



PRODUCT & ENGINEERING MANUAL

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HORIZONTAL GUTTER SPECIFICATIONS AND OPTIONS

See Sections 11.4, 11.6, and 11.7 for Standard Details.

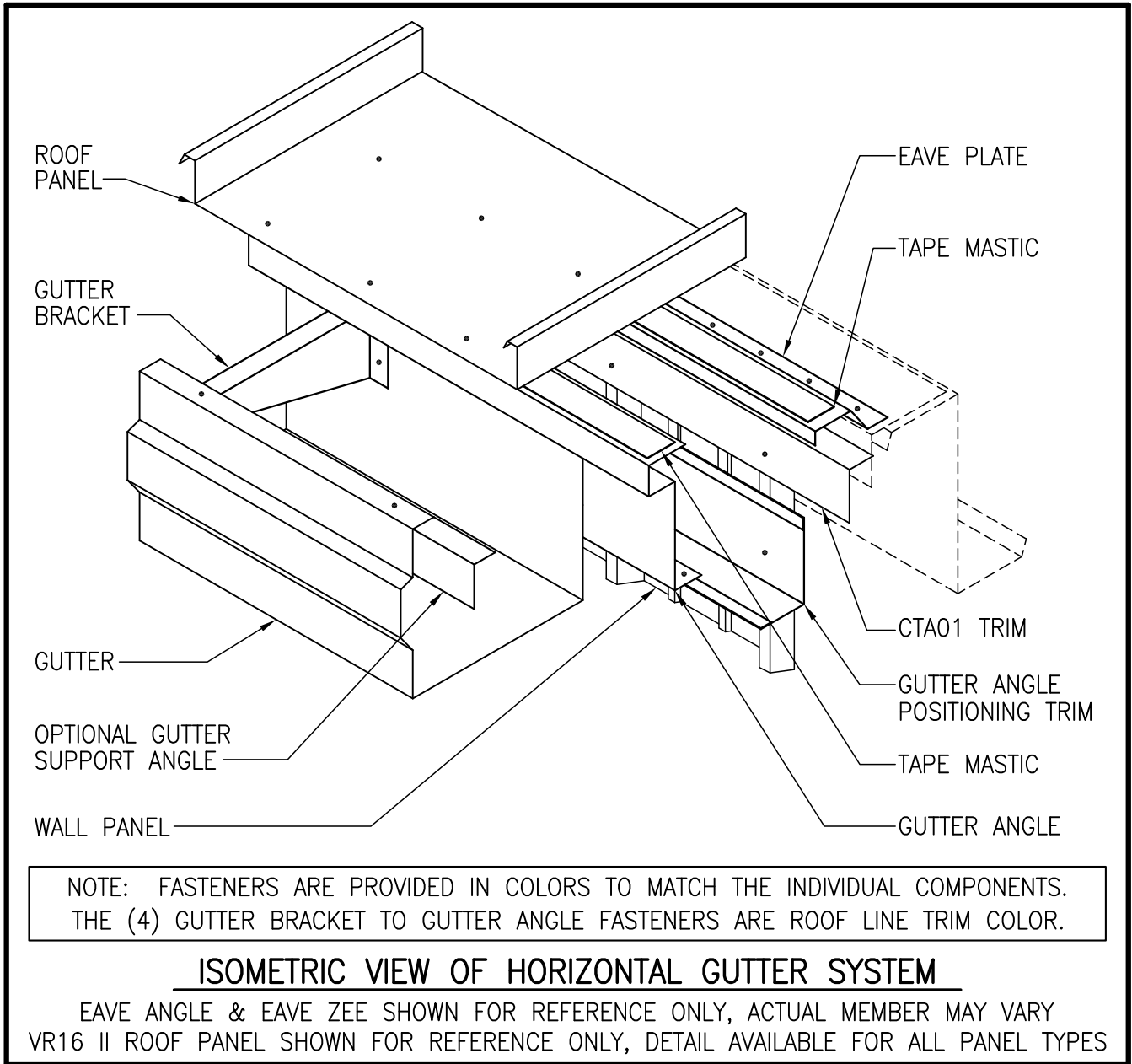
FEATURES:

