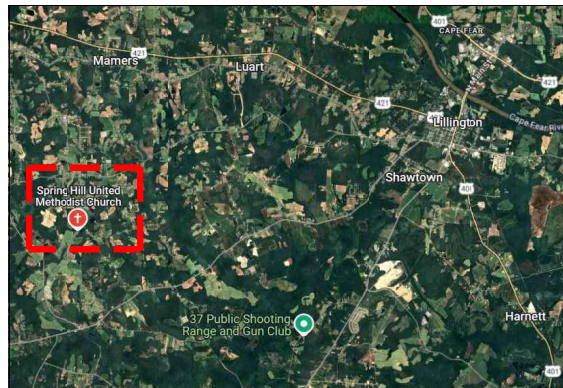


SPRING HILL UNITED METHODIST CHURCH CHAPEL ROOF REPLACEMENT

1960 SPRING HILL CHURCH RD, LILLINGTON, NC 27546



1 VICINITY MAP
SCALE: NTS



2 SITE MAP
SCALE: NTS

APPENDIX B BUILDING CODE SUMMARY - FOR COMMERCIAL ROOF PROJECTS

Name of Project: Spring Hill United Methodist Church - Chapel Roof Replacement	
Address: 1960 Spring Hill Church Road, Lillington, NC 27546	
Owner/Authorized Agent: Brad Cummings (Spring Hill UMC)	Phone #: (910) 893-4723
Email: brad_cummings@yahoo.com	
Owned By: ☐ City/County ☒ Private ☐ State	
Code Enforcement Jurisdiction: ☐ City ☒ County - Harnett County ☐ State	
ENGINEER: NAME: David M. Kreiberg LICENSE #: 001894 PHONE #: (828) 587-1544 EMAIL: dkreiberg@dk-eng.com	
2018 NORTH CAROLINA CODE FOR: ☒ Roof Replacement ☐ Roof Repair ☐ Roof Repair	
2018 NORTH CAROLINA EXISTING BUILDING CODE CHAPTER 5 CLASSIFICATION OF WORK: ☒ Section 503: Alteration Level 1 (Renovation) ☐ Section 504: Alteration Level 2 (Alteration) ☐ Section 505: Alteration Level 3 (Reconstruction)	
BASIC BUILDING DATA	
Constructed Date: 1997	
Construction Type (check all that apply): ☐ A-A ☐ B-A ☐ B-B ☐ B-C ☐ B-D ☐ B-E ☐ B-F ☐ B-G ☐ B-H ☐ B-I ☐ B-J ☐ B-K ☐ B-L ☐ B-M ☐ B-N ☐ B-O ☐ B-P ☐ B-Q ☐ B-R ☐ B-S ☐ B-T ☐ B-U ☐ B-V ☐ B-W ☐ B-X ☐ B-Y ☐ B-Z	
Spiral: ☒ No ☐ Partial ☐ Yes ☐ N/A 13 ☐ N/A 19K ☐ N/A 13D	
Standpipes: ☒ No ☐ Yes ☐ Class ☐ 1 ☐ 2 ☐ 3 ☐ Wet ☐ Dry	
Fire District: ☒ No ☐ Yes (Primary)	
Building Height: 25 feet	
Maximum Roof Area: 3,800 square feet	
Allowable Area: 9,300 square feet (non-sprinkled) (NCSBC Table 506.2)	

