECT  
**ROOFING REPLACEMENT**

Central Detention Facility  
1901 D Street, SE  
Washington DC

**District of Columbia**  
**Department of Corrections**

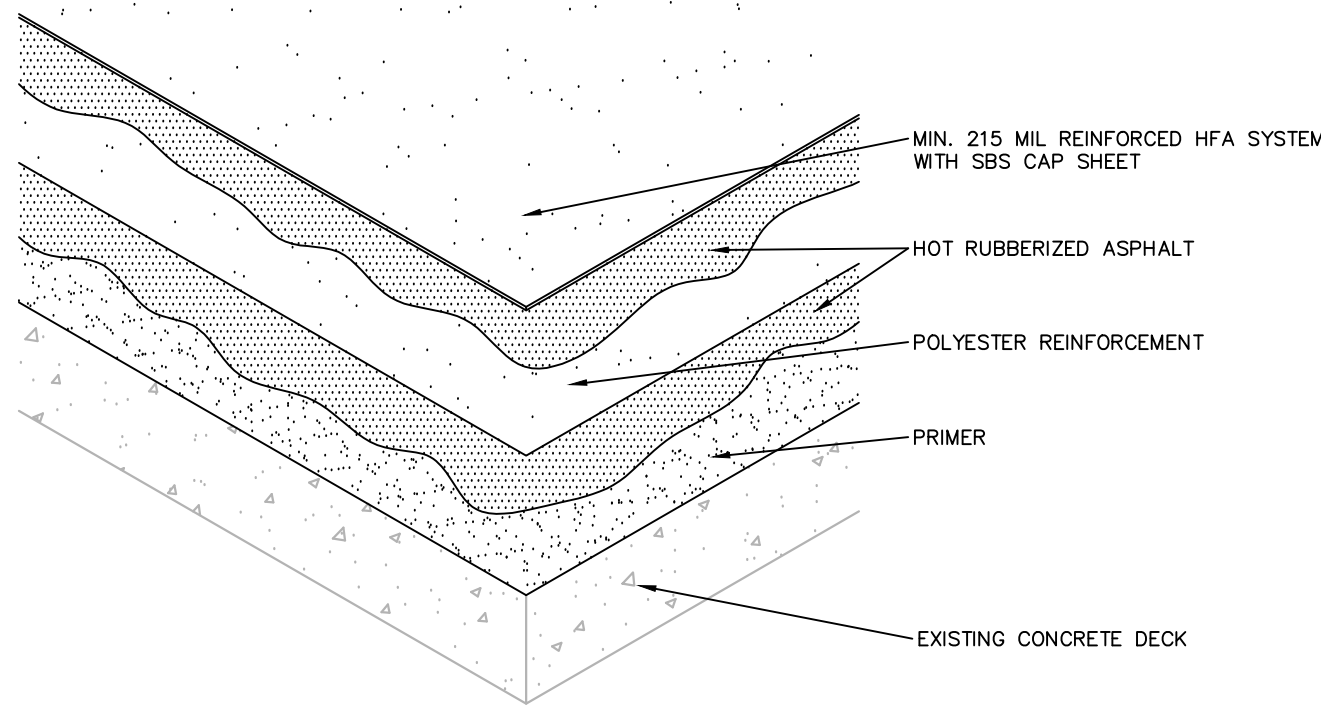


**1 ROOF DRAIN**  
N.T.S

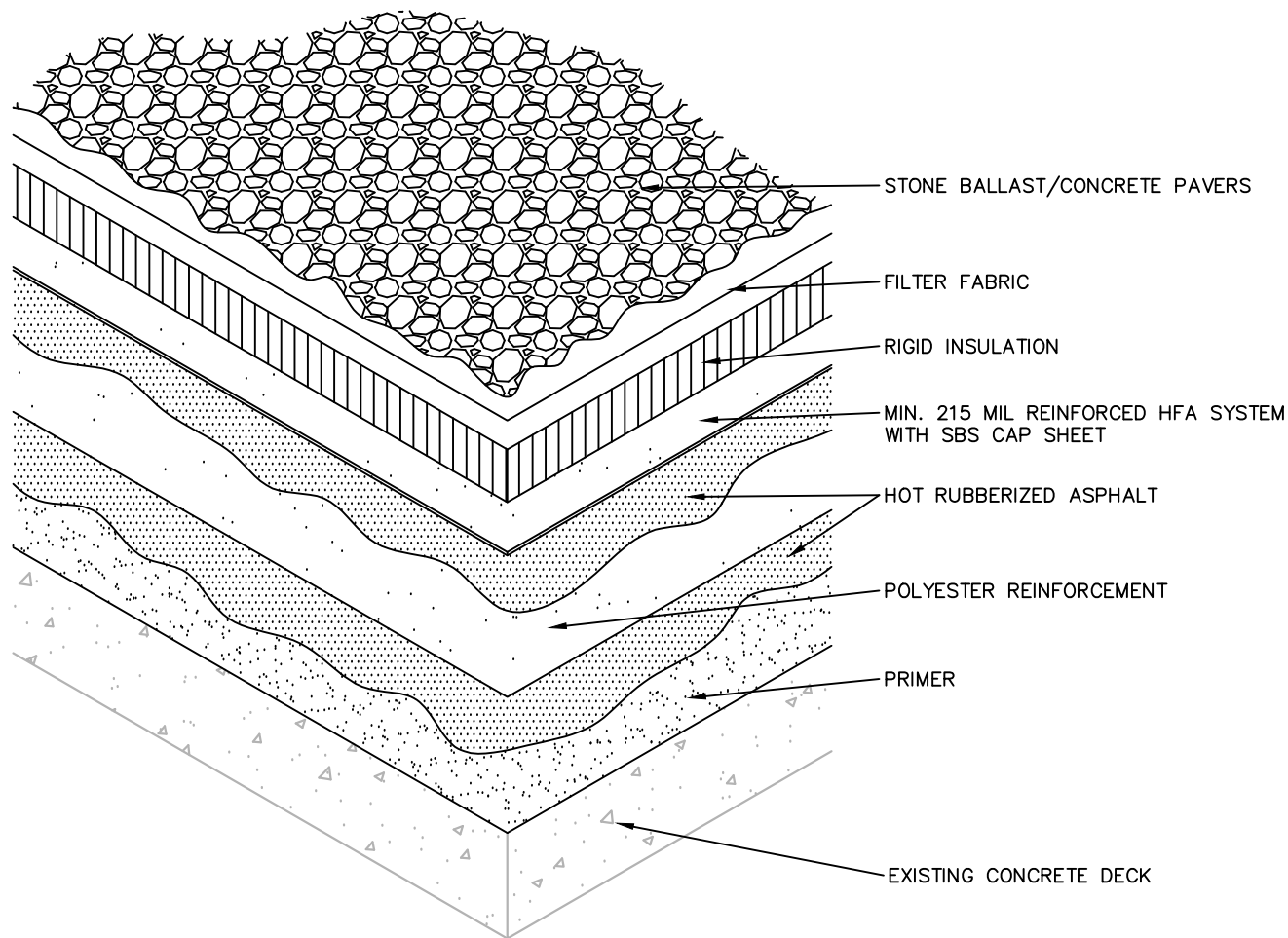


**3 PIPE PENETRATION**  
N.T.S

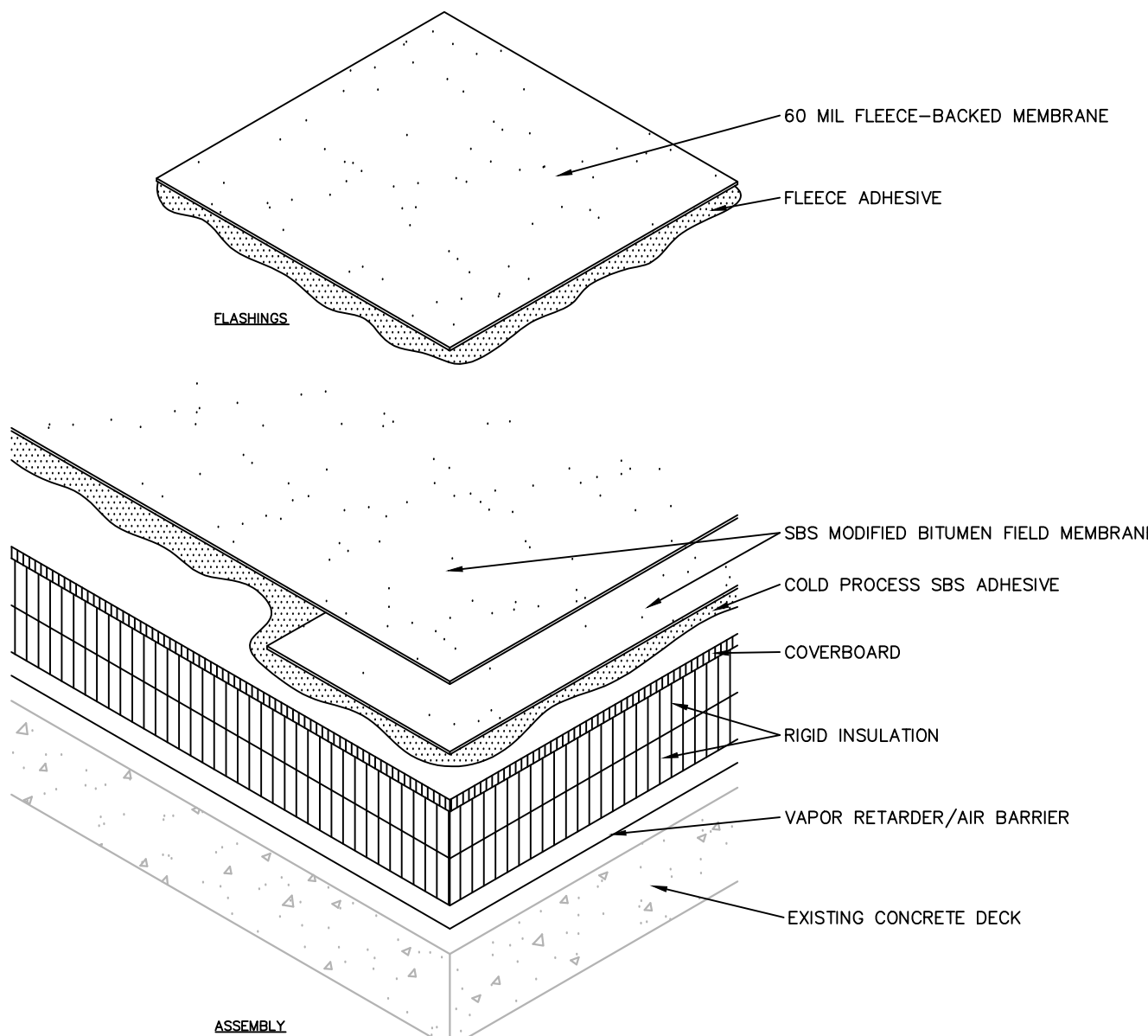
**4 NOT USED**  
N.T.S



**5 TYPICAL ROOF ASSEMBLY TYPE 2 ROOF (BASE)**  
N.T.S

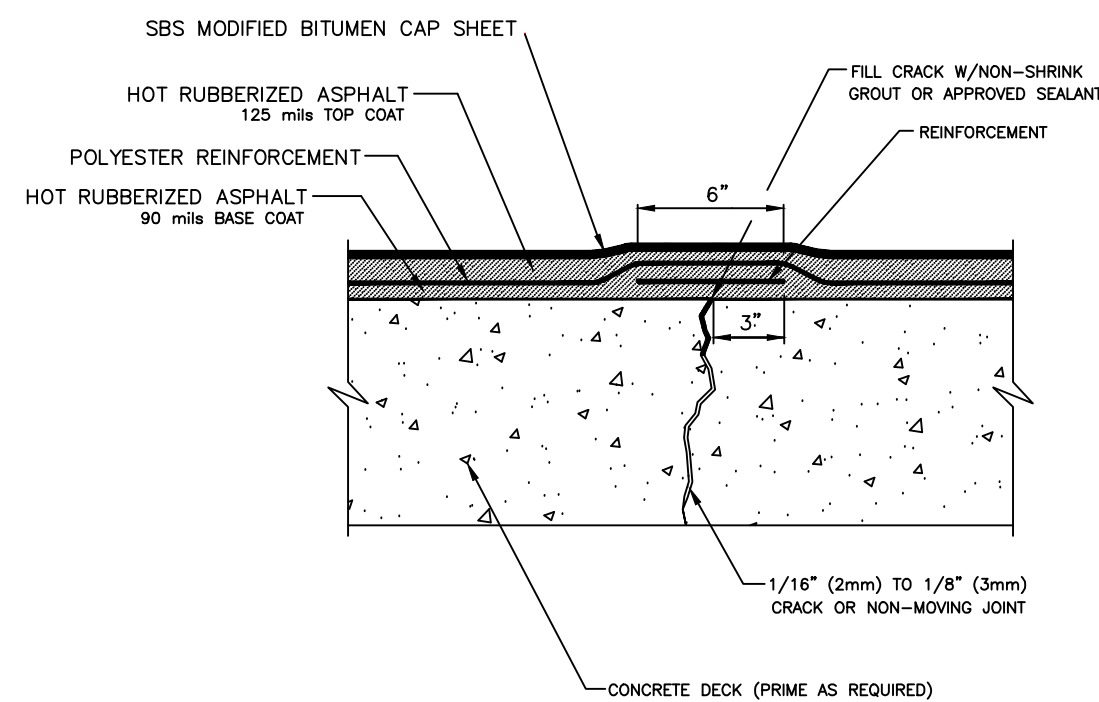


**6 TYPICAL ROOF ASSEMBLY TYPE 2 ROOF**  
N.T.S

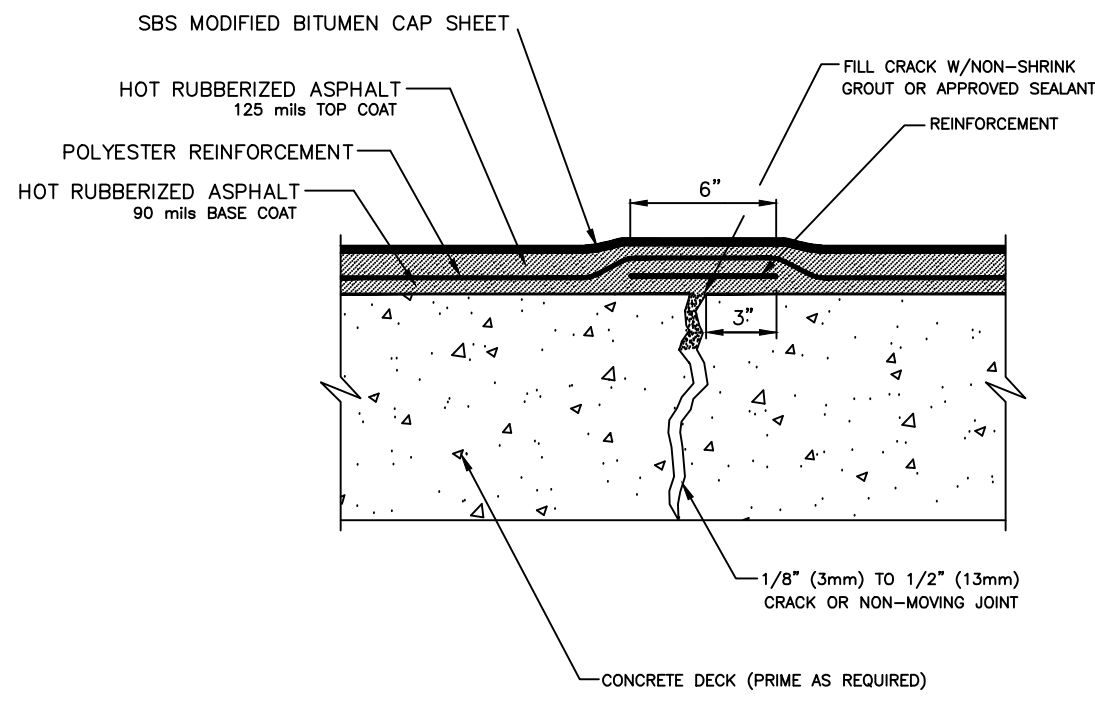


**7 TYPICAL ROOF ASSEMBLY TYPE 1 ROOF**  
N.T.S

**8 NOT USED**  
N.T.S



**9 NON-MOVING JOINT UP TO 1/8"**  
N.T.S



**10 NON-MOVING JOINT UP TO 1/2"**  
N.T.S

**11 NOT USED**  
N.T.S

**12 NOT USED**  
N.T.S

DRAWING DATES		
NUMBER	DATE	COMMENTS

- 
- 
- 
- 
- 
- 
- 
- 

DRAWING TITLE  
**TYPICAL  
ROOF DETAILS -  
TYPE 2 ROOF**

SHEET NUMBER  
**R1.8**





## ***Condition Assessment Report***



CDF Master 2015  
1901 S Street SE  
Washington, DC 20003

***Inspection Date:*** Tuesday, March 17, 2015

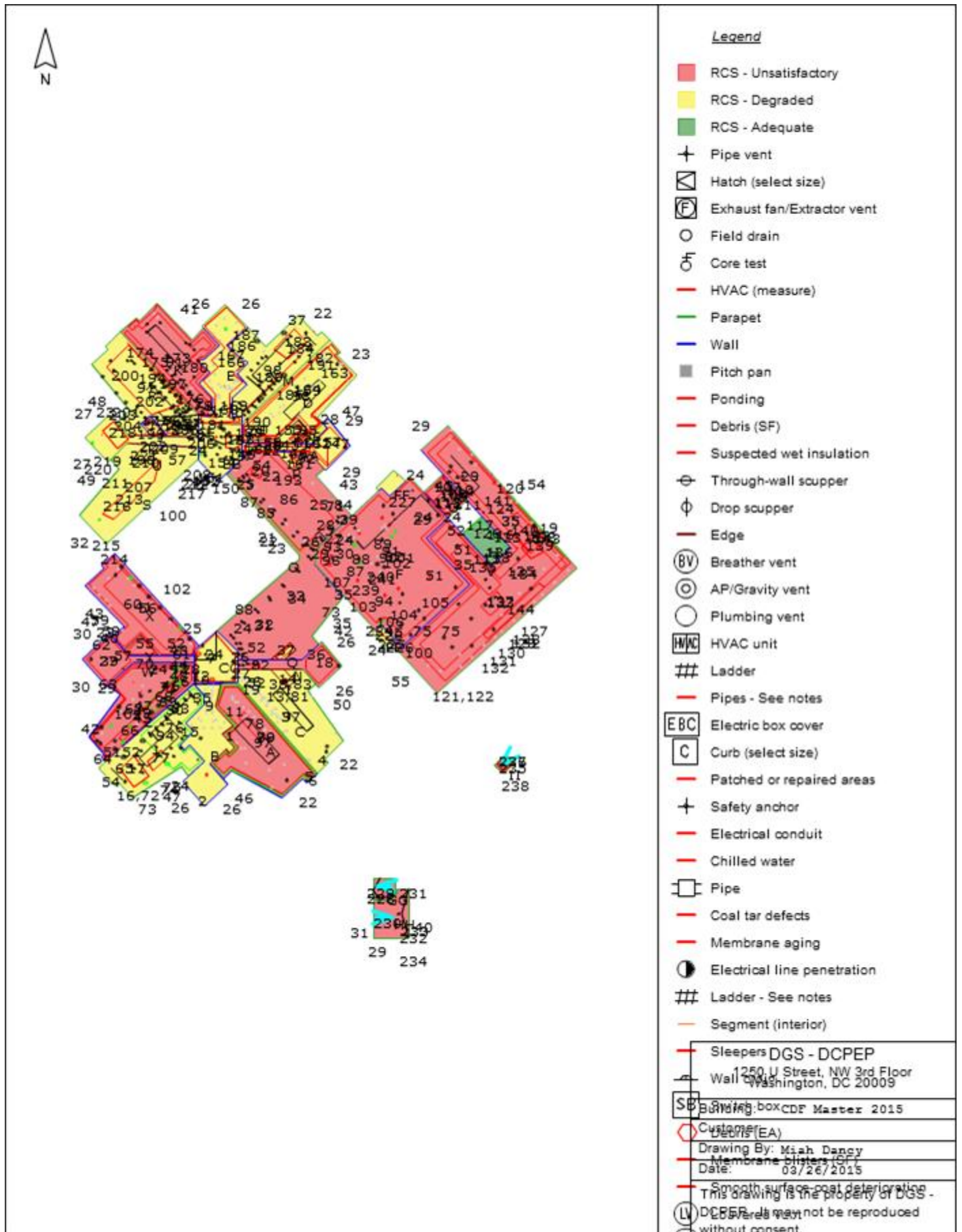