- **Universal Heavy Gauge Gutter Bracket:** Works for virtually any roof pitch, and is hidden from view, so it does not need to be painted.
- **Optional Gutter Bracket Spacing:** Standard spacing is 4'-0 on center. 2'-0 spacing is recommended in snow regions.
- **Optional Gutter Reinforcement Angle:** Typically used in Heavy Snow locations.
- **Optional Simple Rake Trim Profile:** Typically used with VR16 II Roof applications, but available for all NBS roof types. Simple High Eave Trim for Single-Slope buildings to coincide with the Simple Rake Trim.
- **Optional Rake Retainer Trim:** With the use of the Simple Rake Trim, the Rake Retainer Trim is Optional for panel runs less than 35'. It is **required** for panel runs greater than 35' to allow the rake trim to move with the thermal expansion and contraction of the roof panel.
- **Installation Flexibility:** Much of the work can be done on the ground.
- **Metal Gutter End Caps:** Provides strength at the ends of the gutter and clean, erector friendly rake trim transition. No plastic parts with this system.
- **Gutter Capacity:** No loss of gutter capacity because of steep pitch roof. System is independent of roof slope.
- **Downspout Options:** Corrugated and Press-Broke Downspouts available.
- **BERT:** All of the options listed above are being added to the BERT contract for ease of ordering. For a short time, a Quote Qualification Sheet will be necessary (see the last page of this document).



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ISOMETRIC DETAIL



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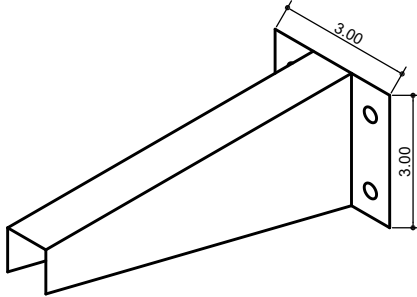
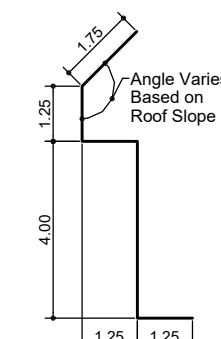
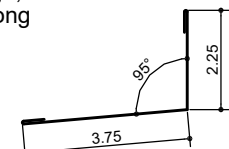
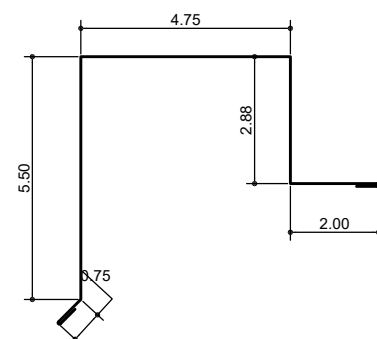
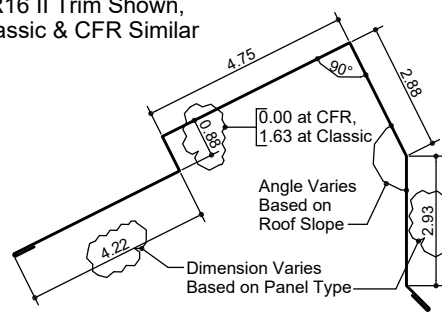
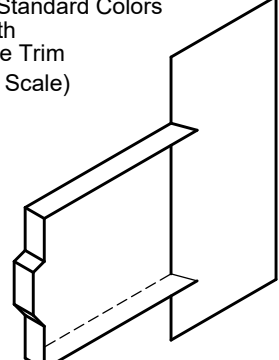
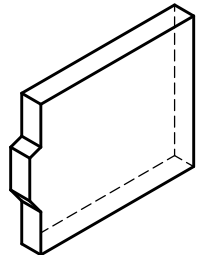
[HZ Gutter Isometric PE.dwg](#)

