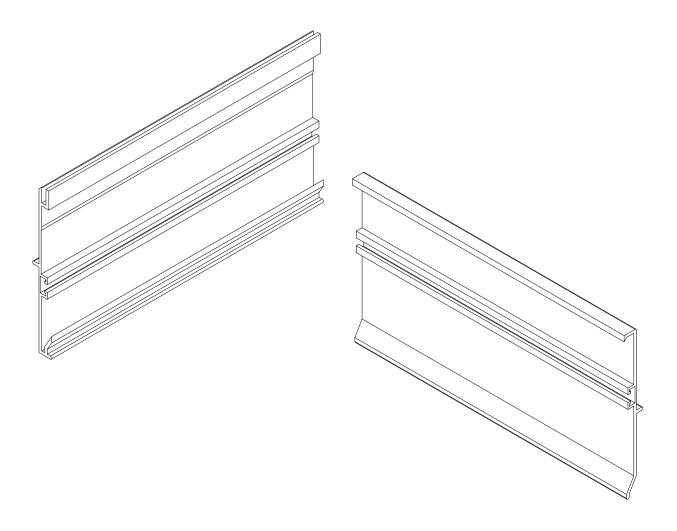
3/8" Mullion Reinforcement Assembly Instructions





BEFORE YOU BEGIN

- Read these instructions thoroughly BEFORE beginning to install your 3/8" Mullion Reinforcement System. Failure to install as recommended will void any warranty, written or implied. Regional applications and standards may vary.
- Follow specific product installation instructions when installing assembly in rough or masonry opening.
- The 3/8" mullion reinforcement system is designed to be used on wood or clad multiple Casemaster, Awning, Direct Glaze, Ultimate Double Hung assemblies to improve structural performance. Depending on unit size some mullion reinforcement components may have been factory installed. Therefore you will skip some steps in the instructions. Read the instructions carefully.
- If the system will be applied to wood units or other products, procedures for installation may differ and some parts may not be used. Purchase of individual reinforcement components may be preferable. Contact your Marvin representative for details on applying this system on other Marvin products.
- The illustrations contained in the following instructions show Clad Casemaster and Clad Ultimate Double Hung units. Procedures for installing this system on wood units are similar except where noted.

INDEX	Page
Clad Casemaster Installation	1
Clad Ultimate Double Hung Installation	6

MULL REINFORCEMENT KIT		
COLOR	PART NUMBER	
BZ	11873143	
SW	11873145	
BN	11873141	
PB	11873142	
EG	11873144	
AR	11873140	
WOOD	11873100	

CLAD CASEMASTER INSTALLATION

3/8" STRUCTURAL MULL REINFORCEMENT

ATTENTION: The following instructions detail mulling two Clad Casemaster frames either horizontally or vertically utilizing mull reinforcement. More complex or multiple wide/multiple high configurations may require additional steps not covered here. Consult your Marvin representative for more information before attempting to mull units in these configurations.

STANDARD PARTS INCLUDED W/KIT		
ILLUSTRATIONS (not to scale)	DESCRIPTION AND COLOR	PART/PROFILE NUMBER
	A302 Mull reinforcement - mill finish (RH) 150" (3810)	16075000
	A303 Mull reinforcement -white (LH) 150" (3810)	16074000
	W1242 Mull trim 150" (3810) (2 – sent w/wood kits)	32249198
	Frame kerf weatherstrip 25' (7620) Clad kits only	15910100

STANDARD PARTS INCLUDED W/KIT			
ILLUSTRATIONS (not to scale)	DESCRIPTION AND COLOR	N	PART/PROFILE NUMBER
	A148 Outside frame trim 2 pieces 150" (3810)	SW BN PB BZ EG AR	18801440 15224810 15224820 15224830 15224840 15224800
(00000000000000000000000000000000000000	3/4" Foam backer rod 13' (3962) Clad kits only		10500228
	A117 Aluminum mull cover 150" (3810)	SW BN PB BZ EG AR	18800980 18601410 18601420 18601430 18601440 18601400
	4- Structural masonry bracket	ts	11860012
ann (b)	64 – #7x5/8" Phillips self tapping flat head wood screws		11800758
	16- #7x 1/2" Phillips pan head screws		11800756

