

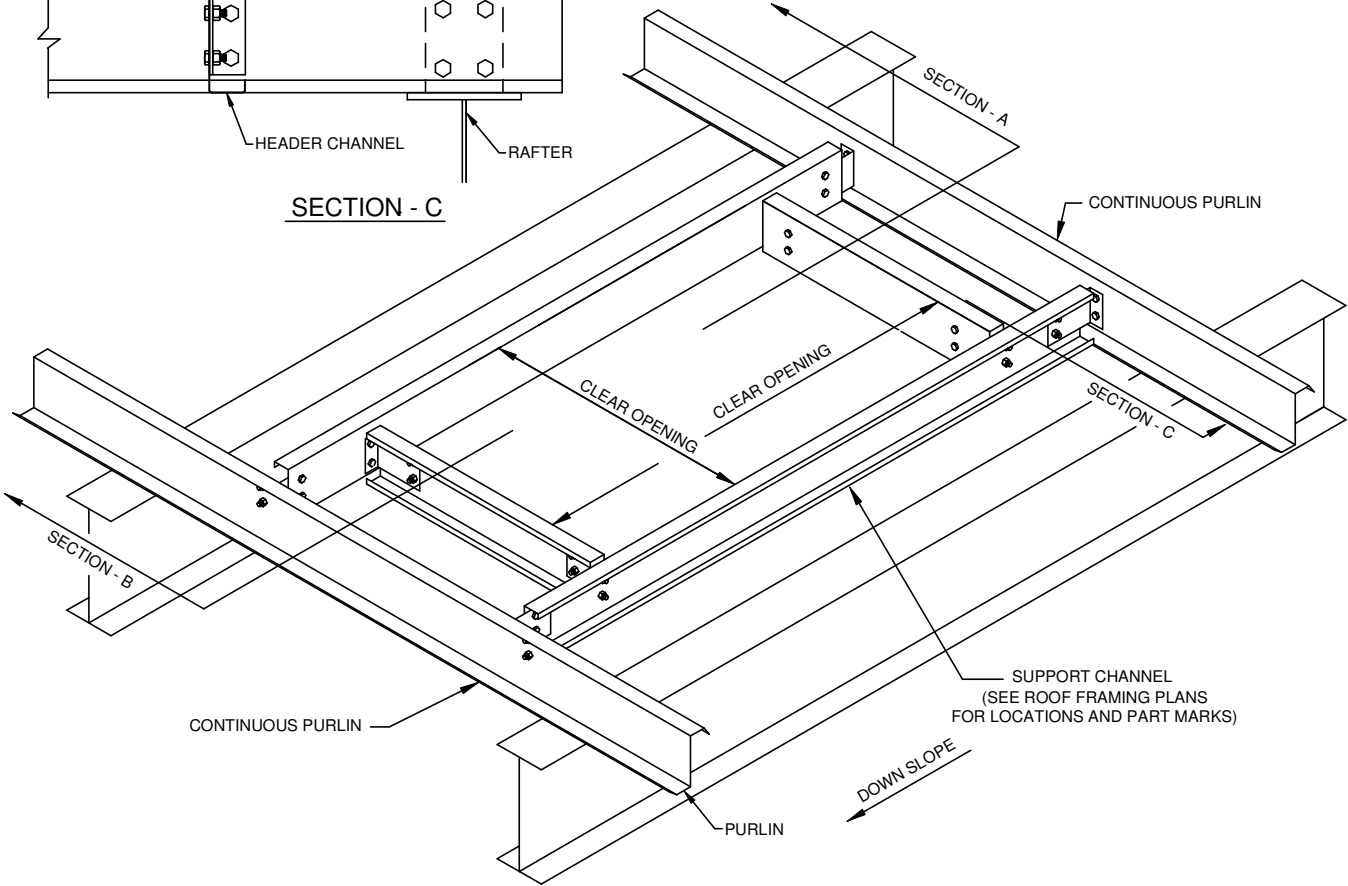
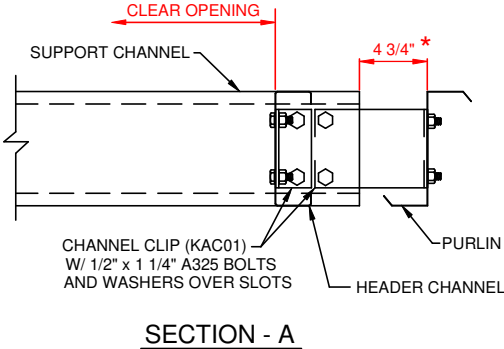
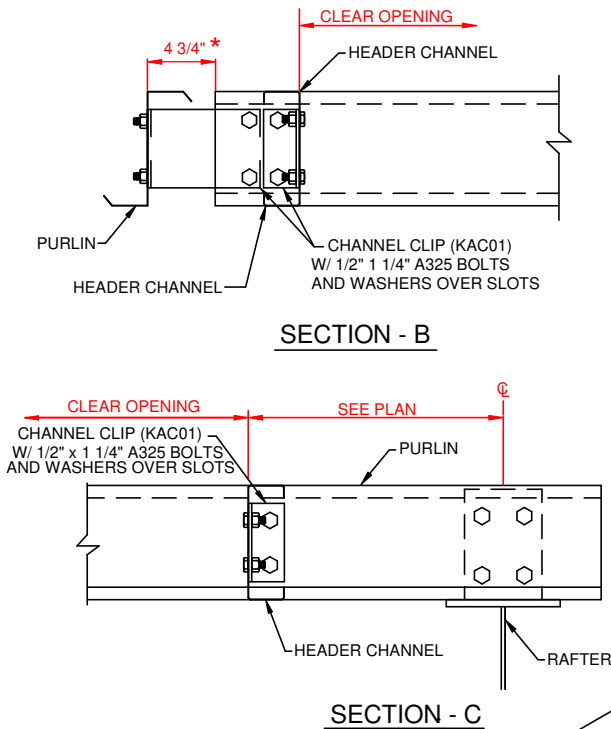
## **Roof Opening For RTU's By KBS**

- BK0010 - Framing for RTU,  $\leq 1200\#$  and  $< 5'-0$
- BK0011 - Framing for RTU,  $\leq 1200\#$  and  $> 5'-0$  w/No Purlins Cut
- BK0012 - Framing for RTU,  $\leq 1200\#$  and  $> 5'-0$  w/Purlins Cut
- BK0020 - Framing for RTU,  $\leq 1200\#$  and  $< 5'-0$  (Optional Framing)
- BK0021 - Framing for RTU,  $\leq 1200\#$  and  $> 5'-0$  No Purlins Cut, (Optional Framing)
- BK0022 - Framing for RTU,  $\leq 1200\#$  and  $< 5'-0$  Purlins Cut, (Optional Framing)
- BK0030 - Bar Joist Roof, Bolted Joist, Framing for RTU,  $\leq 1200\#$  and  $< 5'-0$
- BK0031 - Bar Joist Roof, Bolted Joist, Framing for RTU,  $\leq 1200\#$  and  $> 5'-0$
- BK0040 - Bar Joist Roof, Welded Joist, Framing for RTU,  $\leq 1200\#$  and  $< 5'-0$
- BK0041 - Bar Joist Roof, Welded Joist, Framing for RTU,  $\leq 1200\#$  and  $> 5'-0$
- BK0050 - Bar Joist Roof, Bolted Joist, Framing for RTU,  $> 1200\#$  and  $< 5'-0$
- BK0051 - Bar Joist Roof, Bolted Joist, Framing for RTU,  $> 1200\#$  and  $> 5'-0$
- BK0060 - Bar Joist Roof, Welded Joist, Framing for RTU,  $> 1200\#$  and  $< 5'-0$
- BK0061 - Bar Joist Roof, Welded Joist, Framing for RTU,  $> 1200\#$  and  $> 5'-0$

## **Roof Opening For RTU's Not By KBS**

- BK1010 - Framing for RTU,  $\leq 1200\#$  and  $< 5'-0$
  - BK1011 - Framing for RTU,  $\leq 1200\#$  and  $> 5'-0$  w/No Purlins Cut
  - BK1012 - Framing for RTU,  $\leq 12000\#$  and  $> 5'-0$  w/Purlins Cut
  - BK1020 - Framing for RTU,  $\leq 1200\#$  and  $< 5'-0$  (Optional Framing)
  - BK1021 - Framing for RTU,  $\leq 1200\#$  and  $> 5'-0$  No Purlins Cut, (Optional Framing)
  - BK1022 - Framing for RTU,  $\leq 1200\#$  and  $5'-0$  Purlins Cut, (Optional Framing)
  - BK1030 - Bar Joist Roof, Bolted Joist, Framing for RTU,  $\leq 1200\#$  and  $< 5'-0$
  - BK1031 - Bar Joist Roof, Bolted Joist, Framing for RTU,  $\leq 1200\#$  and  $> 5'-0$
  - BK1040 - Bar Joist Roof, Welded Joist, Framing for RTU,  $< 1200\#$  and  $< 5'-0$
  - BK1041 - Bar Joist Roof, Welded Joist, Framing for RTU,  $< 1200\#$  and  $> 5'-0$
  - BK1050 - Bar Joist Roof, Bolted Joist, Framing for RTU,  $> 1200\#$  and  $< 5'-0$
  - BK1051 - Bar Joist Roof, Bolted Joist, Framing for RTU,  $> 1200\#$  and  $> 5'-0$
  - BK1060 - Bar Joist Roof, Welded Joist, Framing for RTU,  $> 1200\#$  and  $< 5'-0$
  - BK1061 - Bar Joist Roof, Welded Joist, Framing for RTU,  $> 1200\#$  and  $> 5'-0$
-

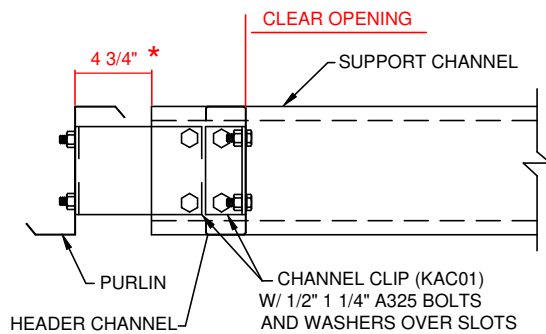
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



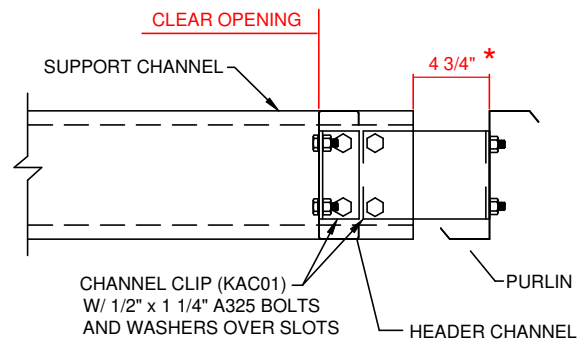
BK0010K

ROOF OPENINGS FOR RTU (BY KBS) <= 1200#  
AND < 5'-0". ALL ROOF TYPES

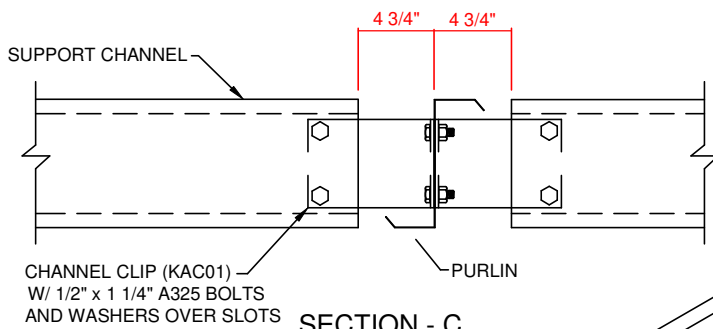
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