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STANDARD PARTS

<p>18 Gauge, Galvanized This is a Buyout Part</p>  <p>GUTTER BRACKET (H2210)</p>	<p>18 Gauge, Burnished Slate or Polar White Only, 10'-1" Long</p>  <p>GUTTER ANGLE (GAT_)</p>	<p>26 Gauge, Standard Colors 10'-1" Long</p>  <p>GUTTER POSITIONING TRIM (GPT10)</p>
<p>26 Gauge, Standard Colors, 10'-1" Long</p>  <p>SIMPLE RAKE TRIM (RTB01)</p>	<p>26 Gauge, Standard Colors, 10'-1" Long VR16 II Trim Shown, Classic & CFR Similar</p>  <p>SIMPLE HIGH EAVE TRIM (HE_)</p>	
<p>26 Gauge, Standard Colors For Use With Simple Rake Trim (Shown 1/2 Scale)</p>  <p>METAL GUTTER END CAP (GEC01)</p>	<p>26 Gauge, Standard Colors For Use With Sculptured Rake Trim (Shown 1/2 Scale)</p>  <p>METAL GUTTER END CAP (GEC02)</p>	

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ASSEMBLY DETAIL

VR16 HORIZONTAL GUTTER
EAVE ANGLE & EAVE ZEE SHOWN FOR REFERENCE ONLY, ACTUAL EAVE MEMBER MAY VARY

ISOMETRIC VIEW OF HORIZONTAL GUTTER SYSTEM
EAVE ANGLE & EAVE ZEE SHOWN FOR REFERENCE ONLY, ACTUAL EAVE MEMBER MAY VARY

STEP 1
MEASURE DOWN 5 1/4" FROM THE BOTTOM OF ROOF PANEL & MARK THE WALL PANEL. INSTALL THE OPT10 AT THIS LOCATION. LEAVE A 1/8" TO 1/4" GAP AT OPT10 ENDS. DO NOT LAP THEM.

STEP 2
APPLY TAPE MASTIC TO THE GUTTER ANGLE AS SHOWN. ALIGN & CLAMP THE GUTTER ANGLE TO THE ROOF PANEL. FASTEN THE GUTTER ANGLE TO THE ROOF PANEL. PLUMB THE GUTTER ANGLE AND FASTEN THE OPT10 TO THE GUTTER ANGLE.

STEP 3
MARK THE LOCATIONS OF THE GUTTER BRACKETS, BASED ON THE SPACING SHOWN ABOVE LEFT. APPLY TAPE MASTIC TO THE VERTICAL BACK LEGS OF THE BRACKETS. INSTALL AN H1220 FASTENER AT THE BACK LIP OF THE GUTTER ONLY AT THIS TIME. APPLY TAPE MASTIC ALONG THE FULL LENGTH OF THE TOP OF THE BACK LIP OF THE GUTTER AS SHOWN.

STEP 4
LIFT THE GUTTER IN PLACE, TEMPORARILY CLAMPING IT TO THE GUTTER ANGLE. PULL THE FRONT FACE OF THE GUTTER FORWARD TO ALLOW ACCESS TO INSTALL THE (4) FASTENERS THROUGH THE BACK OF THE BRACKET & GUTTER INTO THE GUTTER ANGLE. DO NOT YET INSTALL THE FASTENER AT THE OUTER LIP OF THE GUTTER.

STEP 5
AFTER THE (4) FASTENERS ARE INSTALLED THROUGH THE GUTTER BRACKETS & INTO THE GUTTER ANGLE, ALONG THE ENTIRE LENGTH OF A SECTION OF GUTTER, THE FASTENER AT THE FRONT LIP OF THE GUTTER CAN BE INSTALLED. CLAMPING THE BRACKET TO THE GUTTER FACILITATES EASIER INSTALLATION.

STEP 6
AFTER THE (4) FASTENERS ARE INSTALLED THROUGH THE GUTTER BRACKETS & INTO THE GUTTER ANGLE, ALONG THE ENTIRE LENGTH OF A SECTION OF GUTTER, THE FASTENER AT THE FRONT LIP OF THE GUTTER CAN BE INSTALLED. CLAMPING THE BRACKET & GUTTER SUPPORT ANGLE BRACKET TO THE GUTTER FACILITATES EASIER INSTALLATION.