YOU WILL NEED TO SUPPLY

Safety glasses Plastic headed hammer

Hacksaw or chisel Hammer
Wood block Tape measure
Staple gun Circular saw

Construction adhesive Screen spline roller or similar tool

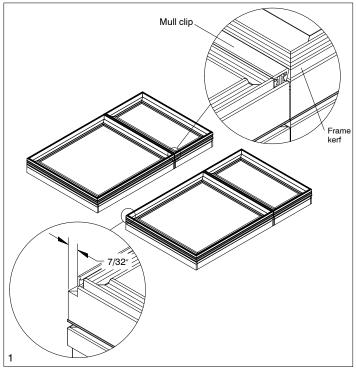
Power driver with a #2 Phillips bit

Grade NS Class 25 Sealant per ASTM C920 Power miter saw w/metal cutting blade

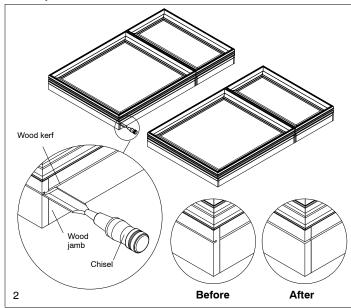
Frame Preparation and Assembly

- Mull any units that will not take structural mull reinforcement.
 Follow procedures for vertical or horizontal mulling configurations.
- 2. Place units to be mulled on a flat sturdy surface, exterior side up in the desired mulling configuration. Notch all accessory kerf corners where a structural mull reinforcement will be placed. Using a hammer and chisel or hack saw, remove enough material from jamb side and head jamb and/or sill side of accessory kerf to allow the mull cap and outside frame trim to pass. See illustration 1.

NOTE: Illustration below shows a two wide two high assembly with vertical mull reinforcement. Notching may vary depending on configuration. Contact your Marvin representative for more details.

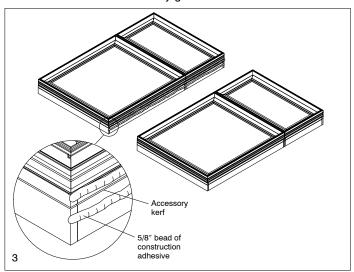


3. Using a hacksaw or hammer and chisel, remove material from wood accessory kerf where head jambs and sills meet the jamb so that the kerf will be extended to receive the mull reinforcement. This will allow the reinforcement to run the full length of the mullion rather than stop short at the head jamb/sill to jamb intersection. See illustration 2.



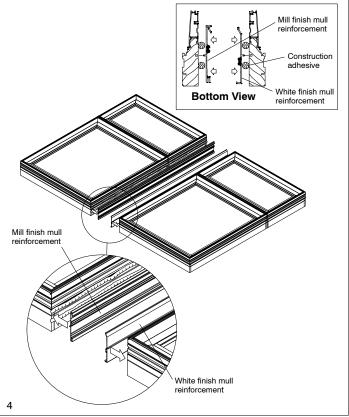
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- 4. Measure the length of the structural mull and cut steel mull reinforcement using a power miter saw or hacksaw.
- 5. Apply a 5/8" (16) continuous bead of construction adhesive on both sides of accessory groove. See illustration 3.

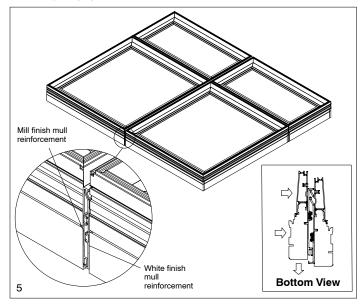


6. Place the white finish mull reinforcement on the left hand jamb or sill of transom unit. Place the mill finish mull reinforcement on the right hand jamb or head jamb of lower unit. Set the reinforcement components into the wood accessory kerf on frame. The mill finish reinforcement will have a "Y" shaped channel toward the interior. Install the white reinforcement with the flat side to interior. See illustration 4.