## Building & Job Summary

<b>Building Name</b>	CDF Master 2015
<b>Building Address</b>	1901 S Street SE Washington, DC 20003
<b>Roof Area (total)</b>	79,987 SF
<b>Building Description</b>	Building Type: Institutional/Government Building Zone: Institutional Roof Access: Stairwell
<b>Inspection Date</b>	Tuesday, March 17, 2015
<b>Inspector</b>	DGS - DCPEP Kevin KVersak kversak@bluefinllc.com
<b>Building Contact</b>	Matt Burress



# Section Key Plan





## Section Information

**Section ID:** A - A

**Area:** 3,855 SF

**Roof Type:** Built-up membrane

**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: fully mopped
- Deck:
  - Type: Precast concrete
  - Deck slope: unknown



**Roof Condition Score:** 48 (Unsatisfactory)



**Section ID: AA - AA****Area:** 1,229 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/16
  - Attachment: Asphalt
- Deck:
  - Type: Precast concrete
  - Deck slope: 0
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Asphalt

**Roof Condition Score: 65 (Degraded)****Section ID: B - B****Area:** 2,124 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Gray

**Roof Condition Score: 66 (Degraded)**



**Section ID: BB - BB****Area:** 1,322 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/16
  - Attachment: Asphalt
- Deck:
  - Type: Precast concrete
  - Deck slope: 0
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Asphalt

**Roof Condition Score: 63 (Degraded)****Section ID: C - C****Area:** 3,419 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Gray

**Roof Condition Score: 65 (Degraded)**



---

**Section ID:** CC - CC

**Area:** 1,214 SF

**Roof Type:** Built-up membrane

**Layers:**

- Surface:
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/16
  - Attachment: Asphalt
- Deck:
  - Type: Precast concrete
  - Deck slope: 0
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Asphalt



**Roof Condition Score:** 71 (Degraded)

---



**Section ID: D - D****Area:** 3,594 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
- Insulation:
  - Type: Polyisocyanurate
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Attachment: Asphalt
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Felt