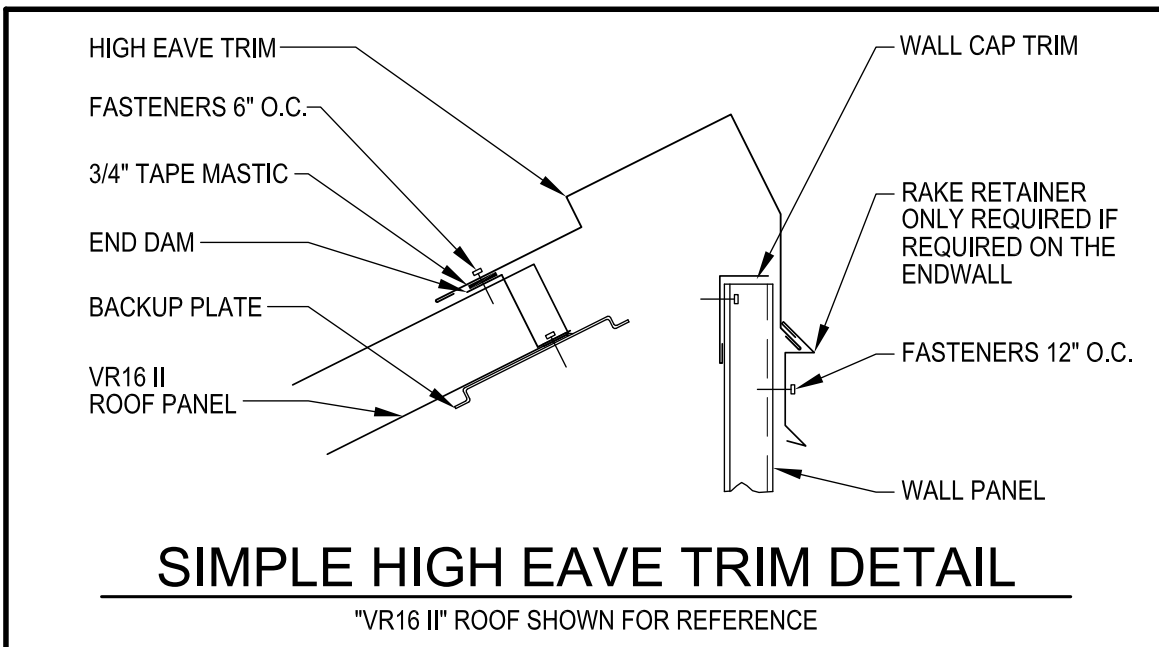
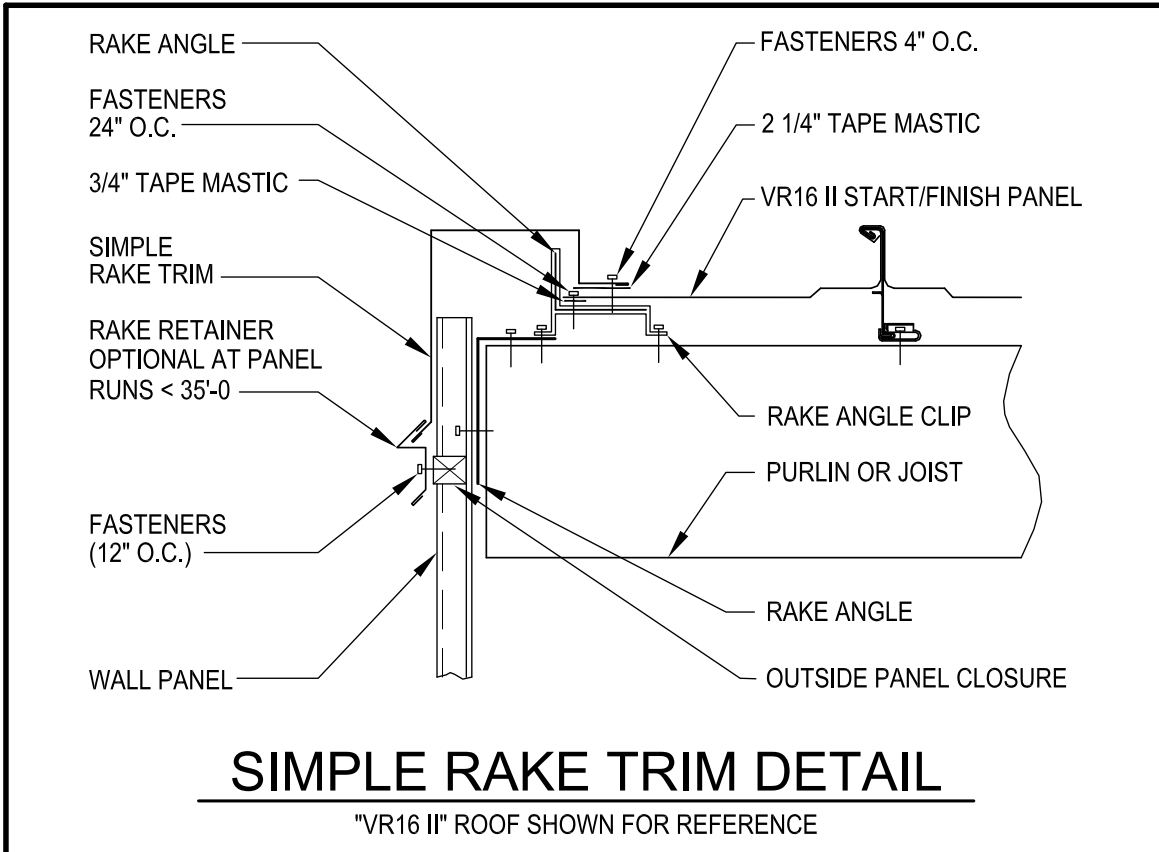
STEP 7
APPLY H3001 TAPE MASTIC TO THE BACK SIDE (AGAINST THE GUTTER) OF THE MAG01 AND INSTALL AS DESCRIBED ABOVE.