NOTE FOR INSTALLATION ON WOOD UNITS: If the mull reinforcement will be applied to a Wood Casement, apply the components to the frame so that the "Y" shaped channel on the mill finish component is facing the exterior. Apply the white reinforcement with the flat side to the exterior. The reinforcement components must be installed in this fashion.



- 7. Press the mull reinforcement components firmly into place and fasten to frame with #7 x 5/8" self tapping wood screws using the pre-drilled screw holes.
- Repeat procedures to install additional reinforcements for all frames in mull assembly.
- Connect frames by carefully hooking both parts of reinforcement together. Make sure window frames are aligned at ends of mullion and reinforcement components are fully engaged. See illustration 5.

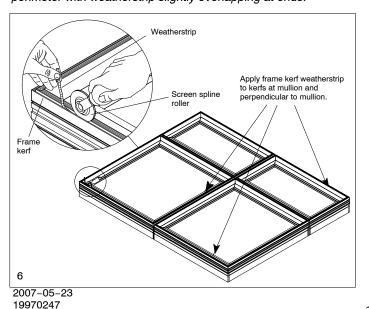


Sealing the Assembly

NOTE FOR INSTALLATION ON WOOD UNITS: The following section, "Sealing the Assembly" details the proper sealing methods on a clad unit. If reinforcement is applied to a wood product, proceed to step 18, and secure the reinforcement components from the exterior. Wood units should be sealed by applying a continuous bead of sealant that will cover the ends and the exterior face of the assembled reinforcement.

 Using a screen spline roller or similar tool, run a continuous length of frame kerf weatherstrip in accessory kerf at mullion and in accessory kerfs that run perpendicular to mullion. See illustration 6.

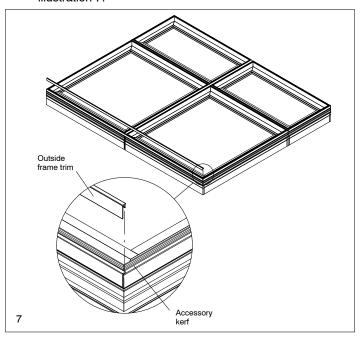
NOTE: On multiple wide units, the middle frame(s) should have a continuous length of frame kerf weatherstrip applied to the entire perimeter with weatherstrip slightly overlapping at ends.



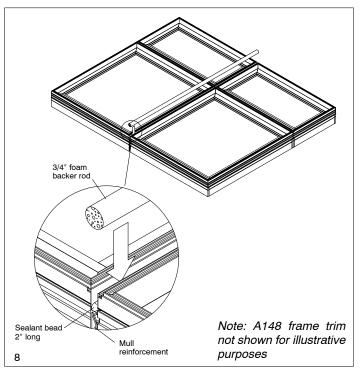
 Measure the outside width of the mulled assembly (distance perpendicular to the mull). Subtract 5/32" (4) and cut two pieces of outside frame trim (A148) to adjusted measurement using a hacksaw or power miter saw.

NOTE: It will not be necessary to install outside frame trim if clad brick mould casing will be applied later.

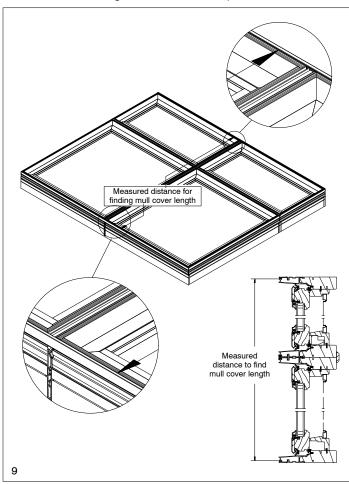
 Install outside frame trim on accessory kerf as shown. make sure trim fits before pounding into place with a plastic headed hammer. Some trimming may be necessary. See illustration 7