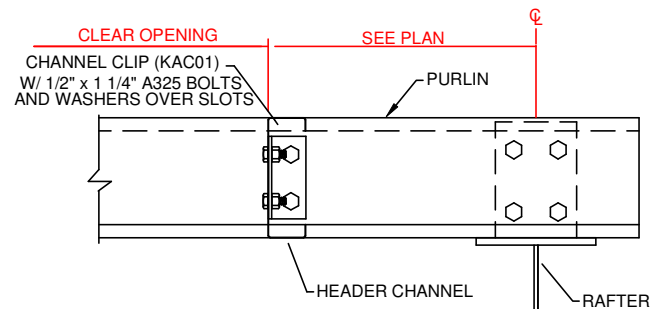
SECTION - B



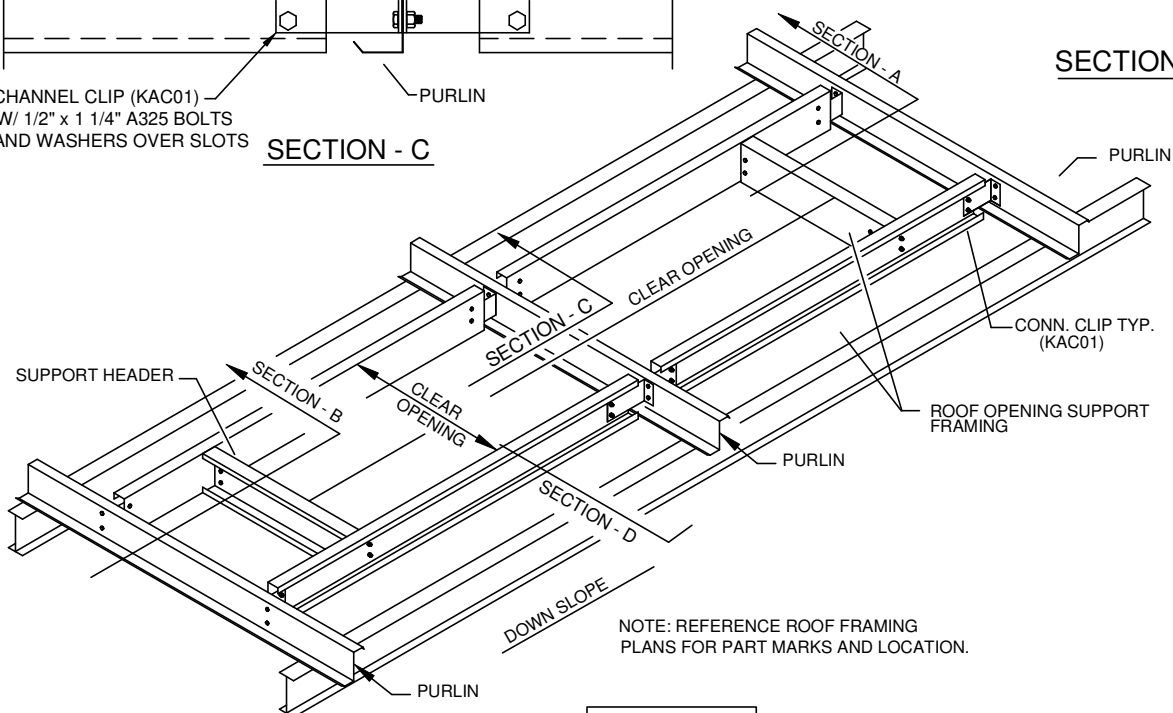
SECTION - A



SECTION - C



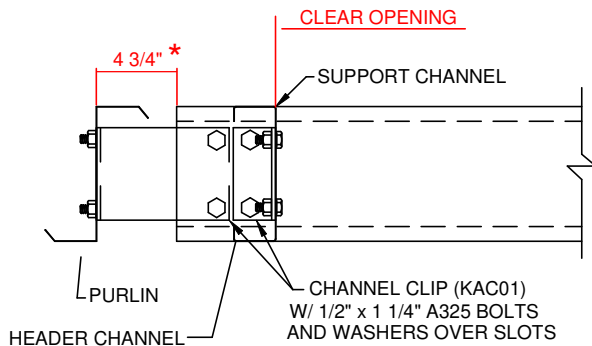
SECTION - D



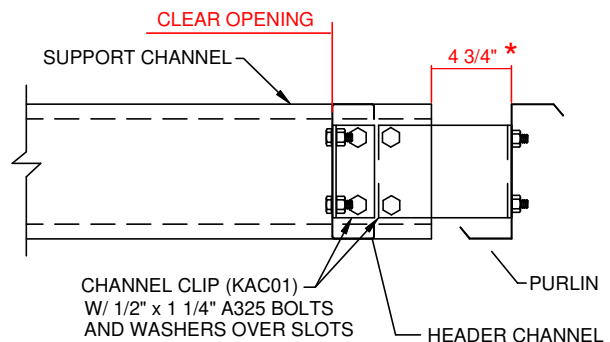
BK0011K

ROOF OPENINGS FOR RTU (BY KBS) ≤1200#  
AND > 5'-0", NO PURLINS CUT. ALL ROOF TYPES

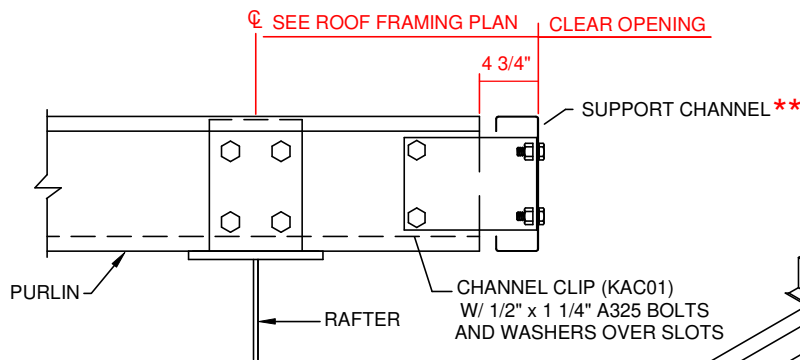
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



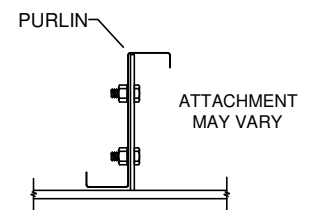
SECTION - B



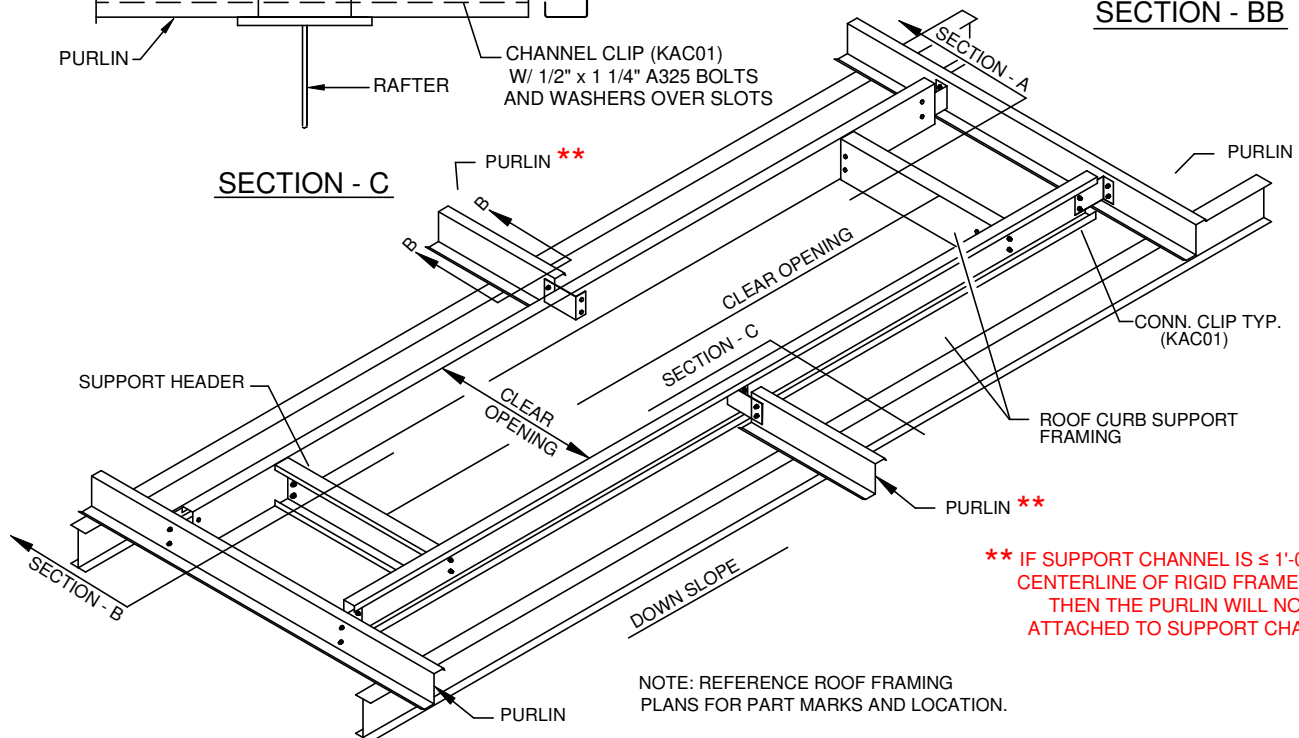
SECTION - A



SECTION - C



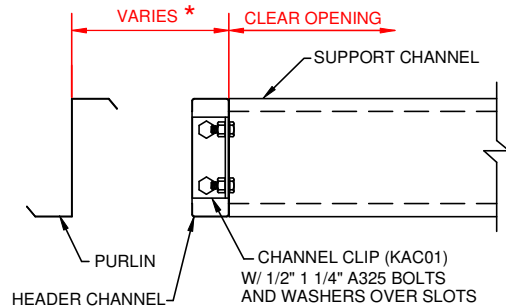
SECTION - BB



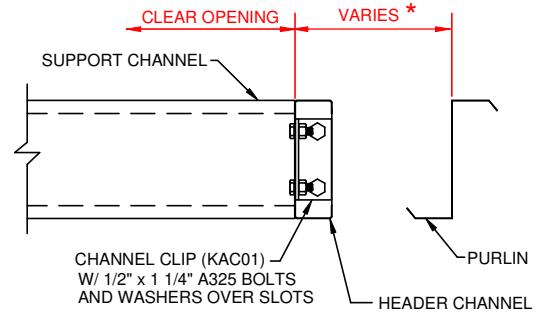
NOTE: REFERENCE ROOF FRAMING PLANS FOR PART MARKS AND LOCATION.

BK0012K

ROOF OPENINGS FOR RTU (BY KBS) <= 1200#  
AND > 5'-0" W/ PURLINS CUT, ALL ROOF TYPES

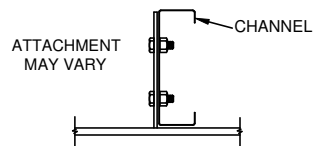


SECTION - B

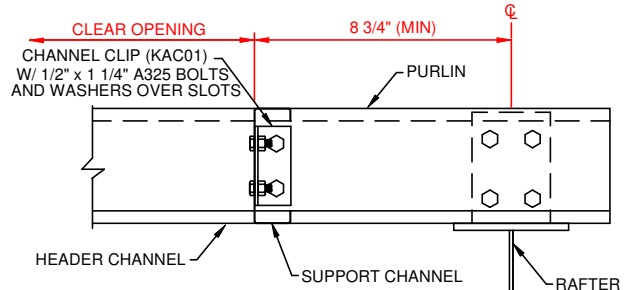


SECTION - A

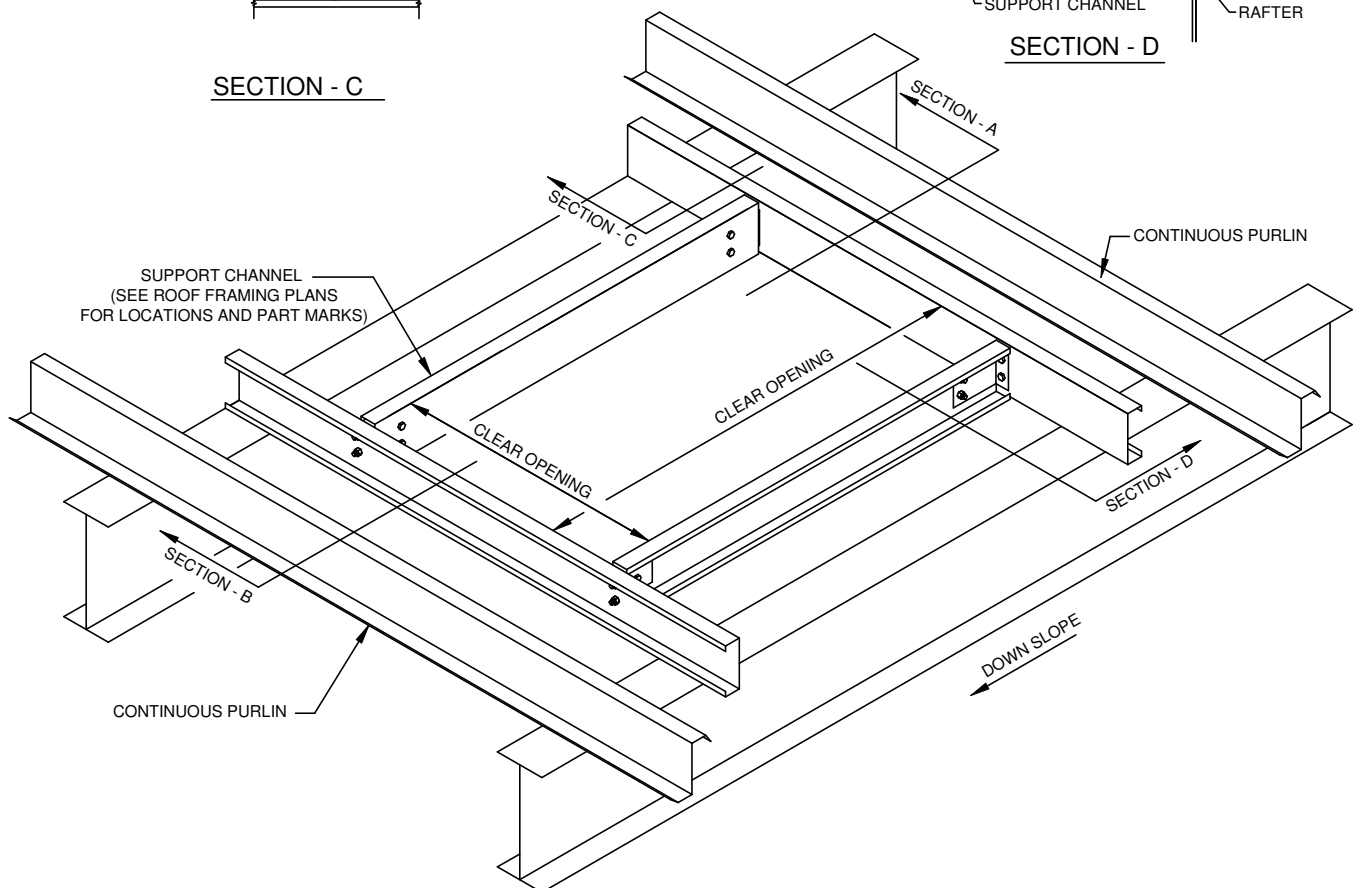
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



SECTION - C



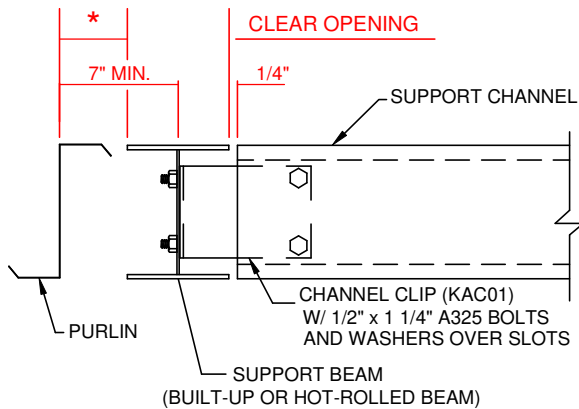
SECTION - D



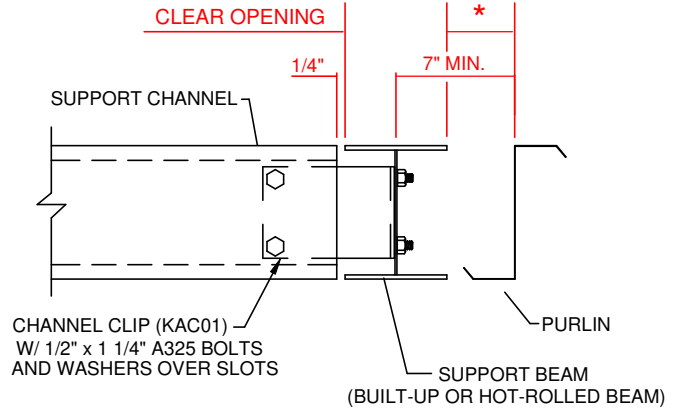
BK0020K

ROOF OPENINGS FOR RTU (BY KBS) <=1200# AND  
< 5'-0" IN LENGTH, ALL ROOF TYPES  
(OPTIONAL FRAMING)

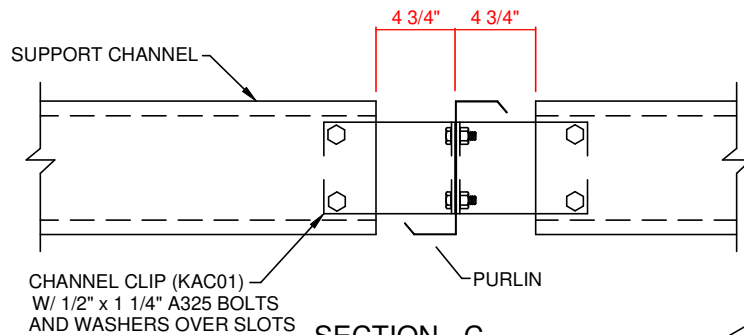
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