STEP 8
TEMPORARILY PLACE THE GUTTER END CAP IN THE GUTTER AND MARK THE BEND LOCATION AT THE CORNER TRIM.

STEP 9
POP RIVET THE GUTTER END CAP TO THE WALL CORNER TRIM AS REQUIRED. THE BOTTOM "WING" OF THE GUTTER END CAP SHOULD ALSO BE BENT UP EITHER 90° OR 180°. THIS STEP WILL HIDE ANY UNPAINTED MATERIALS. THIS WILL ALSO GIVE THE APPEARANCE THAT THE GUTTER EXTENDS ALL THE WAY BACK TO THE WALL.



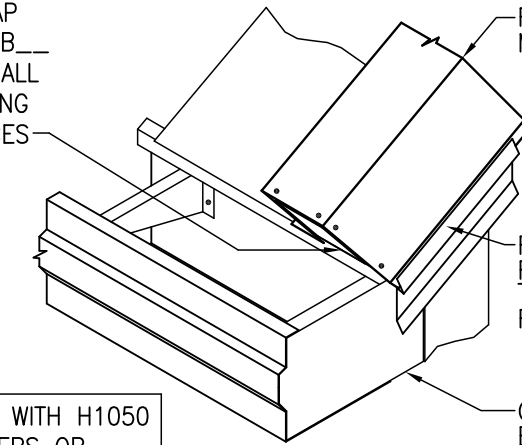
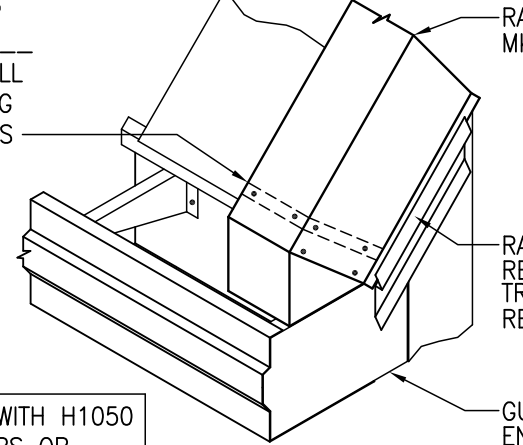
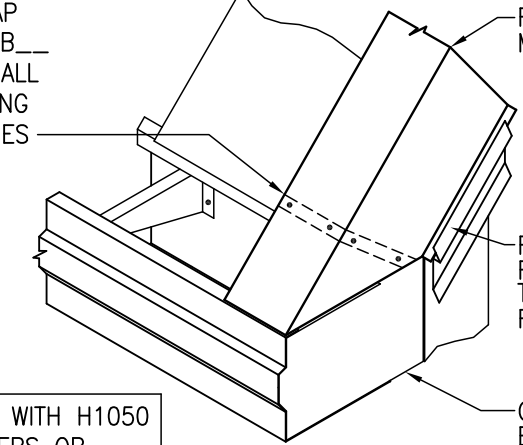
SIMPLE RAKE & HIGH EAVE DETAILS