- Insulation:
  - Type: Perlite cover board
  - Thickness: 0.75"
  - # of layers: 1
  - Tapered: No
  - Attachment: Fully adhered
  - Slope: 0

**Roof Condition Score:** 66 (Degraded)**Section ID: D - D (Photo #4)****Area:** 3,594 SF**Roof Condition Score:** 66 (Degraded)**Section ID: D - D (Photo #5)****Area:** 3,594 SF**Roof Condition Score:** 66 (Degraded)



---

**Section ID:** D - D (Photo #6)

**Area:** 3,594 SF

**Roof Condition Score:** 66 (Degraded)



---

**Section ID:** DD - DD

**Area:** 211 SF

**Roof Type:** Built-up membrane

**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Felt

**Roof Condition Score:** 70 (Degraded)



---

**Section ID:** E - E

**Area:** 2,227 SF

**Roof Type:** Built-up membrane

**Layers:**

- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3 -4
  - Type of ply: Felt
- Surface:

**Roof Condition Score:** 66 (Degraded)



---

**Section ID:** E - E (Photo #2)

**Area:** 2,227 SF

**Roof Condition Score:** 66 (Degraded)





---

**Section ID:** EE - EE

**Area:** 142 SF

**Roof Type:** Built-up membrane

**Layers:**

- Membrane:

**Roof Condition Score:** 61 (Degraded)



---

**Section ID:** EE - EE (Photo #2)

**Area:** 142 SF

**Roof Condition Score:** 61 (Degraded)



---

**Section ID:** EE - EE (Photo #3)

**Area:** 142 SF

**Roof Condition Score:** 61 (Degraded)

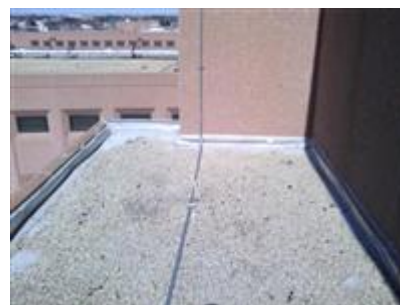


---

**Section ID:** EE - EE (Photo #4)

**Area:** 142 SF

**Roof Condition Score:** 61 (Degraded)





**Section ID: F - F****Area:** 9,437 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: fully mopped
- Deck:
  - Type: Precast concrete
  - Deck slope: unknown

**Roof Condition Score: 54 (Unsatisfactory)****Section ID: FF - FF****Area:** 244 SF**Roof Type:** Built-up membrane**Layers:**

- Membrane:

**Roof Condition Score: 61 (Degraded)**



---

**Section ID:** FF - FF (Photo #2)

**Area:** 244 SF

**Roof Condition Score:** 61 (Degraded)



---

**Section ID:** G - G

**Area:** 612 SF

**Roof Type:** Built-up membrane

**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: Yes
  - Slope: no
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Metal
  - Deck slope: unknown