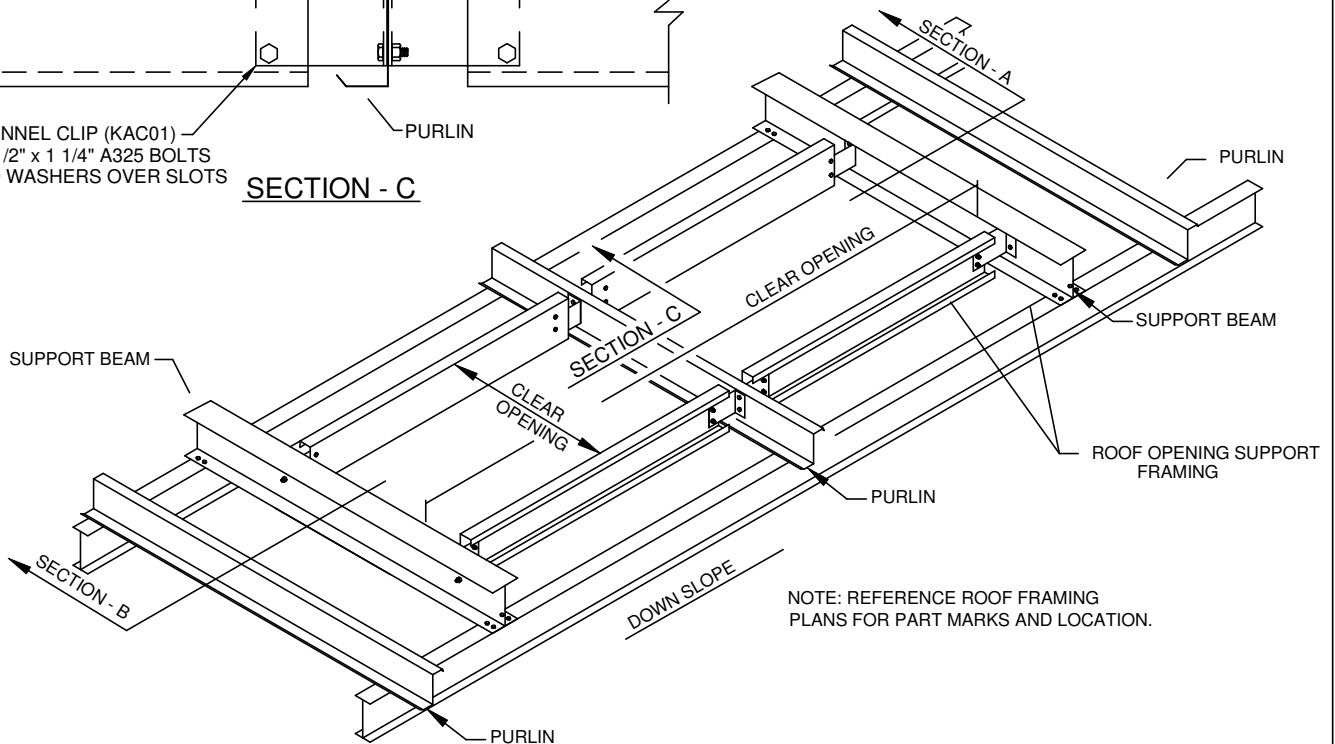
SECTION - B



SECTION - A



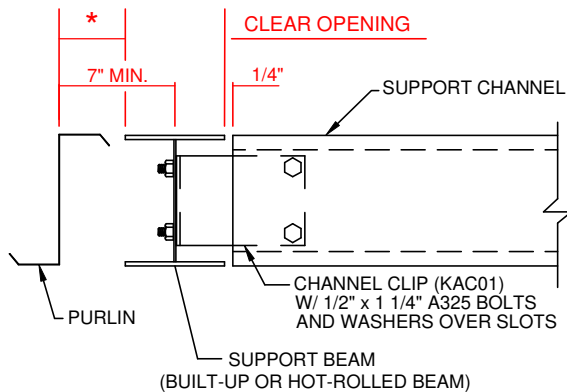
SECTION - C



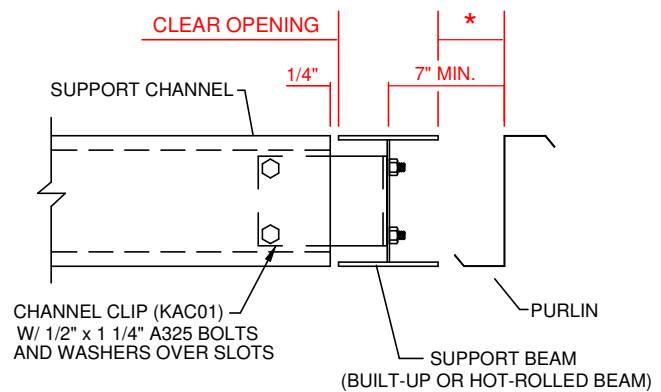
BK0021K

ROOF OPENINGS FOR RTU (BY KBS) ≤ 1200#  
AND > 5'-0", NO PURLINS CUT. ALL ROOF TYPES

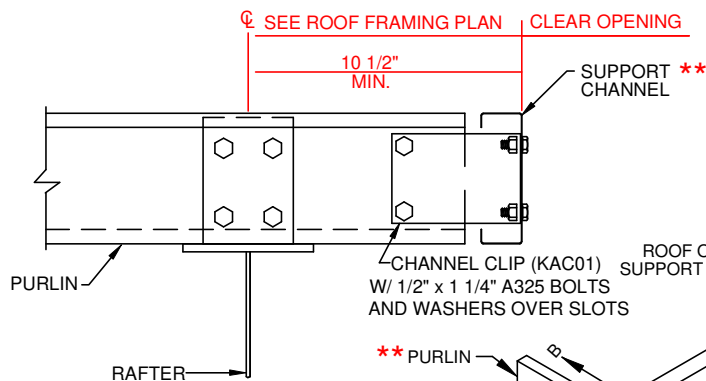
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



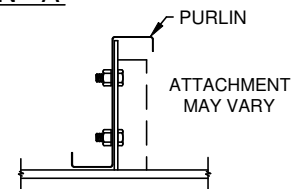
SECTION - B



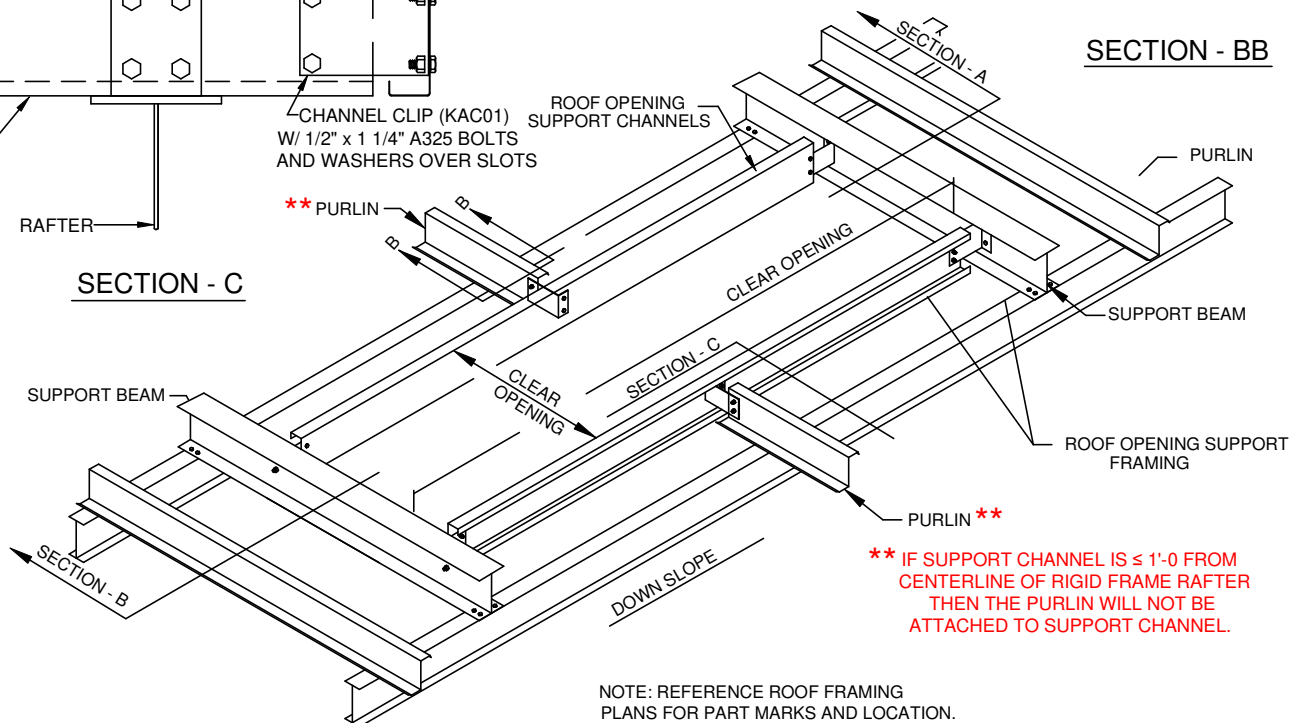
SECTION - A



SECTION - C



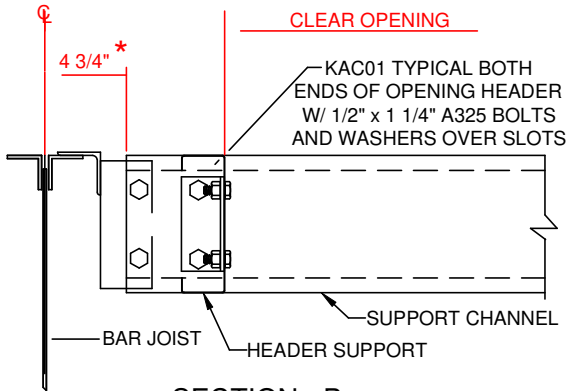
SECTION - BB



NOTE: REFERENCE ROOF FRAMING PLANS FOR PART MARKS AND LOCATION.

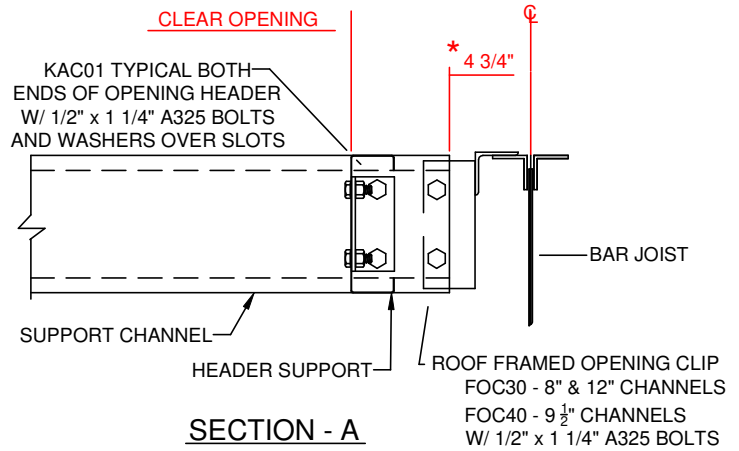
BK0022K

ROOF OPENINGS FOR RTU (BY KBS) ≤ 1200#  
AND > 5'-0, W/ PURLINS CUT. ALL ROOF TYPES  
(OPTIONAL FRAMING)

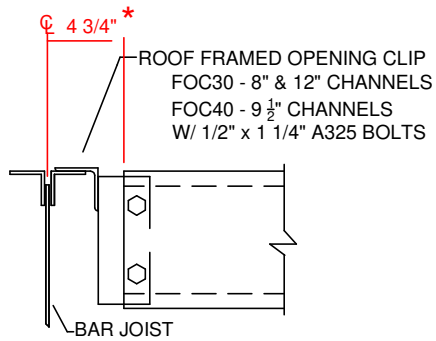


SECTION - B

\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



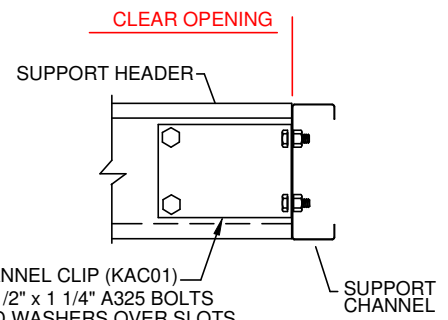
SECTION - A



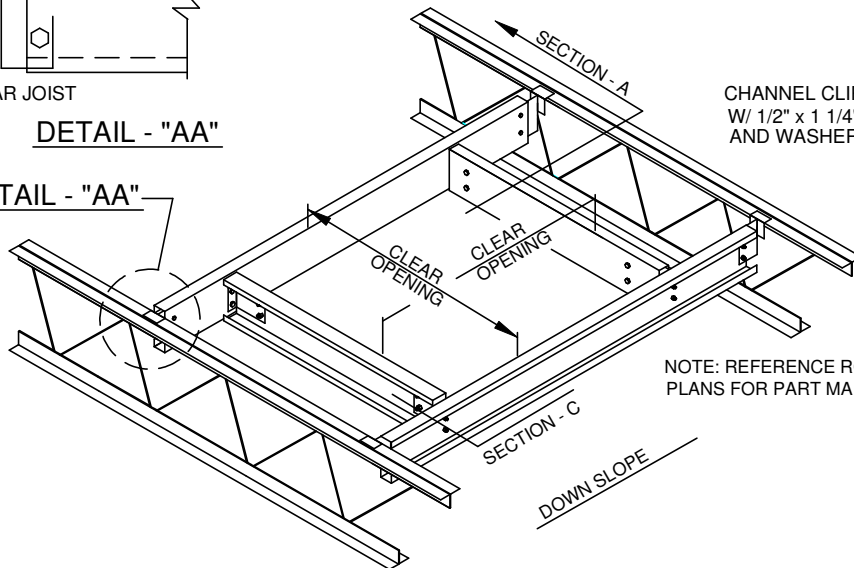
DETAIL - "AA"

DETAIL - "AA"

ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP  
TO JOIST. USE (2) 12-24 x 1 1/2" TCP5  
DRILL BOLT. (PRE DRILLING USING  
1/4" DIA. HOLES WILL BE REQUIRED  
IF MATERIAL THICKNESS IS GREATER  
THAN 1/4")



SECTION - C



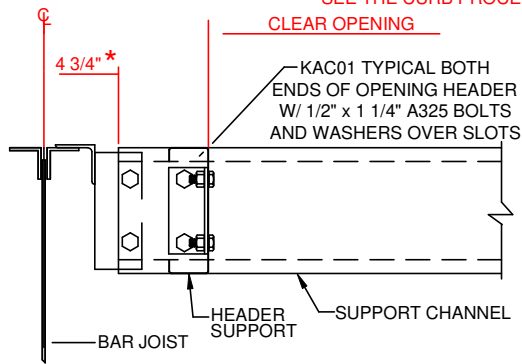
NOTE: REFERENCE ROOF FRAMING  
PLANS FOR PART MARKS AND LOCATION.