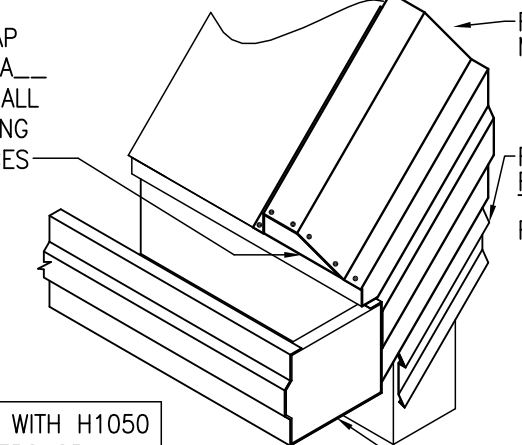
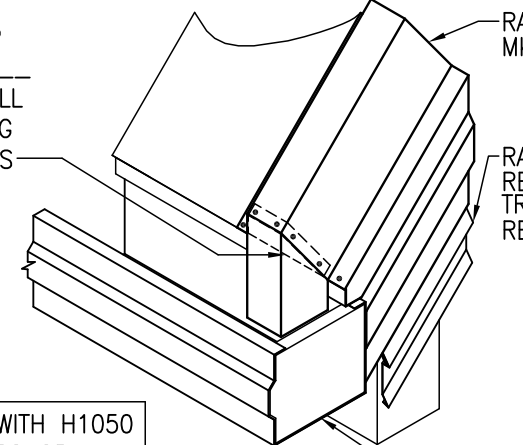
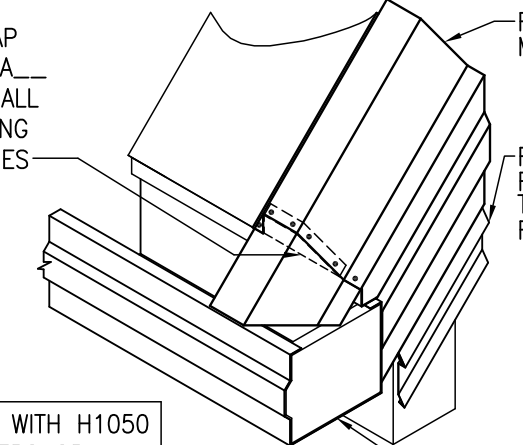