**Roof Condition Score:** 60 (Unsatisfactory)

---



---

**Section ID:** G - G (Photo #2)

**Area:** 612 SF

**Roof Condition Score:** 60 (Unsatisfactory)



---

**Section ID:** GG - GG

**Area:** 304 SF

**Roof Type:** Thermoset (Single ply - rubber)

**Layers:**

- Membrane:
  - Type: EPDM
  - Attachment: Fully adhered
  - Thickness: .045
  - Reinforced: No
  - Fire rated: No
  - Color: Black

**Roof Condition Score:** 58 (Unsatisfactory)



---

**Section ID:** GG - GG (Photo #2)

**Area:** 304 SF

**Roof Condition Score:** 58 (Unsatisfactory)



---

**Section ID:** GG - GG (Photo #3)

**Area:** 304 SF

**Roof Condition Score:** 58 (Unsatisfactory)





**Section ID: H - H****Area:** SF**Roof Type:** Thermoset (Single ply - rubber)**Layers:**

- Surface:
  - Surface: Black
- Membrane:
  - Type: EPDM
  - Attachment: Mechanically fastened
  - Thickness: .045
  - Reinforced: No
  - Fire rated: Unknown
  - Color: Black

**Roof Condition Score: 83 (Adequate)****Section ID: HH - HH****Area:** 995 SF**Roof Type:** Thermoset (Single ply - rubber)**Layers:**

- Membrane:
  - Type: EPDM
  - Attachment: Fully adhered
  - Thickness: .045
  - Reinforced: No
  - Fire rated: No
  - Color: Black
- Insulation:
  - Type: Fiberboard
  - Thickness: 0.50"
  - # of layers: 1
  - Tapered: No
  - Attachment: Mechanical
  - Slope: 0
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 2" - 4.5"
  - # of layers: 2
  - Tapered: yes
  - Attachment: Mechanical
  - Slope: 1/8
- Deck:
  - Type: Precast concrete
  - Deck slope: unknown

**Roof Condition Score: 53 (Unsatisfactory)**



---

**Section ID:** HH - HH (Photo #2)

**Area:** 995 SF

**Roof Condition Score:** 53 (Unsatisfactory)



---

**Section ID:** HH - HH (Photo #3)

**Area:** 995 SF

**Roof Condition Score:** 53 (Unsatisfactory)



---

**Section ID:** HH - HH (Photo #4)

**Area:** 995 SF

**Roof Condition Score:** 53 (Unsatisfactory)



---

**Section ID:** HH - HH (Photo #5)

**Area:** 995 SF

**Roof Condition Score:** 53 (Unsatisfactory)





**Section ID: I - I****Area:** 137 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:

**Roof Condition Score:** 66 (Degraded)**Section ID: I - I (Photo #2)****Area:** 137 SF**Roof Condition Score:** 66 (Degraded)**Section ID: II - II****Area:** 119 SF**Roof Type:** Buildt up roof**Layers:**

- Membrane:
  - Application: Hot mop
  - Type: Multi-ply
  - Base sheet type: Asphalt
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3 -4
  - Type of ply: Asphalt
- Insulation:
  - Type: Perlite cover board
  - Thickness: 4"
  - # of layers: 1
  - Tapered: No
  - Attachment: Fully adhered
  - Slope: 0
- Deck:
  - Type: Precast concrete
  - Deck slope: 1/8

**Roof Condition Score:** 48 (Unsatisfactory)



---

**Section ID:** II - II (Photo #2)

**Area:** 119 SF

**Roof Condition Score:** 48 (Unsatisfactory)



---

**Section ID:** II - II (Photo #3)

**Area:** 119 SF

**Roof Condition Score:** 48 (Unsatisfactory)



---

**Section ID:** II - II (Photo #4)

**Area:** 119 SF

**Roof Condition Score:** 48 (Unsatisfactory)



---

**Section ID:** J - J

**Area:** 173 SF

**Roof Type:** Built-up membrane

**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:

**Roof Condition Score:** 75 (Degraded)





---

**Section ID: K - K****Area:** 3,241 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:

**Roof Condition Score:** 59 (Unsatisfactory)

---

**Section ID: K - K (Photo #2)****Area:** 3,241 SF**Roof Condition Score:** 59 (Unsatisfactory)

---

**Section ID: K - K (Photo #3)****Area:** 3,241 SF**Roof Condition Score:** 59 (Unsatisfactory)

---

**Section ID: K - K (Photo #4)****Area:** 3,241 SF**Roof Condition Score:** 59 (Unsatisfactory)



---

**Section ID:** K - K (Photo #5)

**Area:** 3,241 SF

**Roof Condition Score:** 59 (Unsatisfactory)



---

**Section ID:** K - K (Photo #6)

**Area:** 3,241 SF

**Roof Condition Score:** 59 (Unsatisfactory)



---

**Section ID:** K - K (Photo #7)

**Area:** 3,241 SF

**Roof Condition Score:** 59 (Unsatisfactory)



---

**Section ID:** L - L

**Area:** 3,552 SF

**Roof Type:** Built-up membrane

**Layers:**

- Membrane:

**Roof Condition Score:** 66 (Degraded)



---

**Section ID:** L - L (Photo #2)

**Area:** 3,552 SF

**Roof Condition Score:** 66 (Degraded)





---

**Section ID:** L - L (Photo #3)

**Area:** 3,552 SF

**Roof Condition Score:** 66 (Degraded)



---

**Section ID:** L - L (Photo #4)

**Area:** 3,552 SF

**Roof Condition Score:** 66 (Degraded)



---

**Section ID:** L - L (Photo #5)

**Area:** 3,552 SF

**Roof Condition Score:** 66 (Degraded)



---

**Section ID:** M - M

**Area:** 3,135 SF

**Roof Type:** Built-up membrane

**Layers:**

- Membrane:

**Roof Condition Score:** 69 (Degraded)





---

**Section ID: N - N****Area:** 1,049 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:

**Roof Condition Score:** 56 (Unsatisfactory)

---

**Section ID: N - N (Photo #2)****Area:** 1,049 SF**Roof Condition Score:** 56 (Unsatisfactory)

---

**Section ID: N - N (Photo #3)****Area:** 1,049 SF**Roof Condition Score:** 56 (Unsatisfactory)



**Section ID: O - O****Area:** 9,506 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: multiple
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Precast concrete
  - Deck slope: 0

**Roof Condition Score: 34 (Unsatisfactory)****Section ID: O - O (Photo #2)****Area:** 9,506 SF**Roof Condition Score: 34 (Unsatisfactory)**



---

**Section ID:** O - O (Photo #3)

**Area:** 9,506 SF

**Roof Condition Score:** 34 (Unsatisfactory)



---

**Section ID:** P - P

**Area:** 174 SF

**Roof Type:** Built-up membrane

**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Precast concrete
  - Deck slope: 0



**Roof Condition Score:** 67 (Degraded)

---



**Section ID: Q - Q****Area:** 118 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Precast concrete
  - Deck slope: 0

**Roof Condition Score:** 66 (Degraded)**Section ID: Q - Q (Photo #2)****Area:** 118 SF**Roof Condition Score:** 66 (Degraded)



**Section ID: R - R****Area:** 3,521 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Precast concrete
  - Deck slope: 0

**Roof Condition Score: 64 (Degraded)****Section ID: R - R (Photo #2)****Area:** 3,521 SF**Roof Condition Score: 64 (Degraded)**



---

**Section ID:** R - R (Photo #3)

**Area:** 3,521 SF

**Roof Condition Score:** 64 (Degraded)



---

**Section ID:** R - R (Photo #4)

**Area:** 3,521 SF

**Roof Condition Score:** 64 (Degraded)



---

**Section ID:** R - R (Photo #5)

**Area:** 3,521 SF

**Roof Condition Score:** 64 (Degraded)





**Section ID: S - S****Area:** 3,462 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Precast concrete
  - Deck slope: 0

**Roof Condition Score: 71 (Degraded)****Section ID: S - S (Photo #2)****Area:** 3,462 SF**Roof Condition Score: 71 (Degraded)**



**Section ID: T - T****Area:** 1,148 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Precast concrete
  - Deck slope: 0

**Roof Condition Score:** 73 (Degraded)**Section ID: T - T (Photo #2)****Area:** 1,148 SF**Roof Condition Score:** 73 (Degraded)



**Section ID: U - U****Area:** 170 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Precast concrete
  - Deck slope: 0

**Roof Condition Score: 75 (Degraded)****Section ID: U - U (Photo #2)****Area:** 170 SF**Roof Condition Score: 75 (Degraded)**



**Section ID: V - V****Area:** 11,526 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Precast concrete
  - Deck slope: 0

**Roof Condition Score: 43 (Unsatisfactory)****Section ID: V - V (Photo #2)****Area:** 11,526 SF**Roof Condition Score: 43 (Unsatisfactory)****Section ID: V - V (Photo #3)****Area:** 11,526 SF**Roof Condition Score: 43 (Unsatisfactory)**



---

**Section ID:** V - V (Photo #4)

**Area:** 11,526 SF

**Roof Condition Score:** 43 (Unsatisfactory)



---

**Section ID:** W - W

**Area:** 1,196 SF

**Roof Type:** Built-up membrane

**Layers:**

- Surface:
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Type: Perlite
  - Thickness: 1.50" - 3.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Asphalt
- Deck:
  - Type: Precast concrete
  - Deck slope: 0



**Roof Condition Score:** 60 (Unsatisfactory)

---

**Section ID:** W - W (Photo #2)

**Area:** 1,196 SF

**Roof Condition Score:** 60 (Unsatisfactory)





---

**Section ID:** W - W (Photo #3)

**Area:** 1,196 SF

**Roof Condition Score:** 60 (Unsatisfactory)



---

**Section ID:** W - W (Photo #4)

**Area:** 1,196 SF

**Roof Condition Score:** 60 (Unsatisfactory)



---

**Section ID:** W - W (Photo #5)

**Area:** 1,196 SF

**Roof Condition Score:** 60 (Unsatisfactory)



---

**Section ID:** W - W (Photo #6)

**Area:** 1,196 SF

**Roof Condition Score:** 60 (Unsatisfactory)





**Section ID: X - X****Area:** 3,294 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Precast concrete
  - Deck slope: 0