BK0030K

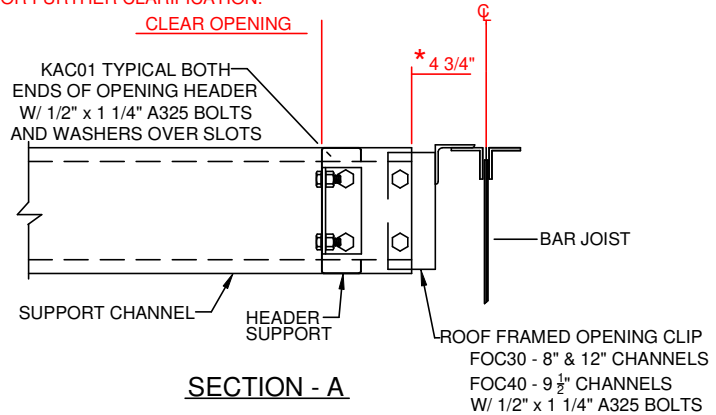
ROOF OPENINGS FOR RTU (BY KBS) <= 1200#  
AND <5'-0, BOLTED JOIST. ALL ROOF TYPES



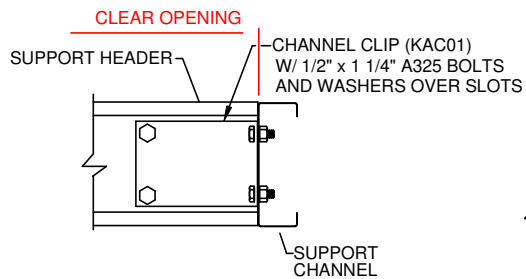
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



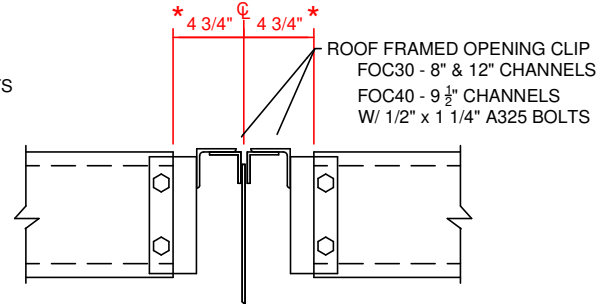
SECTION - B



SECTION - A

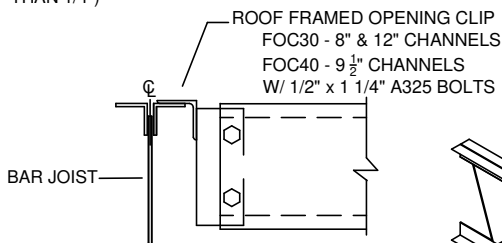


SECTION - D



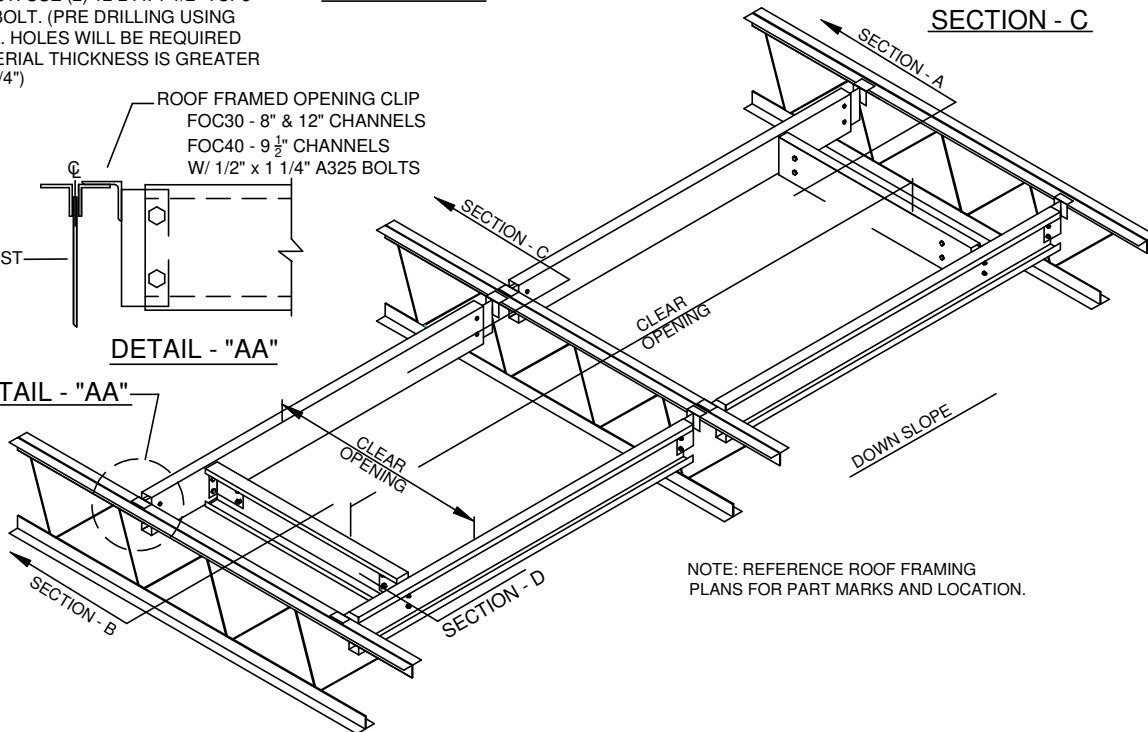
SECTION - C

ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP  
TO JOIST. USE (2) 12-24 x 1 1/2" TCP5  
DRILL BOLT. (PRE DRILLING USING  
1/4" DIA. HOLES WILL BE REQUIRED  
IF MATERIAL THICKNESS IS GREATER  
THAN 1/4")



DETAIL - "AA"

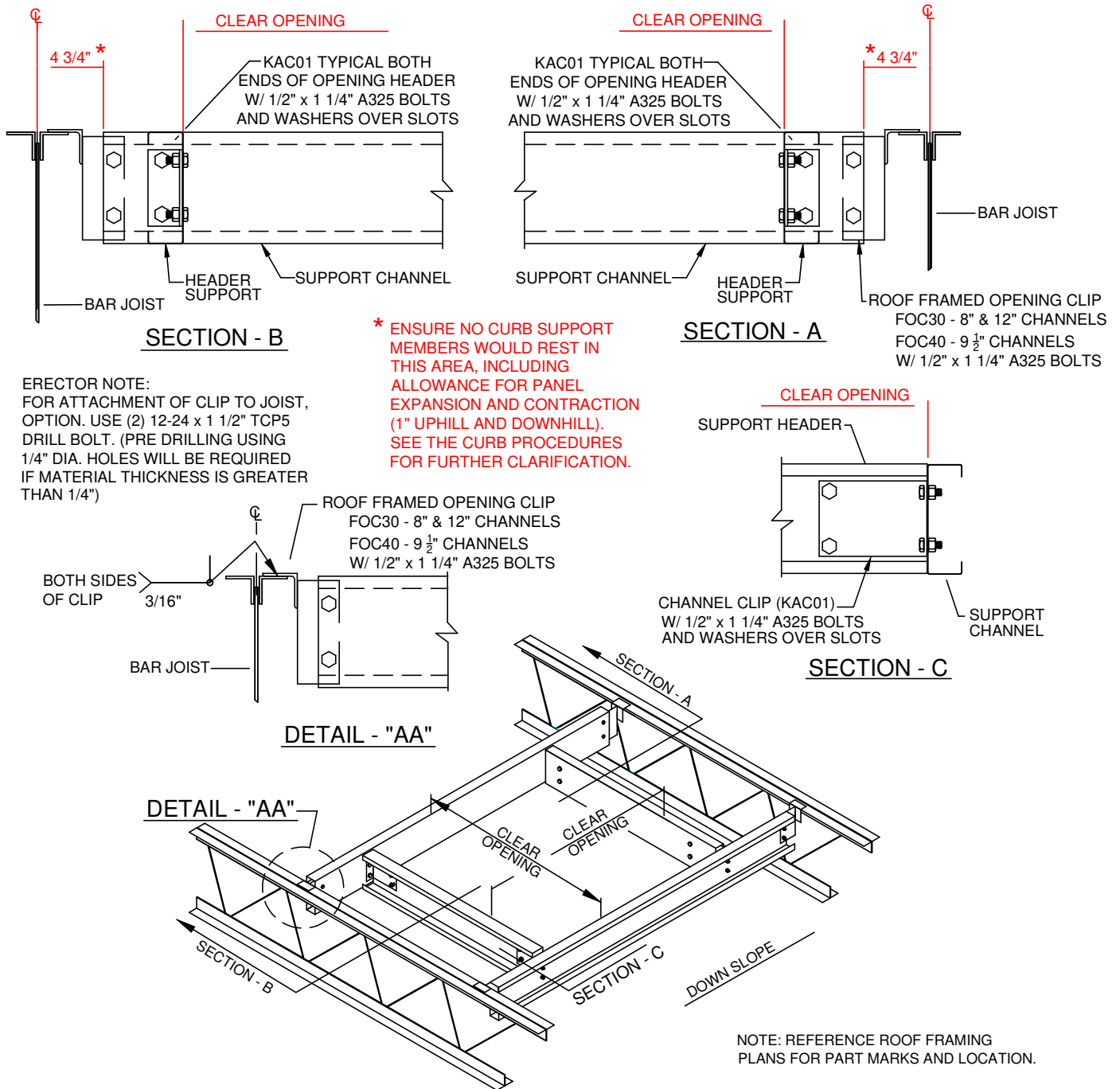
DETAIL - "AA"



NOTE: REFERENCE ROOF FRAMING  
PLANS FOR PART MARKS AND LOCATION.

BK0031K

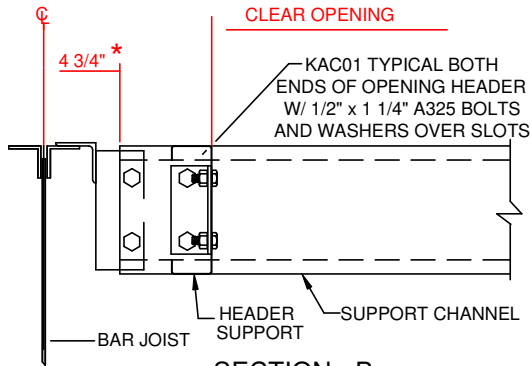
ROOF OPENINGS FOR RTU (BY KBS) ≤ 1200#  
AND > 5'-0", BOLTED JOIST. ALL ROOF TYPES



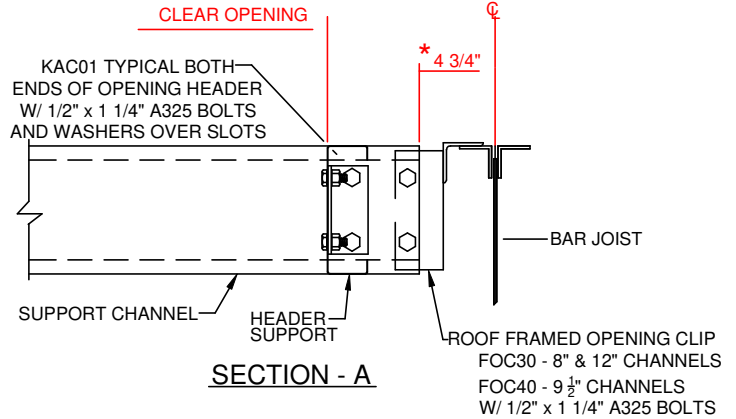
BK0040K

ROOF OPENINGS FOR RTU (BY KBS) <= 1200#  
AND <5'-0", WELDED JOIST. ALL ROOF TYPES

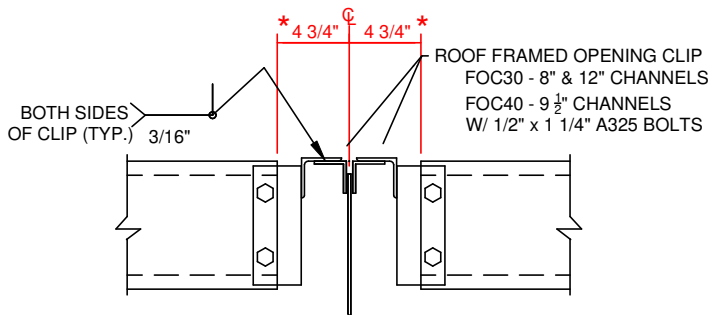
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