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GUTTER TO RAKE TRANSITIONS

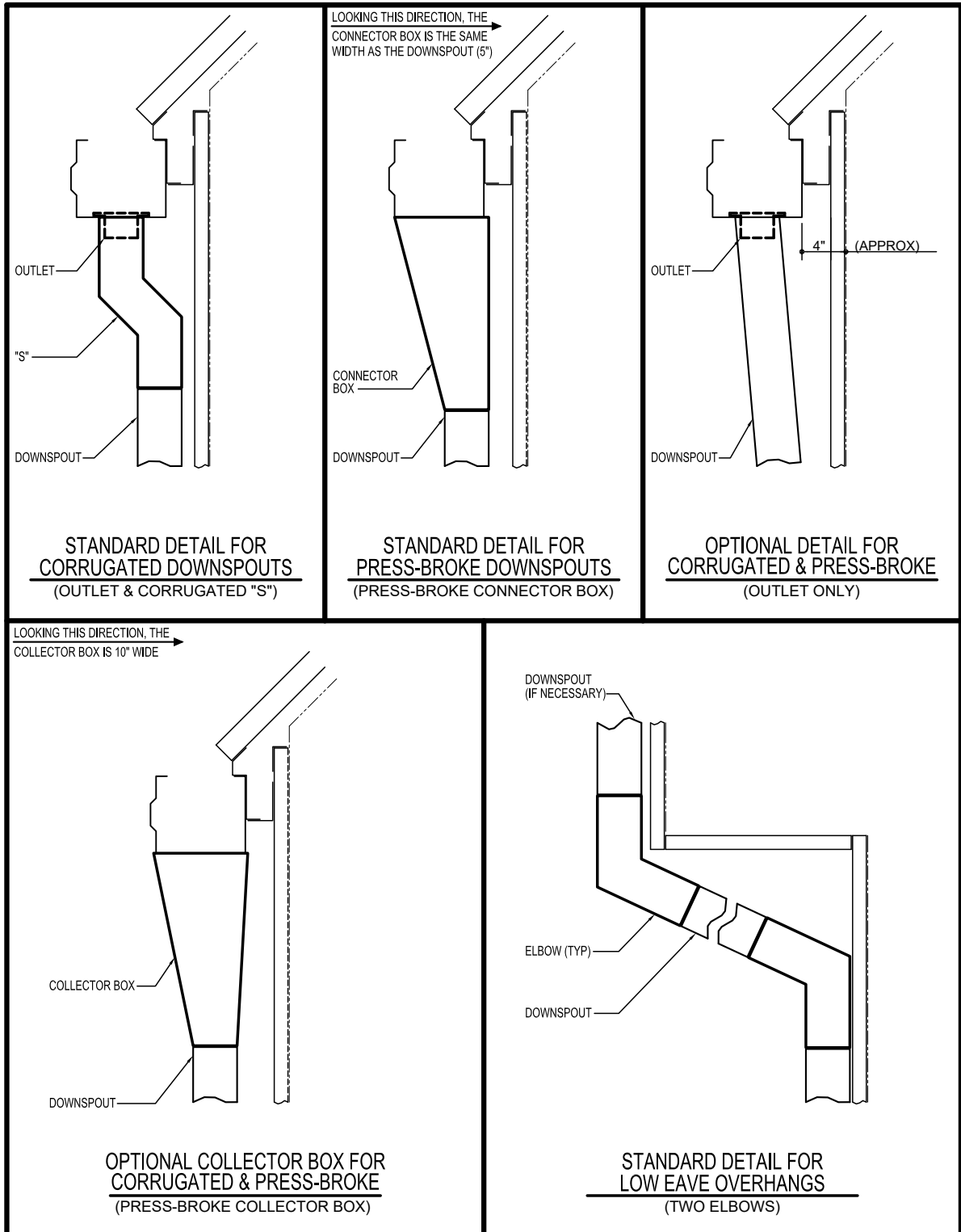
<p>POSITION THE RAKE TRIM FLUSH AND SQUARE WITH THE END OF THE ROOF PANEL.</p>	<p>POSITION THE RAKE TRIM FLUSH AND SQUARE WITH THE END OF THE ROOF PANEL, AND THEN COPE THE VERTICAL LEG. SO THAT IT CAN BE BENT STRAIGHT DOWN AS SHOWN.</p>	<p>EXTEND THE RAKE TRIM OUT TO THE FRONT LIP OF THE GUTTER. THIS OPTION WILL ONLY WORK AT EXTREME SLOPES.</p>
 <p>END CAP MK. RCB___ CAULK ALL ADJOINING SURFACES</p> <p>RAKE TRIM MK. RTB01</p> <p>RAKE RETAINER TRIM IF REQUIRED</p> <p>GUTTER END CAP MK. GEC01</p> <p>FASTEN WITH H1050 FASTENERS OR H1100 POP RIVETS AS REQUIRED</p> <p>OPTION 1</p>	 <p>END CAP MK. RCB___ CAULK ALL ADJOINING SURFACES</p> <p>RAKE TRIM MK. RTB01</p> <p>RAKE RETAINER TRIM IF REQUIRED</p> <p>GUTTER END CAP MK. GEC01</p> <p>FASTEN WITH H1050 FASTENERS OR H1100 POP RIVETS AS REQUIRED</p> <p>OPTION 2</p>	 <p>END CAP MK. RCB___ CAULK ALL ADJOINING SURFACES</p> <p>RAKE TRIM MK. RTB01</p> <p>RAKE RETAINER TRIM IF REQUIRED</p> <p>GUTTER END CAP MK. GEC01</p> <p>FASTEN WITH H1050 FASTENERS OR H1100 POP RIVETS AS REQUIRED</p> <p>OPTION 3</p>
<p>RECOMMENDED SIMPLE RAKE TO HORIZONTAL GUTTER DETAILS</p> <p>REGARDLESS OF THE OPTION CHOSEN, PLACE AN RCB___ END CAP FLUSH WITH THE END OF THE ROOF PANEL AND FASTEN WITH H1050 FASTENERS. OTHER TRANSITION OPTIONS EXIST. CREATE THE DETAIL THAT BEST FITS THE PROJECT'S NEEDS.</p>		