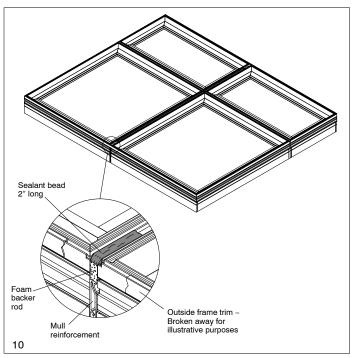
 Place a large bead of sealant approximately 2" (51) long on both ends of mull reinforcement. Insert 3/4" foam backer rod over the mull reinforcement components as shown in illustration 8.



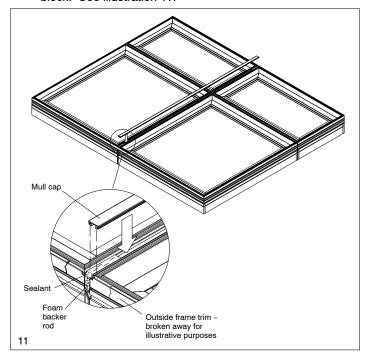
14. Measure the distance of the mullion from the inside edge of the frame trim as shown in illustration 9. Carefully cut the mull cover to measured length with a hacksaw or power miter saw.



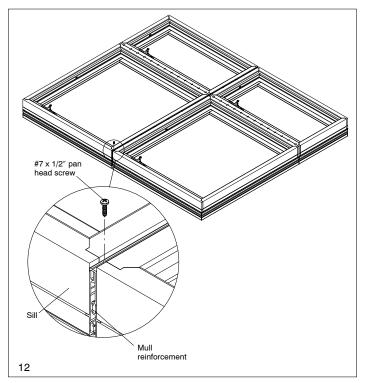
15. Apply a thick bead of sealant approximately 2" long over the ends of the foam backer rod to the height of the cladding as shown in illustration 10.



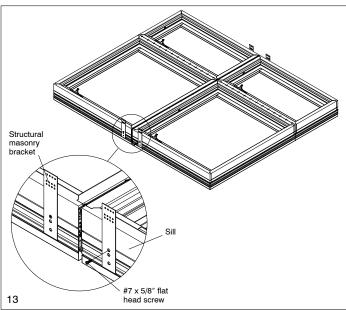
 Place mull cap even with interior edge of accessory kerf as shown and carefully tap onto frame with a hammer and wood block. See illustration 11.



- Clean any excess sealant squeeze out or residue on mullion components.
- 18. From the interior, secure the two reinforcement components together. Using the pre-drilled screw holes, attach components together with #7x1/2" Phillips pan head screws. See illustration 12.



19. Attach masonry brackets at head jamb and sill on both sides of mullion. Place the hooked end of the bracket in the clad accessory kerf (with opposite end toward the interior). Fasten to frame with one #7 x 5/8" flat head screw. See illustration 13.



- Install drip cap on head jamb and nailing fin (if applicable) around perimeter of assembly. Drip cap should be a continuous piece and extend over each jamb approximately 1/16" (2).
- If applicable, jamb extension can now be applied. Follow installation instructions provided for installing unit in rough or masonry opening. Interior mull trim should be applied after unit is completely installed and interior casing is applied.

CLAD ULTIMATE DOUBLE HUNG INSTALLATION

3/8" STRUCTURAL MULL REINFORCEMENT

ATTENTION: The following instructions detail mulling two Clad Ultimate Double Hung frames either horizontally or vertically utilizing mull reinforcement. More complex or multiple wide/multiple high configurations may require additional steps not covered here. Consult your Marvin representative for more information prior to attempting to mull units in these configurations.