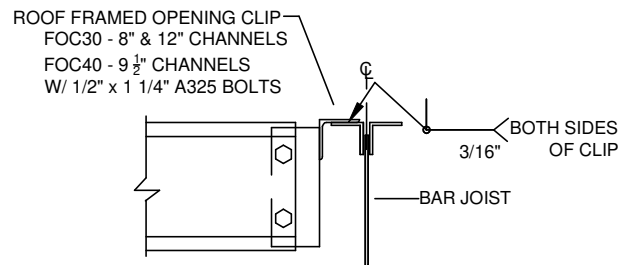
SECTION - B



SECTION - A

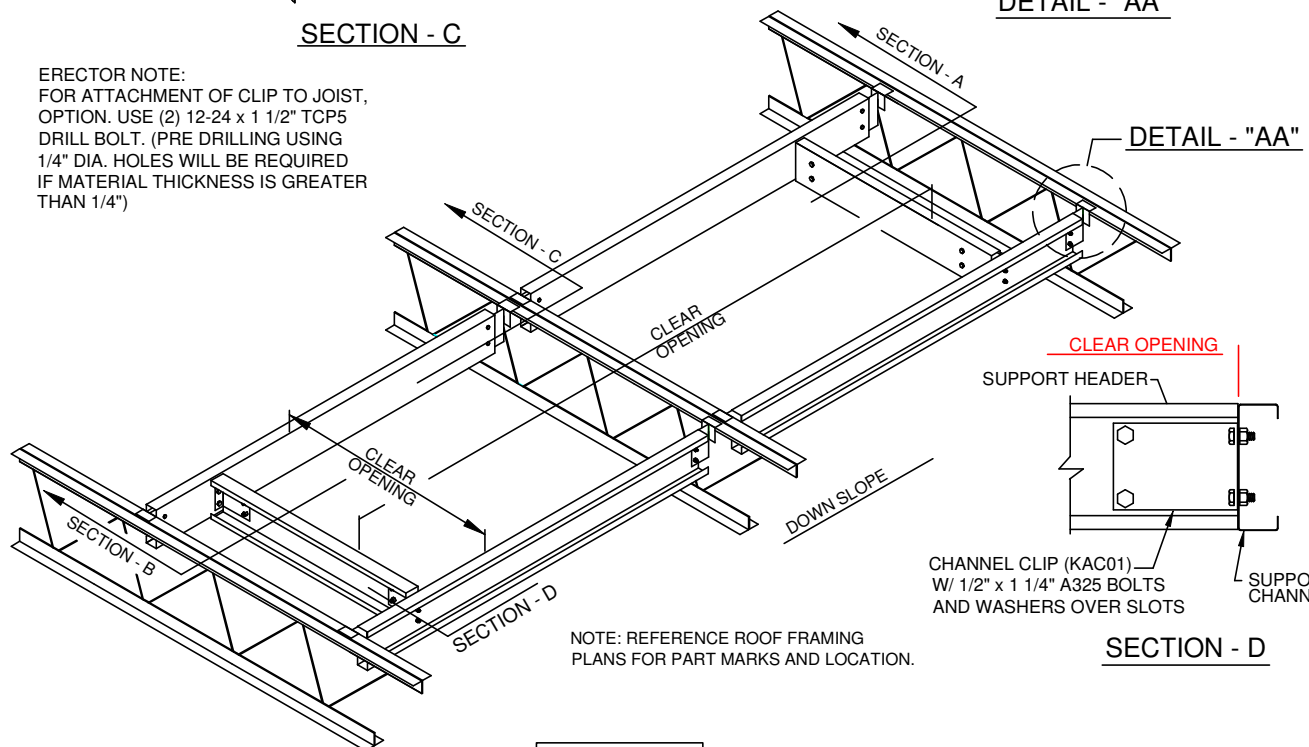


SECTION - C



DETAIL - "AA"

ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP TO JOIST,  
OPTION. USE (2) 12-24 x 1 1/2" TCP5  
DRILL BOLT. (PRE DRILLING USING  
1/4" DIA. HOLES WILL BE REQUIRED  
IF MATERIAL THICKNESS IS GREATER  
THAN 1/4")

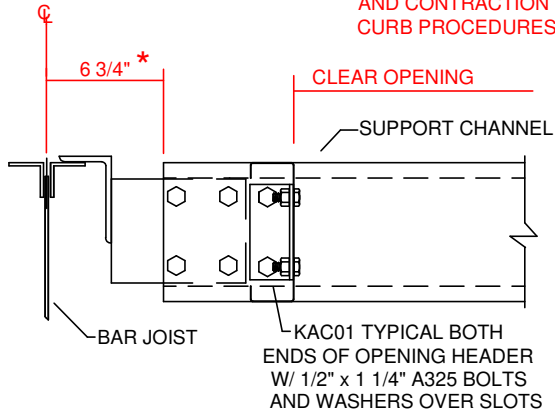


NOTE: REFERENCE ROOF FRAMING  
PLANS FOR PART MARKS AND LOCATION.

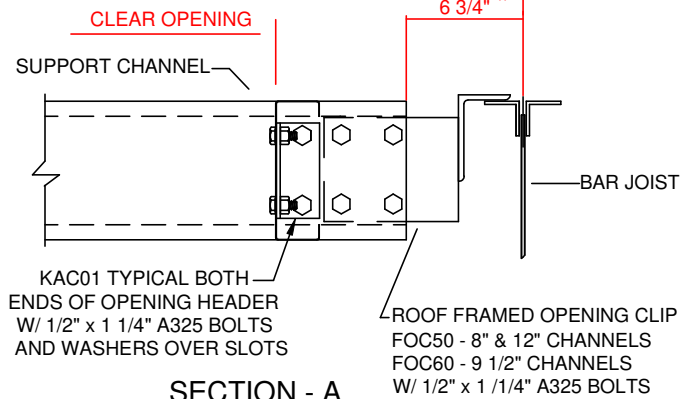
BK0041K

ROOF OPENINGS FOR RTU (BY KBS) <= 1200#  
AND > 5'-0", WELDED JOIST. ALL ROOF TYPES

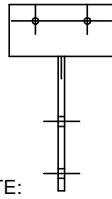
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



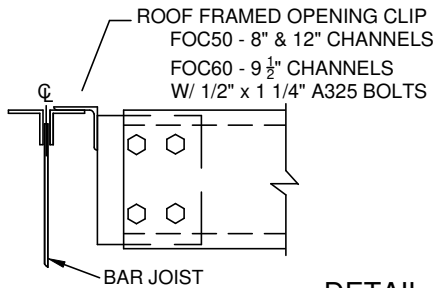
SECTION - B



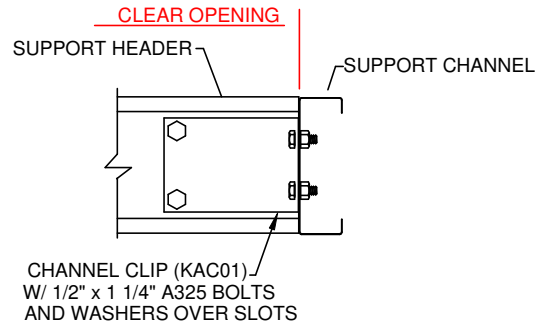
SECTION - A



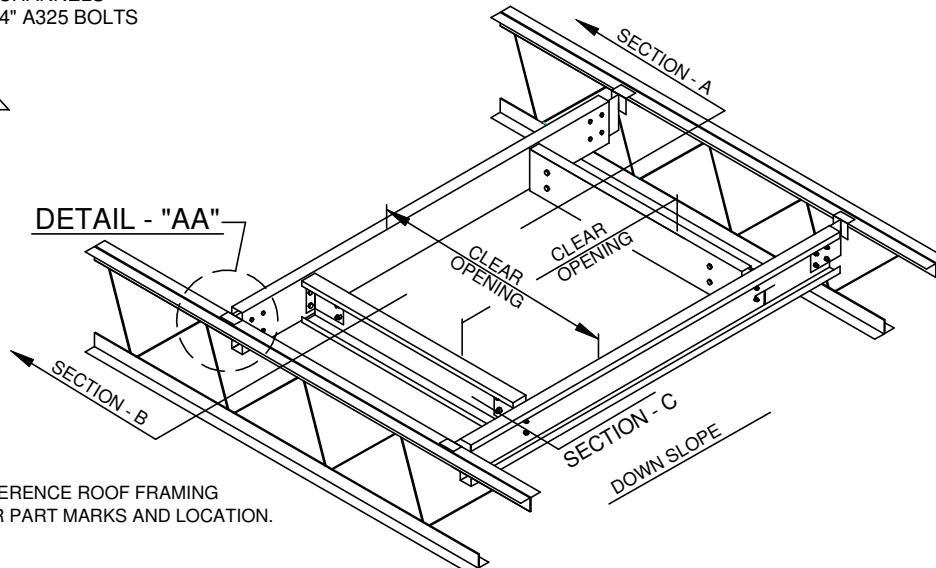
ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP  
TO JOIST. USE (2) 12-24 x 1 1/2" TCP5  
DRILL BOLT. (PRE DRILLING USING  
1/4" DIA. HOLES WILL BE REQUIRED  
IF MATERIAL THICKNESS IS GREATER  
THAN 1/4")



DETAIL - "AA"



SECTION - C

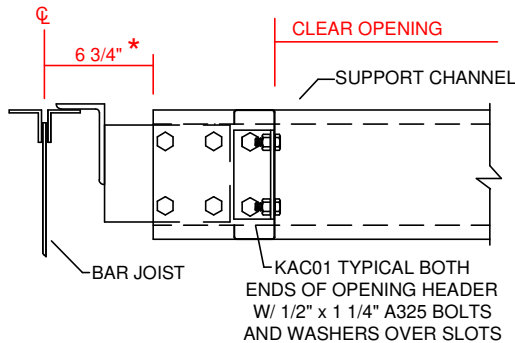


NOTE: REFERENCE ROOF FRAMING  
PLANS FOR PART MARKS AND LOCATION.

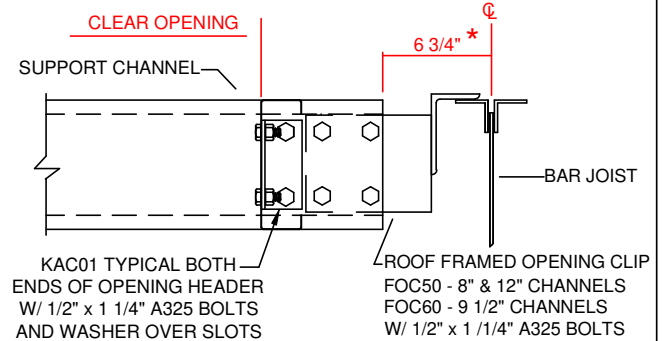
BK0050K

ROOF OPENINGS FOR RTU (BY KBS) > 1200#  
AND <5'-0, BOLTED JOIST. ALL ROOF TYPES

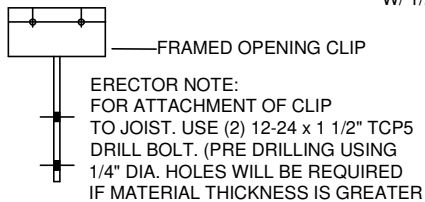
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



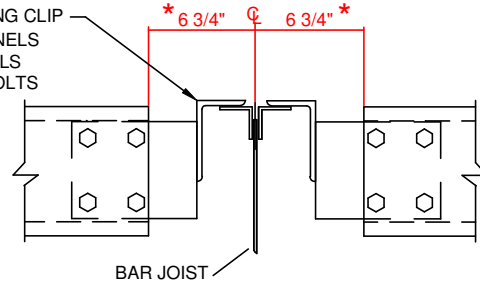
SECTION - B



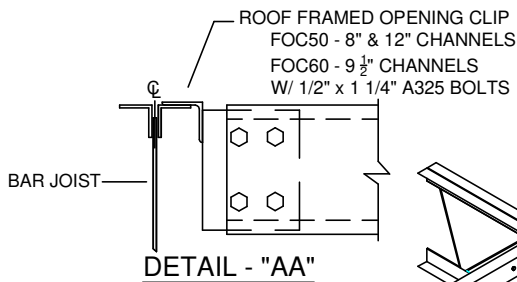
SECTION - A



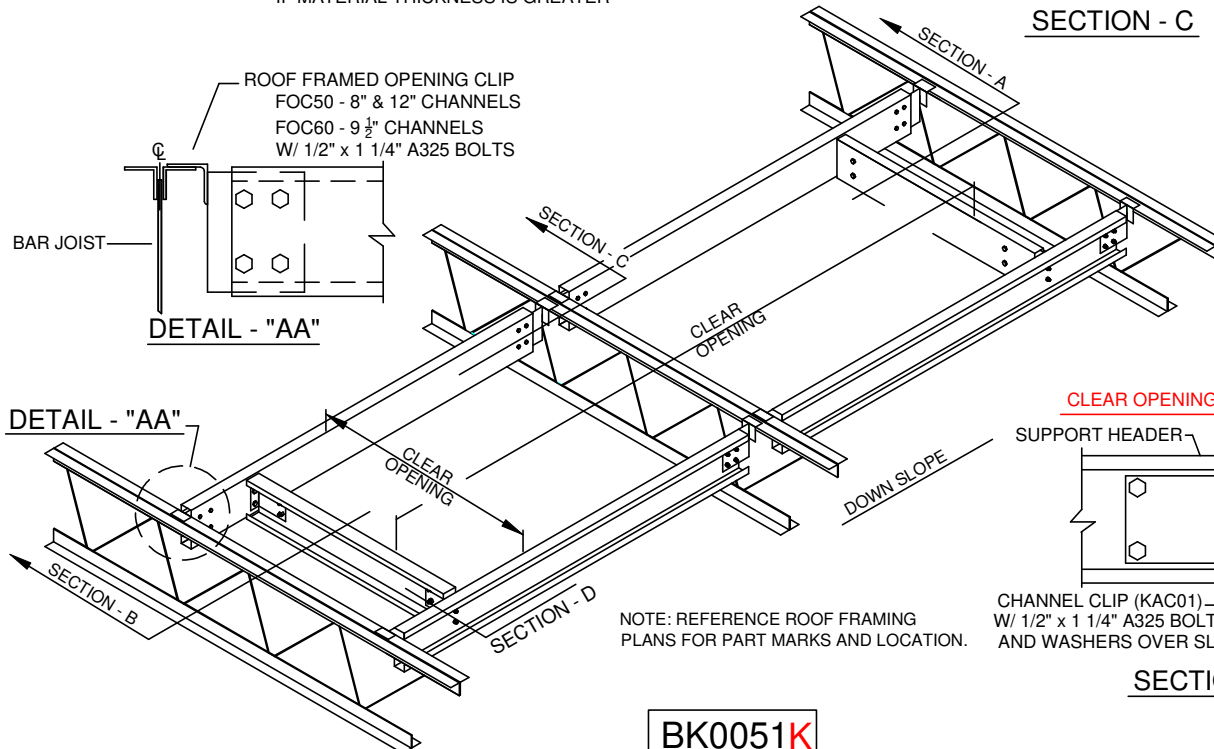
ROOF FRAMED OPENING CLIP  
FOC50 - 8" & 12" CHANNELS  
FOC60 - 9 1/2" CHANNELS  
W/ 1/2" x 1 1/4" A325 BOLTS



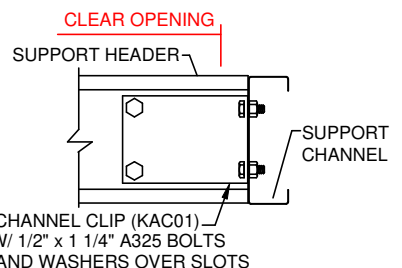
SECTION - C



DETAIL - "AA"



NOTE: REFERENCE ROOF FRAMING PLANS FOR PART MARKS AND LOCATION.