**Roof Condition Score: 58 (Unsatisfactory)****Section ID: X - X (Photo #2)****Area:** 3,294 SF**Roof Condition Score: 58 (Unsatisfactory)****Section ID: X - X (Photo #3)****Area:** 3,294 SF**Roof Condition Score: 58 (Unsatisfactory)**



---

**Section ID:** X - X (Photo #4)

**Area:** 3,294 SF

**Roof Condition Score:** 58 (Unsatisfactory)



---

**Section ID:** X - X (Photo #5)

**Area:** 3,294 SF

**Roof Condition Score:** 58 (Unsatisfactory)



---

**Section ID:** X - X (Photo #6)

**Area:** 3,294 SF

**Roof Condition Score:** 58 (Unsatisfactory)



---

**Section ID:** X - X (Photo #7)

**Area:** 3,294 SF

**Roof Condition Score:** 58 (Unsatisfactory)



---

**Section ID:** X - X (Photo #8)

**Area:** 3,294 SF

**Roof Condition Score:** 58 (Unsatisfactory)





**Section ID: Y - Y****Area:** 236 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Type: Perlite
  - Thickness: 1.50" - 3.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Asphalt
- Deck:
  - Type: Precast concrete
  - Deck slope: 0

**Roof Condition Score: 60 (Unsatisfactory)****Section ID: Y - Y (Photo #2)****Area:** 236 SF**Roof Condition Score: 60 (Unsatisfactory)**



**Section ID: Z - Z****Area:** 3,301 SF**Roof Type:** Built-up membrane**Layers:**

- Surface:
  - Surface: Aggregate
  - Color: Tan
- Membrane:
  - Adhesive: Asphalt
  - # of plies: 3-4
  - Type of ply: Fiberglass
- Insulation:
  - Type: Perlite cover board
  - Thickness: 1"
  - # of layers: 1
  - Tapered: No
  - Slope: 0
  - Attachment: Fully adhered
- Insulation:
  - Type: Polyisocyanurate (Poly ISO) foam
  - Thickness: 1.50" - 5.5"
  - # of layers: 1
  - Tapered: Yes
  - Slope: 1/8
  - Attachment: Spot adhered
- Deck:
  - Type: Precast concrete
  - Deck slope: 0

**Roof Condition Score:** 46 (Unsatisfactory)**Section ID: Z - Z (Photo #2)****Area:** 3,301 SF**Roof Condition Score:** 46 (Unsatisfactory)**Section ID: Z - Z (Photo #3)****Area:** 3,301 SF**Roof Condition Score:** 46 (Unsatisfactory)



---

**Section ID:** Z - Z (Photo #4)

**Area:** 3,301 SF

**Roof Condition Score:** 46 (Unsatisfactory)



---

**Section ID:** Z - Z (Photo #5)

**Area:** 3,301 SF

**Roof Condition Score:** 46 (Unsatisfactory)







## Roof Condition Scores

Section	Score
A - A (Area = 3,855 SF)	48 - Unsatisfactory
AA - AA (Area = 1,229 SF)	65 - Degraded
B - B (Area = 2,124 SF)	66 - Degraded
BB - BB (Area = 1,322 SF)	63 - Degraded
C - C (Area = 3,419 SF)	65 - Degraded
CC - CC (Area = 1,214 SF)	71 - Degraded
D - D (Area = 3,594 SF)	66 - Degraded
DD - DD (Area = 211 SF)	70 - Degraded
E - E (Area = 2,227 SF)	66 - Degraded
EE - EE (Area = 142 SF)	61 - Degraded
F - F (Area = 9,437 SF)	54 - Unsatisfactory
FF - FF (Area = 244 SF)	61 - Degraded
G - G (Area = 612 SF)	60 - Unsatisfactory
GG - GG (Area = 304 SF)	58 - Unsatisfactory
H - H (Area = 0 SF)	83 - Adequate
HH - HH (Area = 995 SF)	53 - Unsatisfactory
I - I (Area = 137 SF)	66 - Degraded
II - II (Area = 119 SF)	48 - Unsatisfactory
J - J (Area = 173 SF)	75 - Degraded
K - K (Area = 3,241 SF)	59 - Unsatisfactory
L - L (Area = 3,552 SF)	66 - Degraded



Section	Score
M - M (Area = 3,135 SF)	69 - Degraded
N - N (Area = 1,049 SF)	56 - Unsatisfactory
O - O (Area = 9,506 SF)	34 - Unsatisfactory
P - P (Area = 174 SF)	67 - Degraded
Q - Q (Area = 118 SF)	66 - Degraded
R - R (Area = 3,521 SF)	64 - Degraded
S - S (Area = 3,462 SF)	71 - Degraded
T - T (Area = 1,148 SF)	73 - Degraded
U - U (Area = 170 SF)	75 - Degraded
V - V (Area = 11,526 SF)	43 - Unsatisfactory
W - W (Area = 1,196 SF)	60 - Unsatisfactory
X - X (Area = 3,294 SF)	58 - Unsatisfactory
Y - Y (Area = 236 SF)	60 - Unsatisfactory
Z - Z (Area = 3,301 SF)	46 - Unsatisfactory

**Legend**

	Adequate ( 0% )
	Degraded ( 39% )
	Unsatisfactory ( 61% )
	Unspecified ( 0% )