STANDARD PARTS INCLUDED W/KIT			
ILLUSTRATIONS (not to scale)	DESCRIPTION AND COLOR	PART/PROFILE NUMBER	
	A302 Mull reinforcement – mill finish (RH) 150" (3810)	16075000	
	A303 Mull reinforcement - white (LH) 150" (3810)	16074000	
	W1242 Mull trim 150" (3810) (2-sent w/wood kits)	32249198	
	W7053 Filler Board	W7053	
	NOTE: Not part of standard kit. Must be ordered separately for horizontal mulls		
	Frame kerf weatherstrip 25' (7620)	15910100	
	Clad kits only		
	A148 Outside frame trim 2 pieces 150" (3810) SW BN PB BZ Clad kits only EG	18801440 15224810 15224820 15224830 15224840	
	3/4" Foam backer rod 13' (3962)	10500228	
(6.0)	Clad kits only		
	A117 Aluminum mull cap 150" (3810)		
	SW BN PB BZ Clad kits only	18800980 18601410 18601420 18601430 18601440	
	4- Structural masonry brackets	11860012	

STANDARD PARTS INCLUDED W/KIT			
ILLUSTRATIONS (not to scale)	DESCRIPTION AND COLOR	PART/PROFILE NUMBER	
**************************************	64 – #7x5/8" Phillips self tapping flat head wood screws	11800758	
	16- #7x 1/2" Phillips pan head screws	11800756	

YOU	WII I	NFFD T	O SUPPLY

Safety Glasses Plastic headed hammer

Hacksaw or chisel Hammer
Wood block Tape measure
Staple gun Circular saw

Power driver with a #2 Phillips bit Construction adhesive

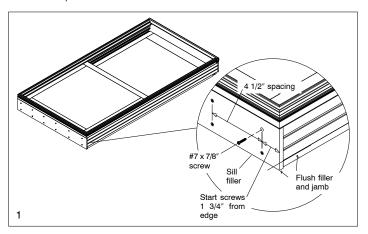
#7 x 7/8" Phillips Flat head wood screws

Screen spline roller or similar tool

Grade NS Class 25 sealant per ASTM C920 Power miter saw w/metal cutting blade

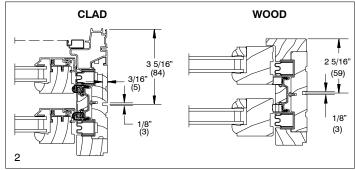
Frame Preparation and Assembly

 Determine mulling configuration. On horizontal mulls only, attach wood filler board to head jamb of lower unit. Fasten with two rows of #7 x 7/8" wood screws 2" from each end spaced at 4 1/2" intervals as shown in illustration 1.



2. Units that receive structural mull reinforcement will need to have an accessory kerf sawn into the wood portion of the jambs, head jambs or sills. For <u>clad</u> units, measure and mark a line 3 5/16" (84) from exterior on all unit frame members that will receive structural reinforcement. For <u>wood</u> units, measure and mark a line 2 5/16" (59) from exterior. Set circular saw depth to no more than 3/16" (5) deep and carefully cut a 1/8" (3) kerf on line. See illustration 2.

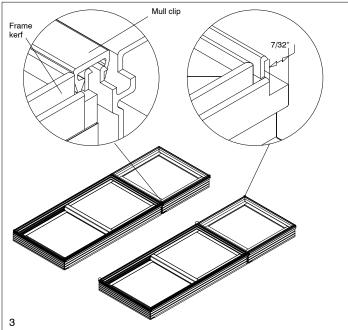
CAUTION: Use extreme care when operating circular saw. Always wear the proper eye and hand protection to avoid injury.



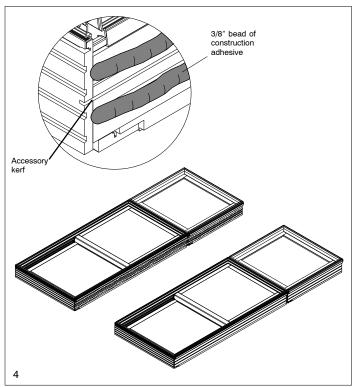
3/8" Mullion Reinforcement Assembly Instructions

 Notch all accessory kerf corners where the structural mull reinforcement will run. Remove material with a hacksaw or hammer and chisel in locations shown in illustration 3.