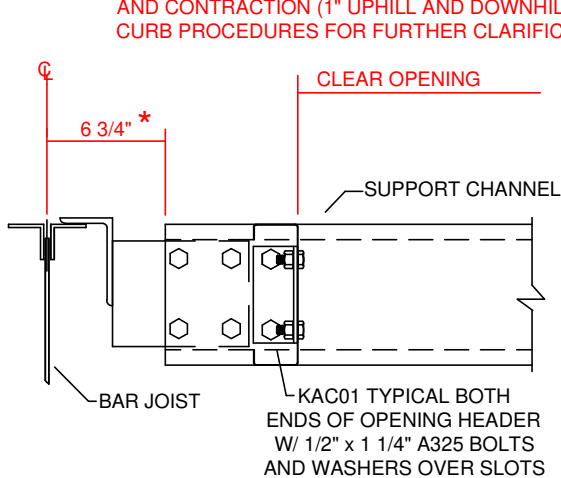


SECTION - D

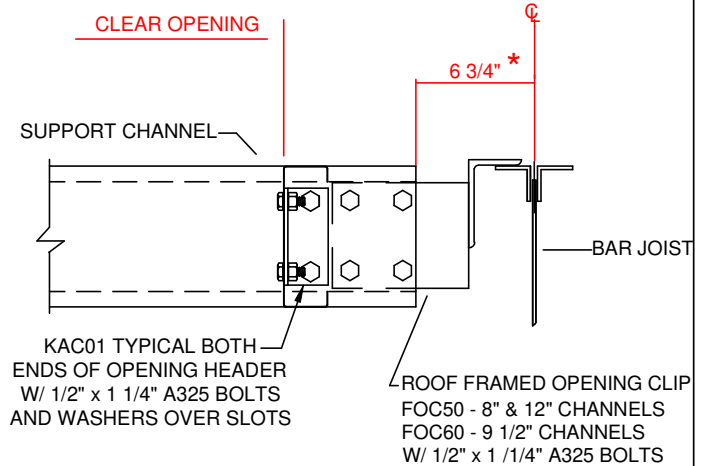
BK0051K

ROOF OPENINGS FOR RTU (BY KBS) > 1200#  
AND > 5'-0, BOLTED JOIST. ALL ROOF TYPES

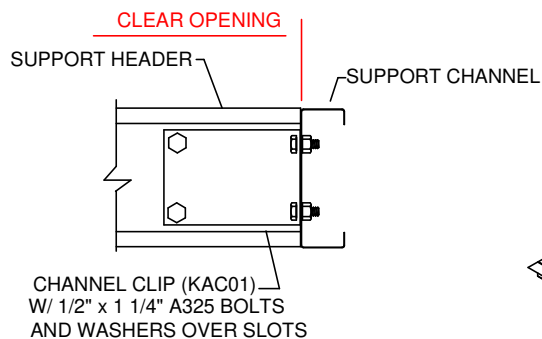
\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1" UPHILL AND DOWNHILL). SEE THE CURB PROCEDURES FOR FURTHER CLARIFICATION.



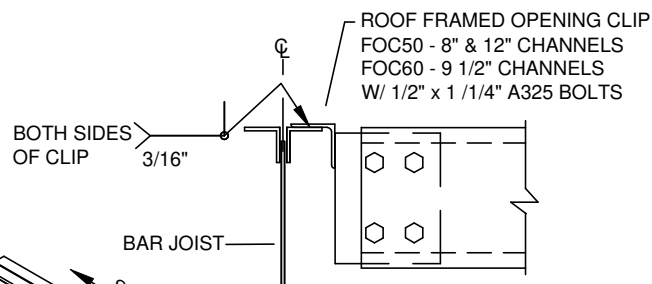
SECTION - B



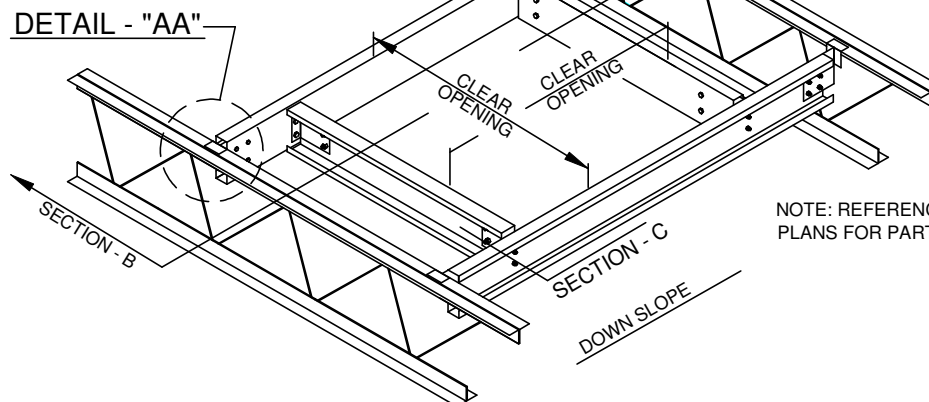
SECTION - A



SECTION - C



DETAIL - "AA"

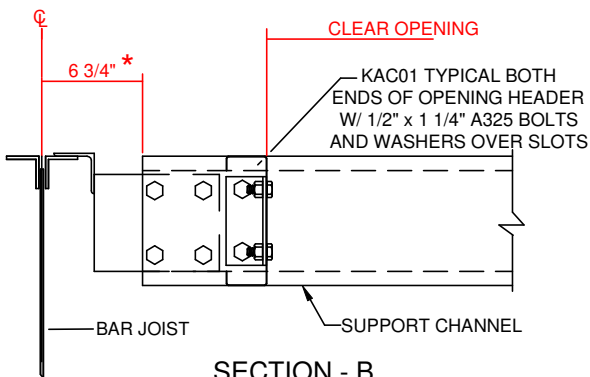


ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP TO JOIST,  
OPTION. USE (2) 12-24 x 1 1/2" TCP5  
DRILL BOLT. (PRE DRILLING USING  
1/4" DIA. HOLES WILL BE REQUIRED  
IF MATERIAL THICKNESS IS GREATER  
THAN 1/4")

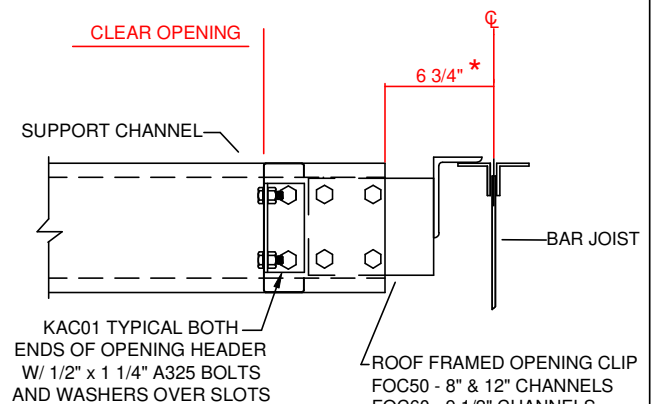
NOTE: REFERENCE ROOF FRAMING  
PLANS FOR PART MARKS AND LOCATION.

BK0060K

ROOF OPENINGS FOR RTU (BY KBS) > 1200#  
AND <5'-0, WELDED JOIST. ALL ROOF TYPES



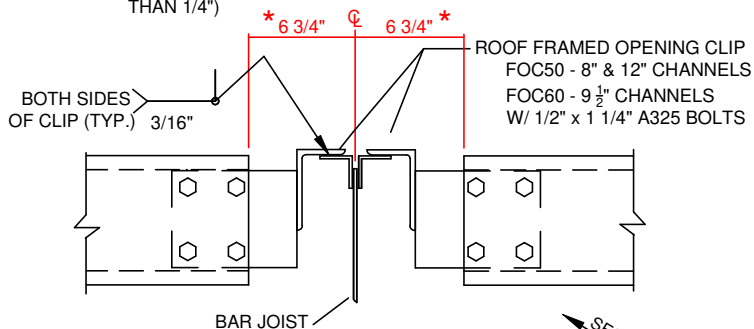
SECTION - B



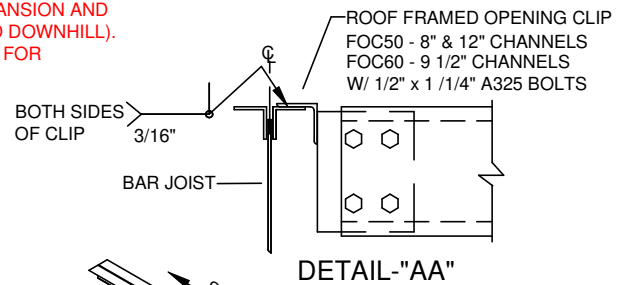
SECTION - A

\* ENSURE NO CURB SUPPORT MEMBERS WOULD REST IN THIS AREA, INCLUDING ALLOWANCE FOR PANEL EXPANSION AND CONTRACTION (1\"/>

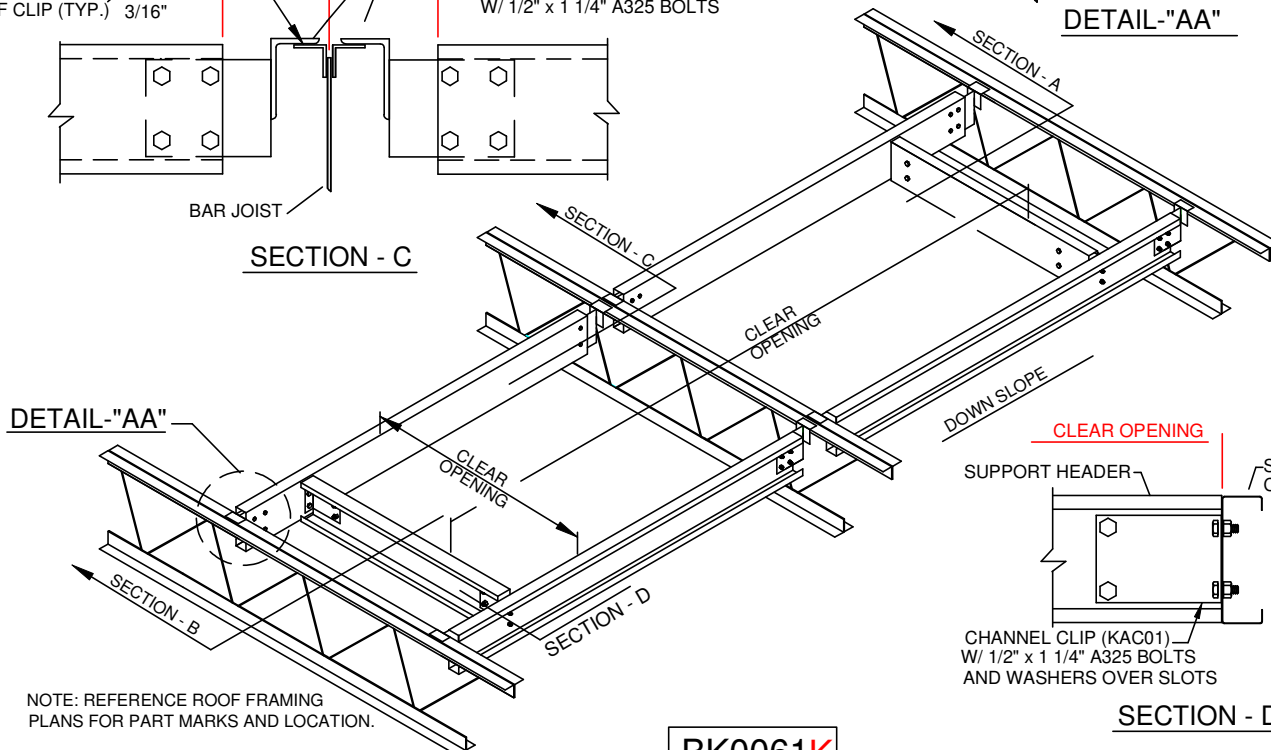
ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP TO JOIST, OPTION. USE (2) 12-24 x 1 1/2\"/>



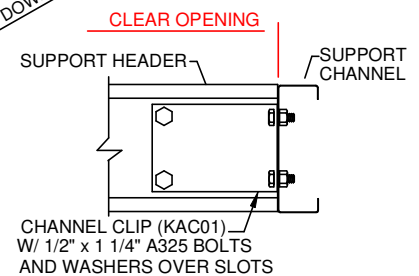
SECTION - C



DETAIL - AA



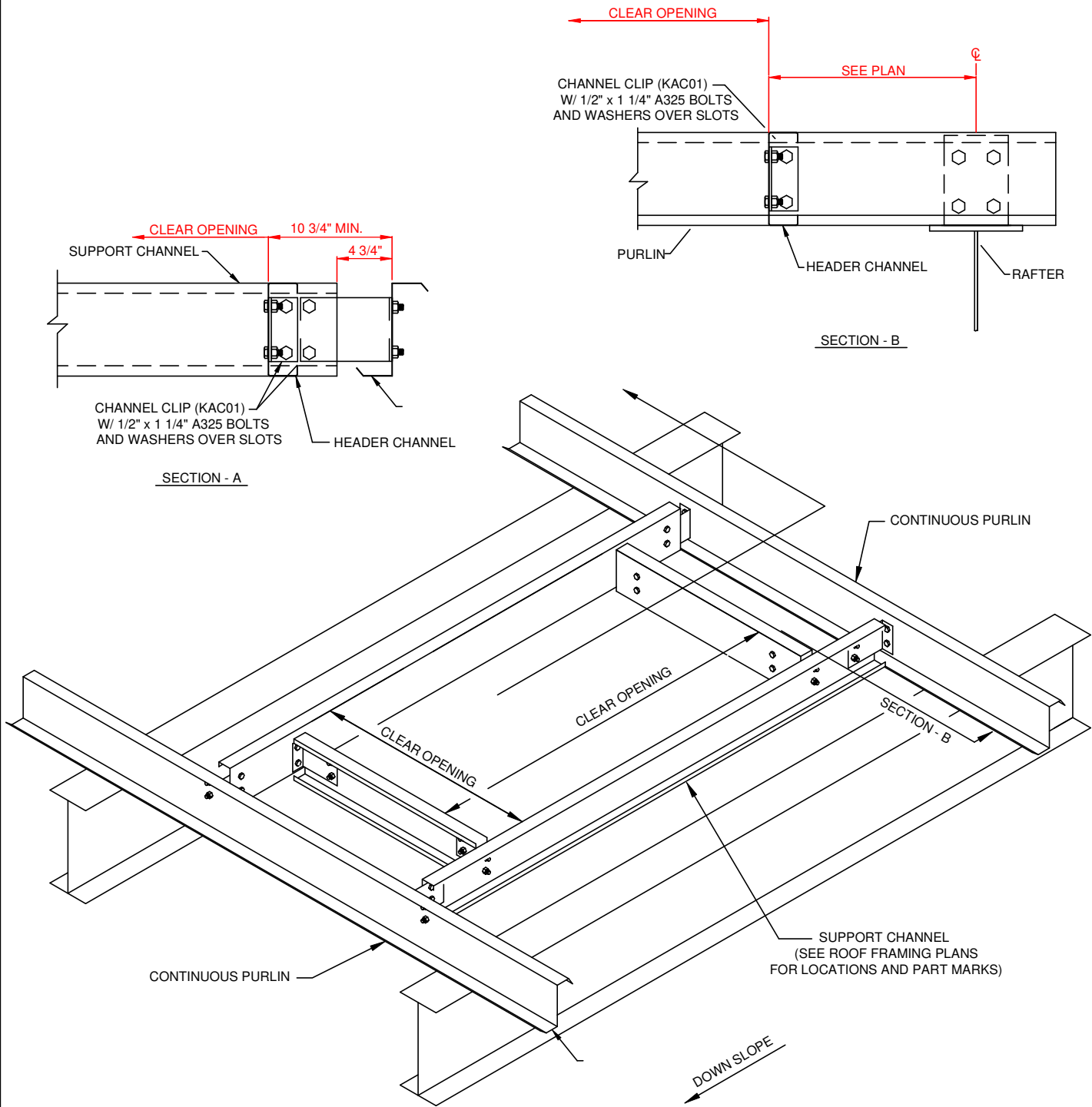
NOTE: REFERENCE ROOF FRAMING PLANS FOR PART MARKS AND LOCATION.