PRIMARY OCCUPANCY (CHAPEL)	
Assembly: ☐ A-1 ☐ A-2 ☒ A-3 ☐ A-4 ☐ A-5	
Business: ☐ B	
Educational: ☐ E	
Factory: ☐ F-1 (Moderate) ☐ F-2 (Low Hazard)	
High Hazard: ☐ H-1 (Debris) ☐ H-2 (Deflagrate) ☐ H-3 (Combust) ☐ H-4 (Health) ☐ H-5 (HPM)	
Institutional: ☐ I-1 Condition 1 ☐ I-1 Condition 2 ☐ I-2 ☐ I-3 ☐ I-4	
Mercantile: ☐ M	
Residential: ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4	
Storage: ☐ S-1 (Moderate) ☐ S-2 (Low Hazard)	
Utility: ☐ U	
ACCESSORY OCCUPANCY (ALL SECTORS) (☐ N/A)	
Assembly: ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5	
Business: ☒ B	
Educational: ☐ E	
Factory: ☐ F-1 (Moderate) ☐ F-2 (Low Hazard)	
High Hazard: ☐ H-1 (Debris) ☐ H-2 (Deflagrate) ☐ H-3 (Combust) ☐ H-4 (Health) ☐ H-5 (HPM)	
Institutional: ☐ I-1 Condition 1 ☐ I-1 Condition 2 ☐ I-2 ☐ I-3 ☐ I-4	
Mercantile: ☐ M	
Residential: ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4	
Storage: ☐ S-1 (Moderate) ☐ S-2 (Low Hazard)	
Utility: ☐ U	

FIRE PROTECTION REQUIREMENTS			
BUILDING ELEMENT	FIRE PROTECTION RATING	DESIGN # FOR RATED ASSEMBLY	COMMENTS
Roof Construction	0 HR	0 HR	Design No. P402
Combustible Wood Floor	0 HR	0 HR	Non-combustible, unprotected
STRUCTURAL SUMMARY			
Components & Cladding Wind/Uplift Resistance (ASCE 7-16)			
Basic Wind Speed: 120 mph		Risk Category: II	
Internal Pressure Coeff: ±0.18		Exposure Category: C	
Wind Uplift Nominal Design Pressures:			
Zone 1 (Field)	-38 psf	Overhang Zone 1 (Field)	-44 psf
Zone 2a (Perimeter Eave)	-38 psf	Overhang Zone 2a (Perimeter Eave)	-44 psf
Zone 2b (Perimeter Ridge)	-55 psf	Overhang Zone 2b (Perimeter Ridge)	-61 psf
Zone 2c (Perimeter Ridge)	-55 psf	Overhang Zone 2c (Perimeter Ridge)	-61 psf
Zone 3a (Corner Eave)	-55 psf	Overhang Zone 3a (Corner Eave)	-61 psf
Zone 3b (Corner Ridge)	-55 psf	Overhang Zone 3b (Corner Ridge)	-61 psf
Roof System Dead Load			
Existing System:	8.99 psf		
Replacement system:	15.98 psf (7% force increase due to deadload)		
ENERGY SUMMARY			
NEW Insulating Assembly		Self-adhered membrane underlayment, retrofit light-gauge metal sub-ironing, mineral wool insulation, & vented standing seam metal roof	
Description of Assembly:			
Number of Storylines:		N/A	
All Sectors:			
R-Value of Insulation (in):		15-15.8	



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4. NOTES PROVIDE TYPICAL WORK LOCATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO QUANTIFY AND CONFIRM ALL LOCATIONS.
5. LIGHT LINES INDICATE EXISTING STRUCTURES/COMPONENTS THAT WILL BE REMAINED. HEAVY LINES SHOW NEW ELEMENTS TO BE ADDED.
6. ELEMENTS/COMPONENTS NOT SHOWN IN DRAWINGS ARE TO BE REMOVED AS PART OF PREPARATION FOR WORK.

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CD	100% CONTRACT DOCUMENTS	7/25/2025
CD	90% CONTRACT DOCUMENTS	8/20/2025
NO.	REVISION / ISSUE	DATE