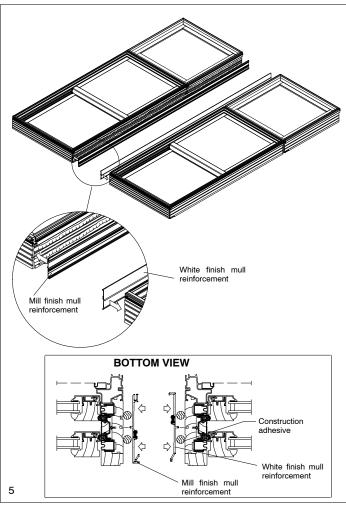
Note: Illustration below shows a two wide two high assembly with vertical mull reinforcement. Notching may vary depending on configuration. Contact your Marvin representative for more details



- 4. Mull any partial assemblies that will not take structural mull reinforcement. Follow procedures for vertical or horizontal mulling configurations found earlier in this instruction.
- Measure length of the structural mull and cut steel mull reinforcement to measured length using a power miter saw.
- Apply a 3/8" (10) continuous bead of construction adhesive on both sides of accessory groove cut earlier. See illustration 4.

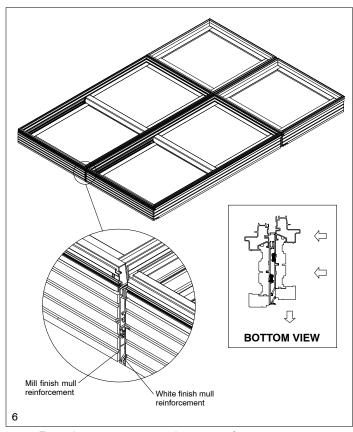


7. Place the white finish mull reinforcement on the left hand jamb or sill of transom unit. Place the mill finish mull reinforcement on the right hand jamb or head jamb of lower unit. Set the reinforcement components into the wood accessory kerf on frame. The mill finish reinforcement will have a "Y" shaped channel toward the exterior. Install the white reinforcement with the flat side to exterior see illustration 5.

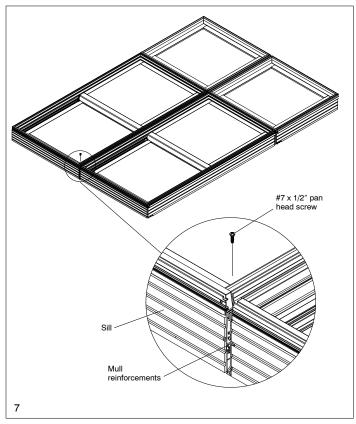


- 8. Press components firmly into place and fasten to frame with #7 x 5/8" wood screws using the pre-drilled screw holes provided.
- Repeat procedures to install additional reinforcements for all frames in mull assembly.

 Connect frames by carefully sliding both parts of reinforcement together. Make sure window frames are aligned at ends of mullion and reinforcement components are fully engaged. See illustration 6.



 From the exterior, secure the two reinforcement components together through pre-drilled screw holes with #7 x 1/2" Phillips pan head screws. See illustration 7.

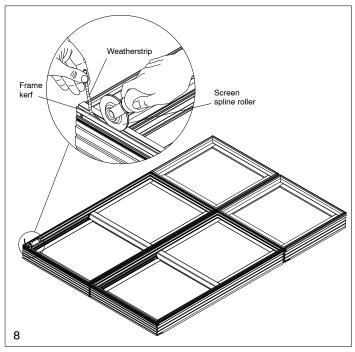


Sealing the Assembly

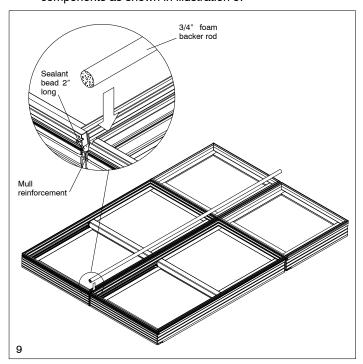
NOTE FOR INSTALLATION ON WOOD UNITS: The following section, "Sealing the Assembly" details the proper sealing methods on a clad unit. Wood units should be sealed by applying a continuous bead of sealant that will cover the end and exterior face of the assembled reinforcement. Skip to step 19.