<p>POSITION THE RAKE TRIM FLUSH AND SQUARE WITH THE END OF THE ROOF PANEL. COPE THE RAKE TRIM AT THE BACK OF THE GUTTER.</p>	<p>POSITION THE RAKE TRIM FLUSH AND SQUARE WITH THE END OF THE ROOF PANEL, AND THEN COPE THE VERTICAL LEG. SO THAT IT CAN BE BENT STRAIGHT DOWN AS SHOWN.</p>	<p>EXTEND THE RAKE TRIM OUT TO THE FRONT LIP OF THE GUTTER. THIS OPTION WILL ONLY WORK AT EXTREME SLOPES.</p>
 <p>END CAP MK. RCA___ CAULK ALL ADJOINING SURFACES</p> <p>RAKE TRIM MK. RTA___</p> <p>RAKE RETAINER TRIM IF REQUIRED</p> <p>GUTTER END CAP MK. GEC02</p> <p>FASTEN WITH H1050 FASTENERS OR H1100 POP RIVETS AS REQUIRED</p> <p>OPTION 1</p>	 <p>END CAP MK. RCA___ CAULK ALL ADJOINING SURFACES</p> <p>RAKE TRIM MK. RTA___</p> <p>RAKE RETAINER TRIM IF REQUIRED</p> <p>GUTTER END CAP MK. GEC02</p> <p>FASTEN WITH H1050 FASTENERS OR H1100 POP RIVETS AS REQUIRED</p> <p>OPTION 2</p>	 <p>END CAP MK. RCA___ CAULK ALL ADJOINING SURFACES</p> <p>RAKE TRIM MK. RTA___</p> <p>RAKE RETAINER TRIM IF REQUIRED</p> <p>GUTTER END CAP MK. GEC02</p> <p>FASTEN WITH H1050 FASTENERS OR H1100 POP RIVETS AS REQUIRED</p> <p>OPTION 3</p>
<p>RECOMMENDED SCULPTURED RAKE TO HORIZONTAL GUTTER DETAILS</p> <p>REGARDLESS OF THE OPTION CHOSEN, PLACE AN RCA___ END CAP FLUSH WITH THE END OF THE ROOF PANEL AND FASTEN WITH H1050 FASTENERS. OTHER TRANSITION OPTIONS EXIST. CREATE THE DETAIL THAT BEST FITS THE PROJECT'S NEEDS.</p>		



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DOWNSPOUT OPTIONS



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