SECTION - D

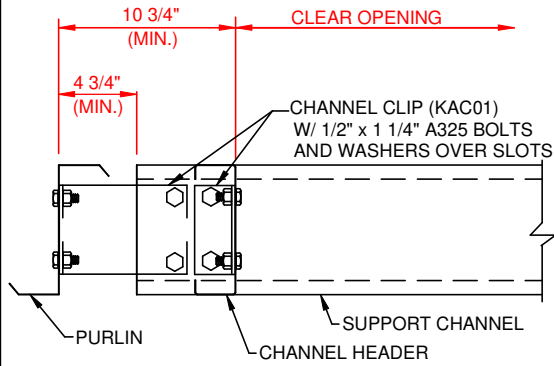
BK0061K

ROOF OPENINGS FOR RTU (BY KBS) > 1200#  
AND > 5'-0, WELDED JOIST. ALL ROOF TYPES

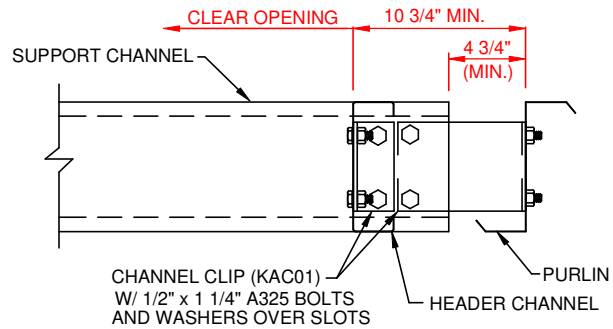


BK1010K

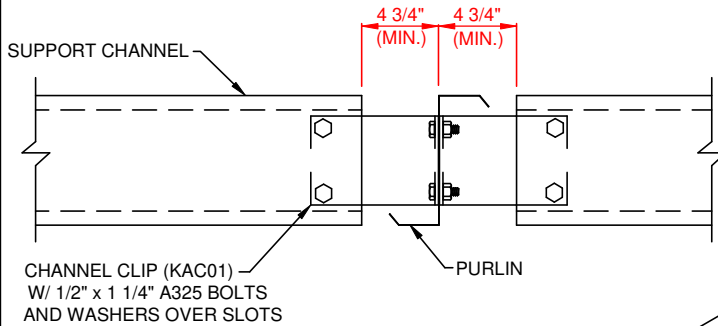




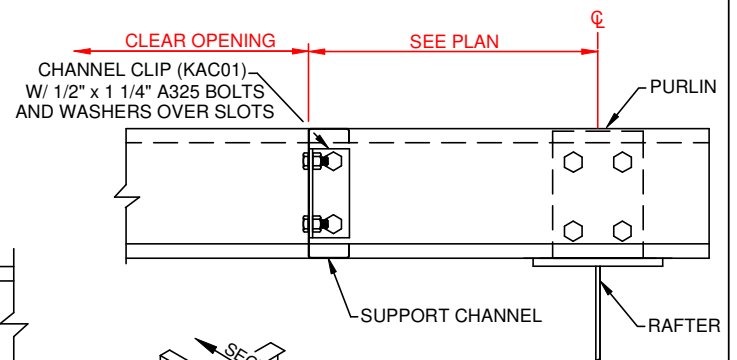
**SECTION - B**



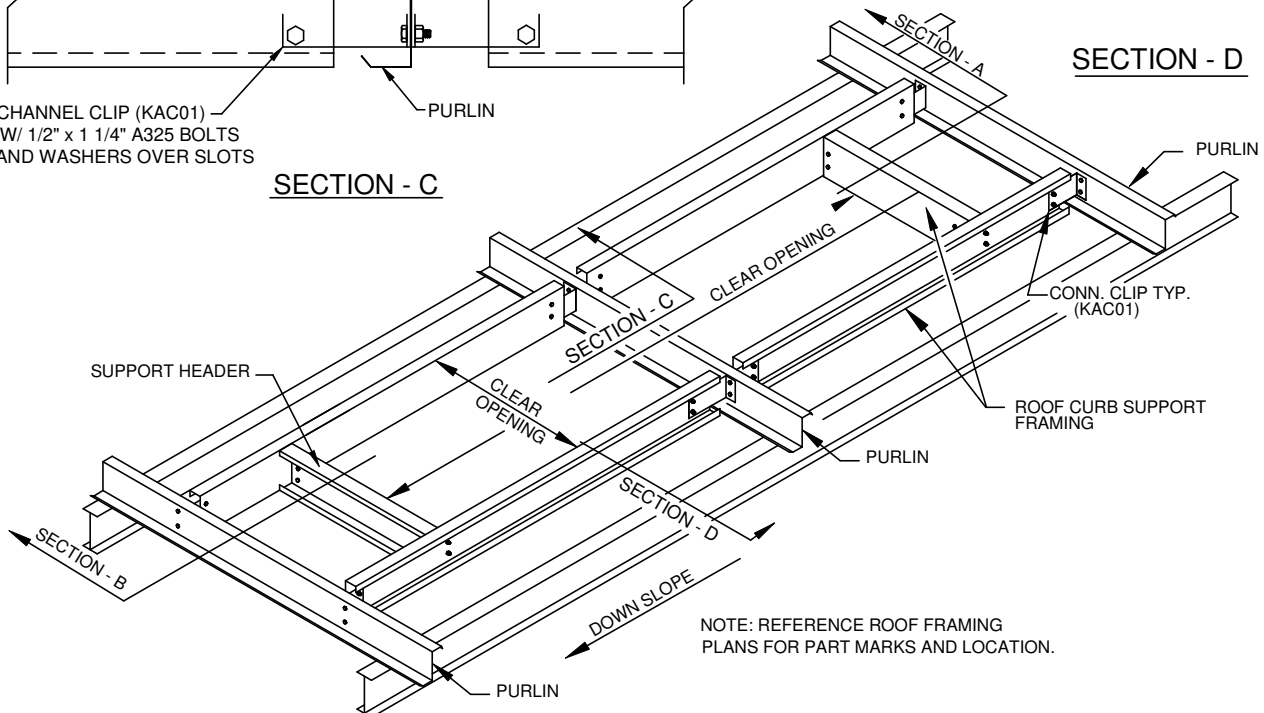
**SECTION - A**



**SECTION - C**

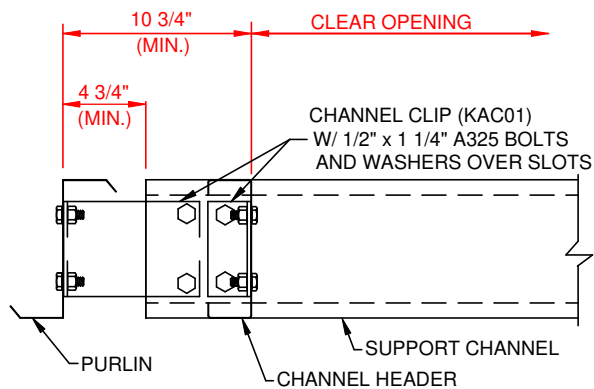


**SECTION - D**

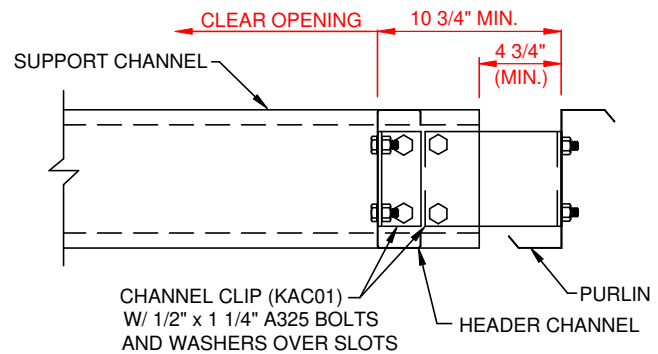


**BK1011K**

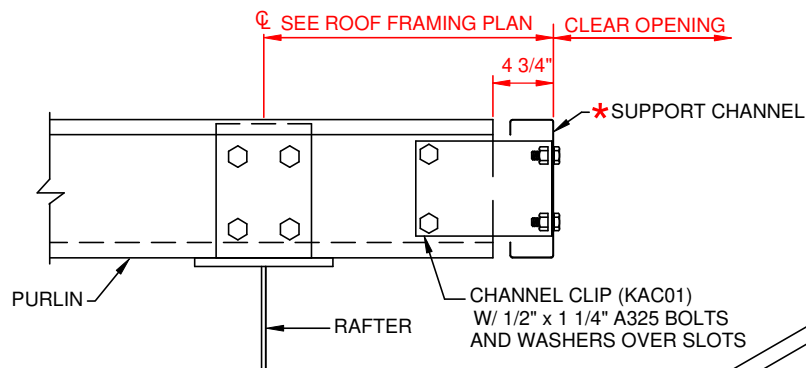
ROOF OPENINGS FOR RTU (NOT BY KBS) <=1200#  
AND > 5'-0, NO PURLINS CUT. ALL ROOF TYPES



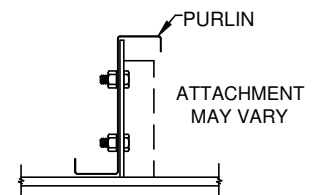
SECTION - B



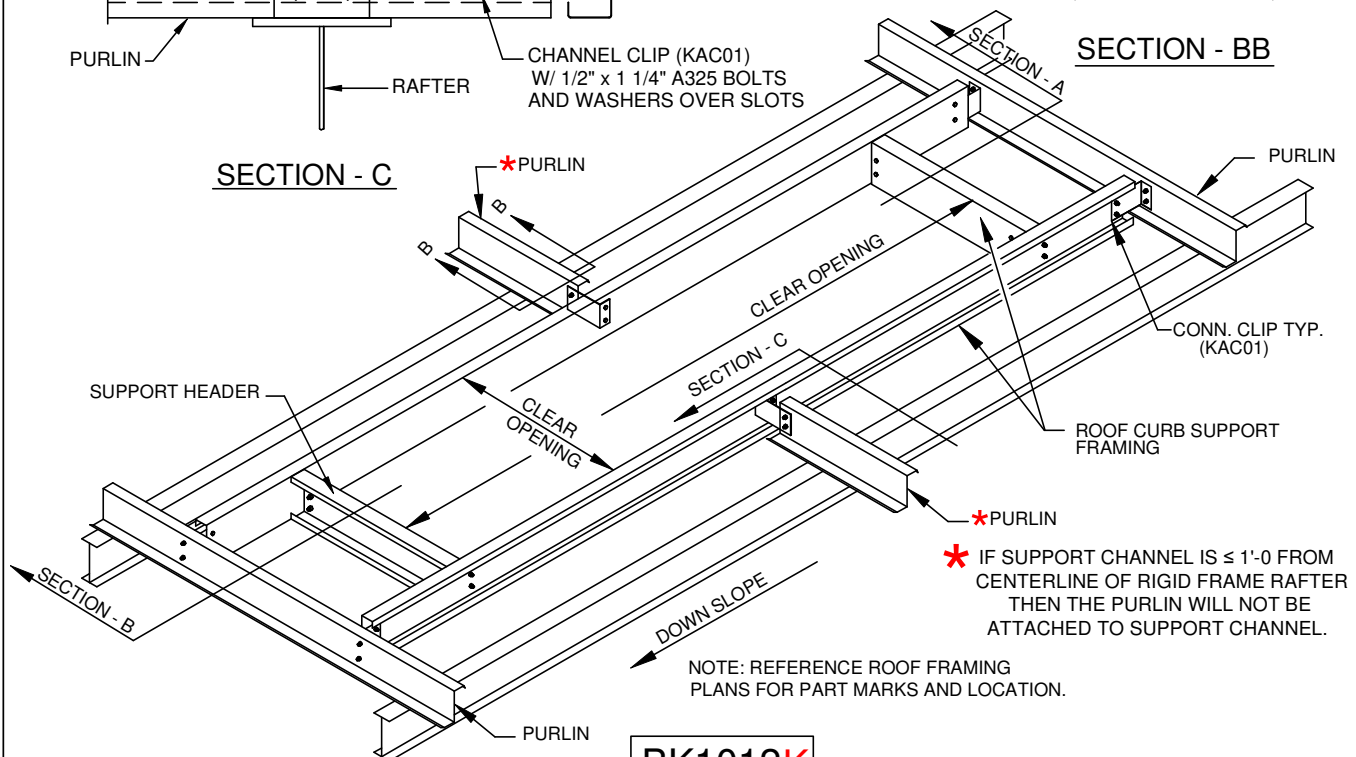
SECTION - A



SECTION - C



SECTION - BB

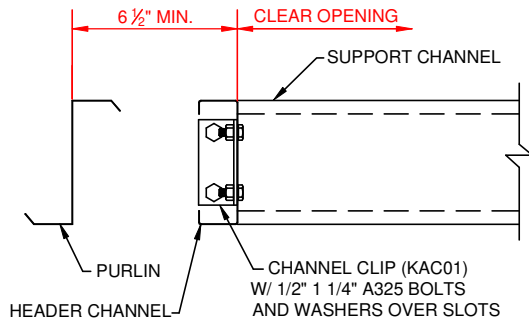


\* IF SUPPORT CHANNEL IS  $\leq 1'-0$  FROM CENTERLINE OF RIGID FRAME RAFTER THEN THE PURLIN WILL NOT BE ATTACHED TO SUPPORT CHANNEL.

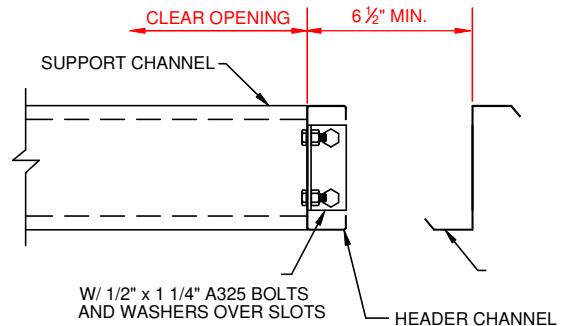
NOTE: REFERENCE ROOF FRAMING PLANS FOR PART MARKS AND LOCATION.