 Using a screen spline roller or similar tool, run a continuous length of frame kerf weatherstrip in accessory kerf at mullion and with members that meet mullion. See illustration 8.

Note: On multiple wide units, the middle frame(s) should have a continuous length of frame kerf weatherstrip applied to the entire perimeter with weatherstrip slightly overlapping at ends.



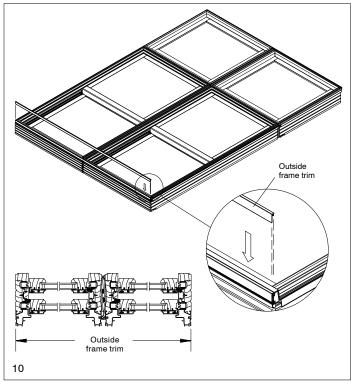
13. Apply 3/4" foam backer rod over the mull reinforcement components as shown in illustration 9.



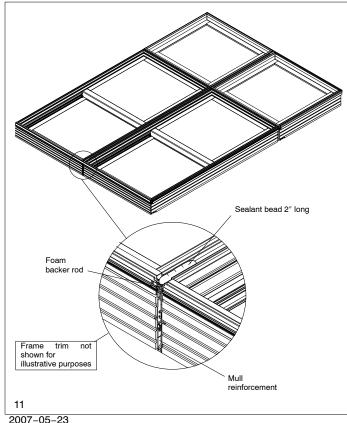
Measure the width of the mulled assembly at cladding (distance perpendicular to the mull). Subtract 5/32" (4) and cut two pieces of outside frame trim (A148) to adjusted measurement using a hacksaw or power miter saw.

NOTE: It will not be necessary to install outside frame trim if clad brick mould casing will be applied later.

Install outside frame trim on accessory kerf and pound into place with a plastic headed hammer and wood block. See illustration 10.



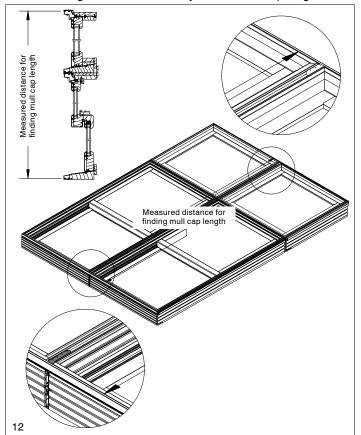
Apply a thick bead of sealant over the ends of the foam 16. backer rod as shown in illustration 11.



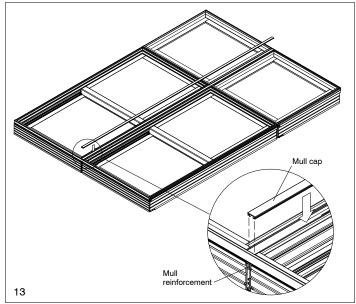
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Measure the distance of the mullion from the inside edge of the frame trim as shown in illustration 12. Carefully cut the mull cap to measured length with a hacksaw or power miter saw.

NOTE: If clad brick mould casing will be applied later, measure from the interior edge of frame accessory kerf for mull cap length.



Place mull cap even with interior edge of frame trim as shown and carefully tap onto frame with a plastic headed hammer and wood block. See illustration 13.



- Clean any excess sealant squeeze out or residue on mull components with isopropyl alcohol.
- If applicable, jamb extension can now be applied. Follow installation instructions provided for installing unit in rough or masonry opening. Interior mull trim should be applied after unit is completely installed and interior casing is applied.