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CHAPEL ROOF REPLACEMENT
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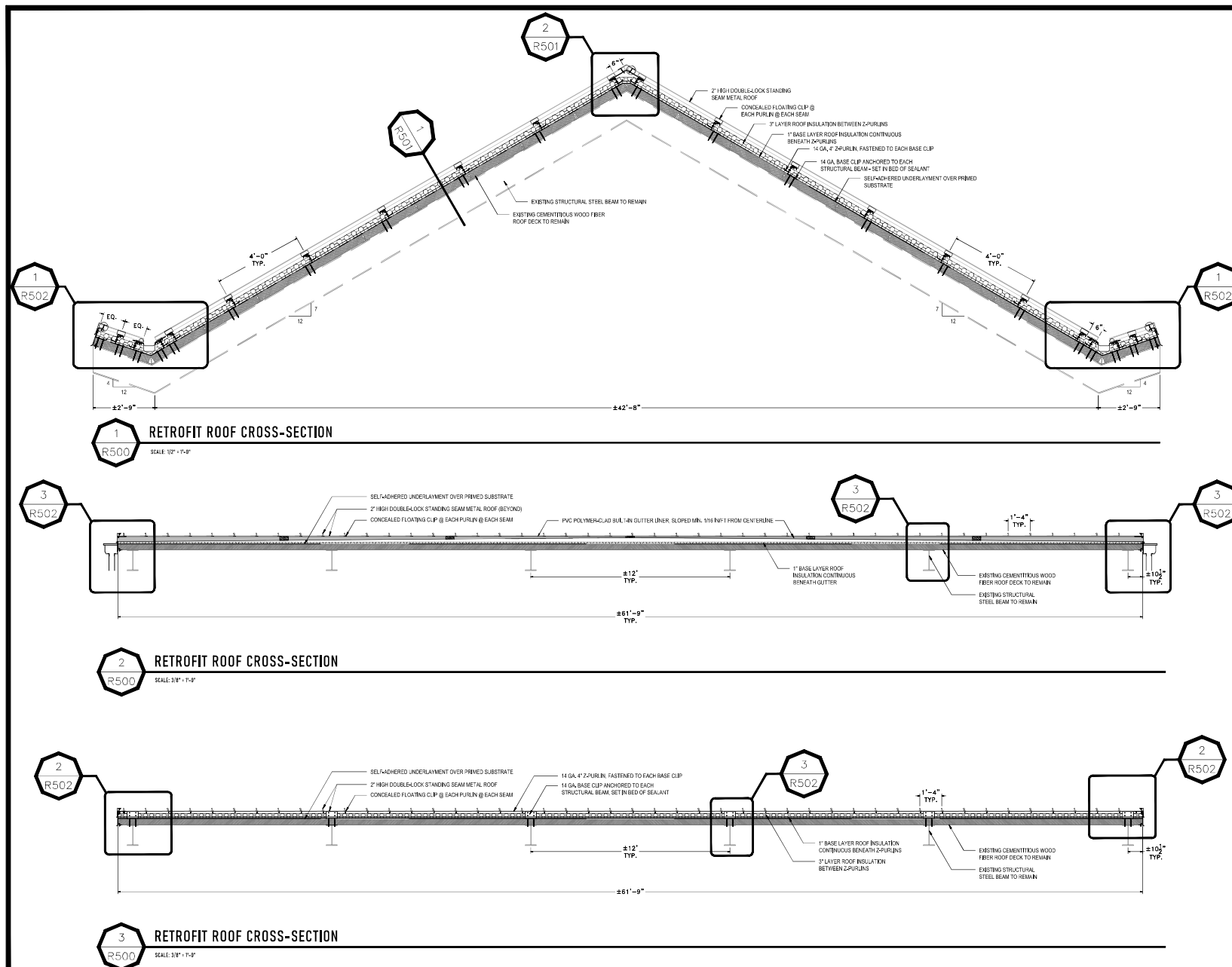


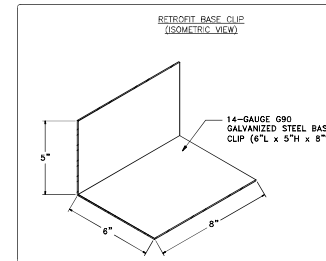
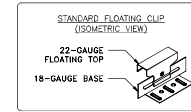
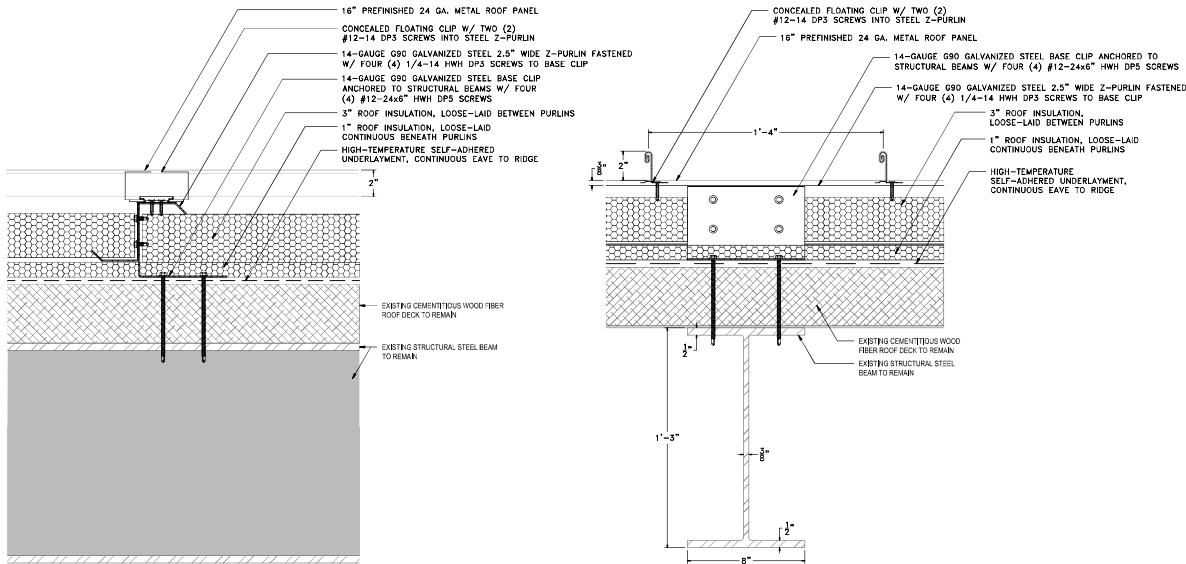
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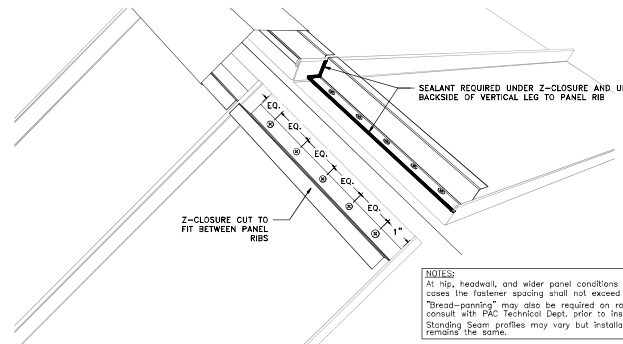
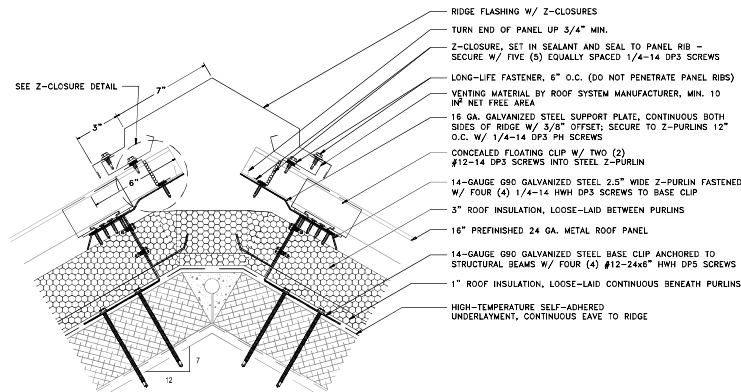
R500

ROOF SECTIONS





1 2\"/>



NOTES:
At hip, headwall, and wider panel conditions and in all other cases the fastener spacing shall not exceed 4\"/>

TYPICAL Z-CLOSURE DETAIL

2 RIDGE FLASHING WITH Z-CLOSURE (VENTED)



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DETAILS	

LAP SEAMS IN GUTTER LINER 3" W/ TWO BEADS CONCEALED BUTYL SEALANT, STRIP SEAMS W/ PVC STRIPPING MEMBRANE HOT-AIR WELDED

PROVIDE 45° TAPER AT CORNERS OF GUTTER LINER

1-1/2" HEM LOCK ONTO JOGGLE CLEAT, PROVIDE MIN. 1/2" FOR THERMAL MOVEMENT

JOGGLE CLEAT, SET IN SEALANT AND SECURE W/ 1/4-14 DP3 PH SCREWS 6" O.C.

24-GAUGE PVC CLAD METAL GUTTER LINER, SLOPED @ 1/16 IN/FT MIN.

14-GAUGE G90 GALVANIZED STEEL 3.5" WIDE Z-PURLIN FASTENED W/ FOUR (4) 1/4-14 HWH DP3 SCREWS TO BASE CLIP

16" PREFINISHED 24 GA. METAL ROOF PANEL

CONCEALED FLOATING CLIP W/ TWO (2) #12-14 DP3 SCREWS INTO STEEL Z-PURLIN

14-GAUGE G90 GALVANIZED STEEL 2.5" WIDE Z-PURLIN FASTENED W/ FOUR (4) 1/4-14 HWH DP3 SCREWS TO BASE CLIP

3" ROOF INSULATION, LOOSE-LAID BETWEEN PURLINS

1" ROOF INSULATION, LOOSE-LAID CONTINUOUS BENEATH PURLINS

HIGH-TEMPERATURE SELF-ADHERED UNDERLAYMENT, CONTINUOUS ACROSS VALLEY AND TURN DOWN OVER ROOF HIGH EAVE

6" CLEAR OPENING FOR GUTTER

SEE DETAIL "A"

14-GAUGE G90 GALVANIZED STEEL BASE CLIP ANCHORED TO STRUCTURAL BEAMS W/ FOUR (4) #12-24x8" HWH DP3 SCREWS

EAVE FLASHING W/ Z-CLOSURES

LONG-LIFE FASTENER, 6" O.C. (DO NOT PENETRATE PANEL RIBS)

Z-CLOSURE, SET IN SEALANT AND SEAL TO PANEL RIB - SECURE W/ FIVE (5) EQUALLY SPACED 1/4-14 DP3 SCREWS

VENTING MATERIAL BY ROOF SYSTEM MANUFACTURER, MIN. 10 IN² NET FREE AREA

SEE TYPICAL Z-CLOSURE DETAIL (2/R501)

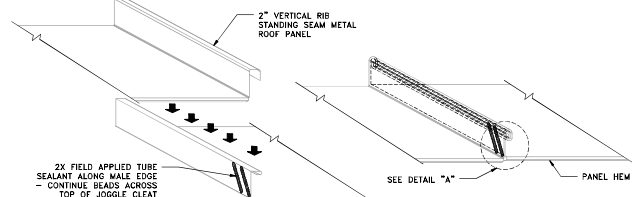
TURN END OF PANEL UP 3/4" MIN.

16 GA. GALVANIZED STEEL SUPPORT PLATE, CONTINUOUS BOTH SIDES OF RIDGE W/ 3/8" OFFSET; SECURE TO Z-PURLINS 12" O.C. W/ 1/4-14 DP3 PH SCREWS

22-GAUGE CONTINUOUS CLEAT, FASTENED TO EAVE STRUT W/ #10-16 DP3 PH SCREWS 12" O.C. STAGGERED THROUGH SEALANT TAPE

14-GAUGE 5"X4" W G90 GALVANIZED STEEL EAVE STRUT ANCHORED TO STRUCTURAL BEAMS W/ FOUR (4) #12-24x8" HWH DP3 SCREWS - PERFORATE TOP FLANGE W/ 1/2" DIA. HOLES 1" O.C. STAGGERED

EAVE CLOSURE FLASHING, SECURE BEHIND EAVE CLEAT W/ 1/4-14 DP3 PH SCREWS 12" O.C.; WRAP TO UNDERSIDE OF ROOF DECK (NOTCHED AT BEAMS) AND SECURE W/ LONG-LIFE FASTENERS 12" O.C.



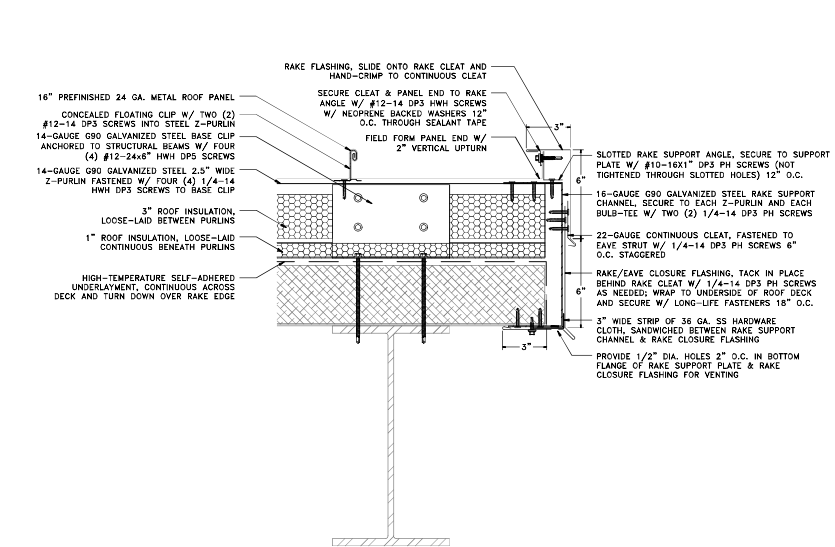
TYPICAL PANEL INSTALL @ EAVE



DETAIL "A"

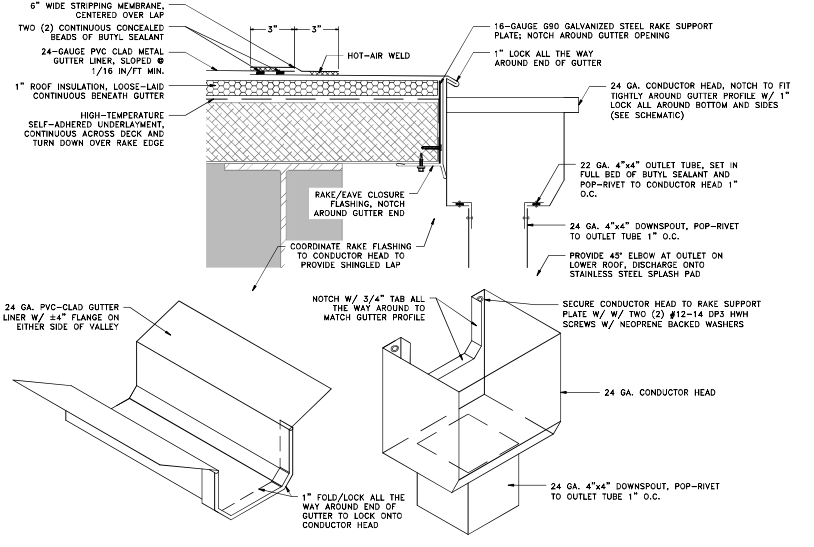
1 BUILT-IN GUTTER AND HIGH EAVE FLASHING (VENTED)

SCALE 3" = 1'-0"



2 FLOATING RAKE FLASHING (VENTED)

SCALE 3" = 1'-0"



3 NON-DRAINING ROOF EDGE - SIMMONS ST.

SCALE 3" = 1'-0"



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DETAILS