BK1012K

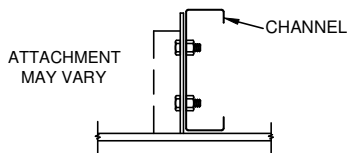
ROOF OPENINGS FOR RTU (NOT BY KBS)  $\leq 1200\#$   
AND  $> 5'-0$  W/ PURLINS CUT, ALL ROOF TYPES



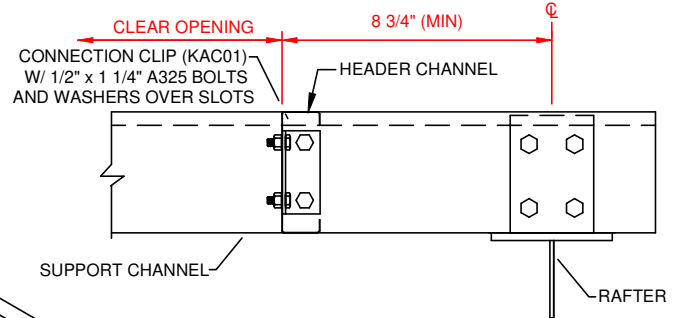
SECTION - B



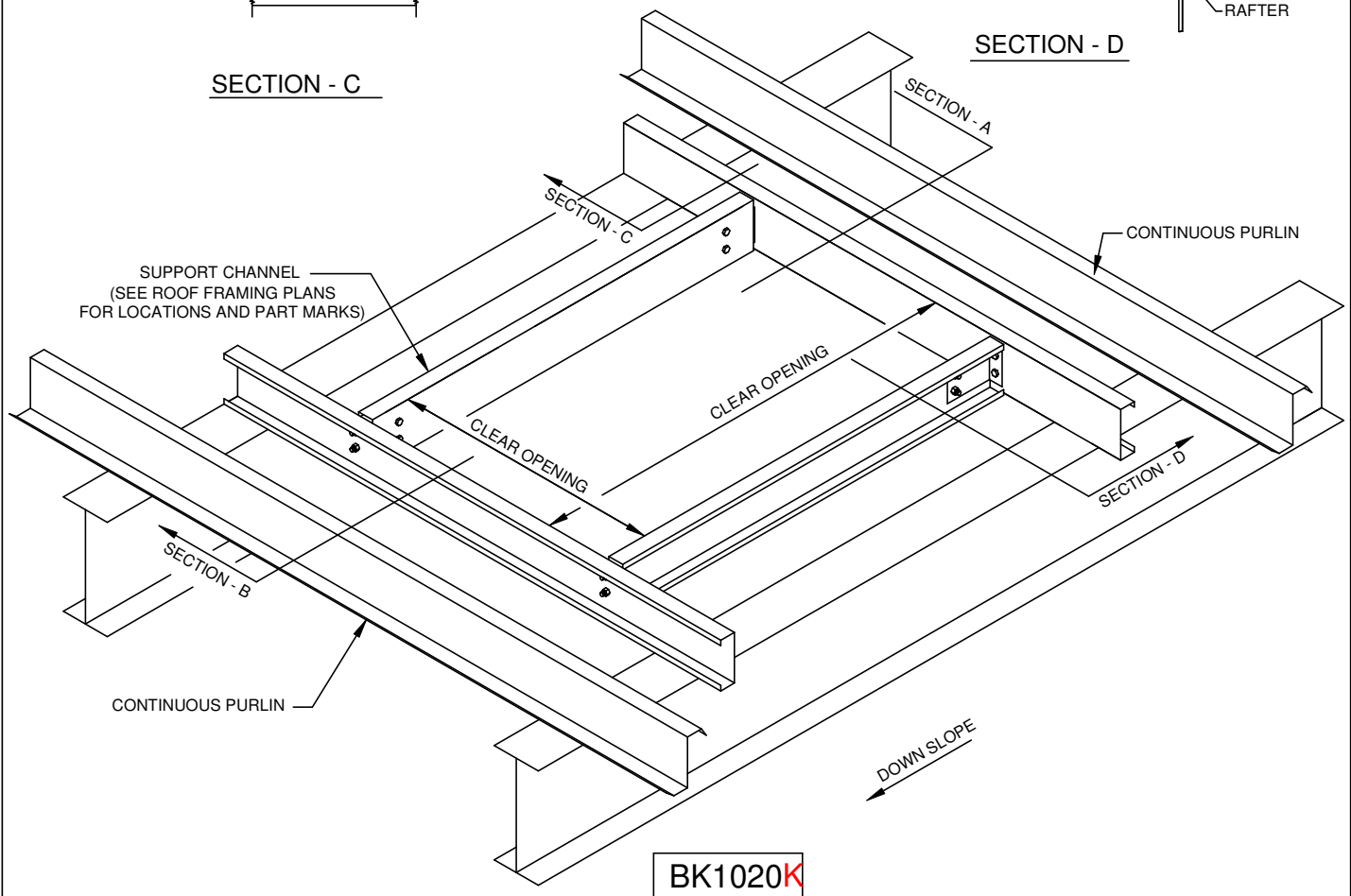
SECTION - A



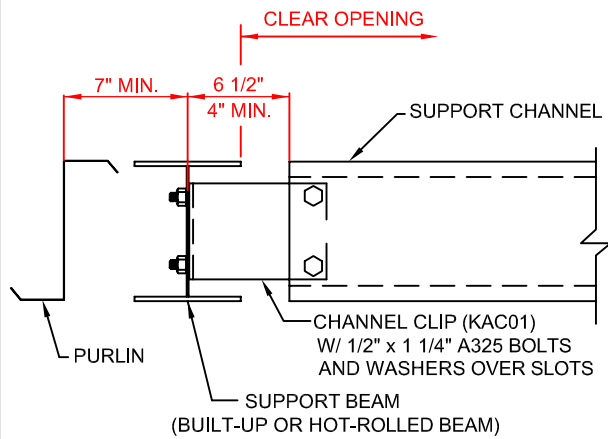
SECTION - C



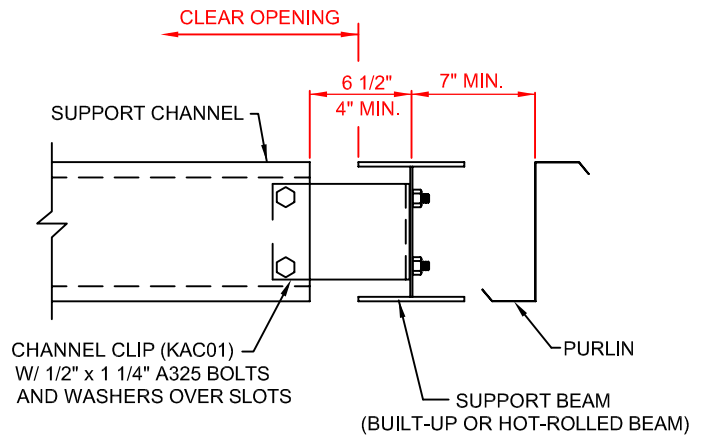
SECTION - D



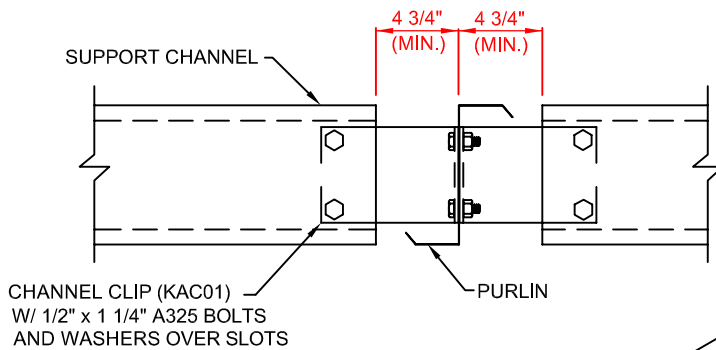
BK1020K



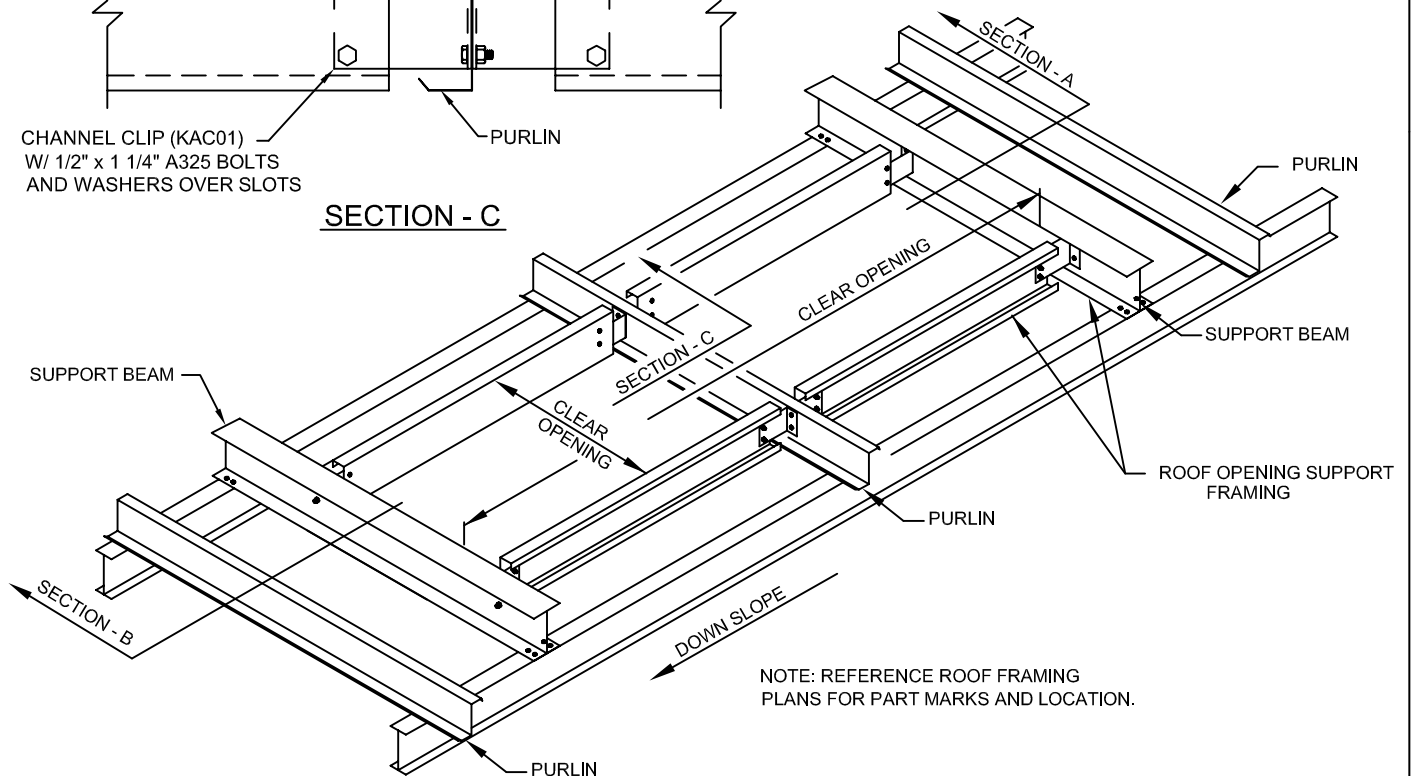
SECTION - B



SECTION - A

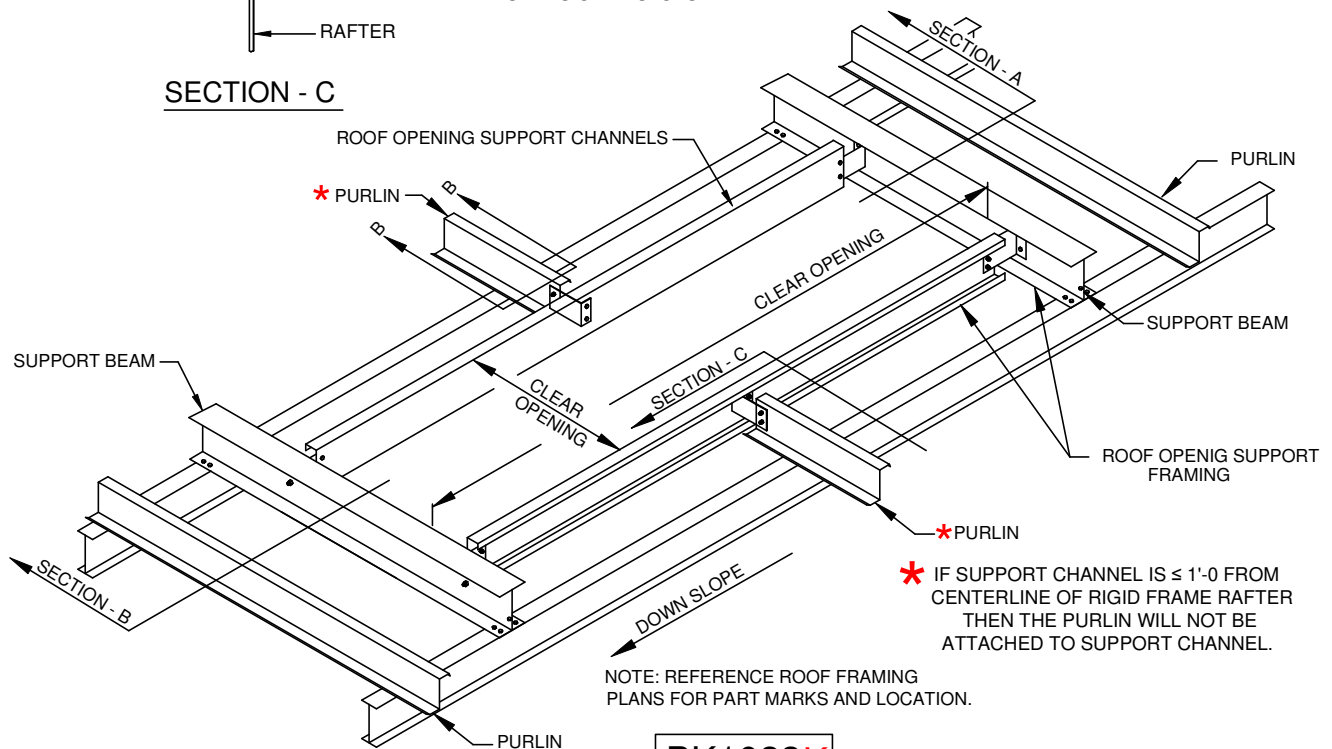
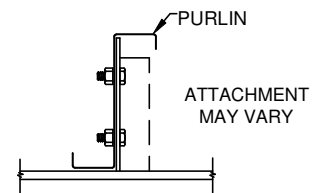
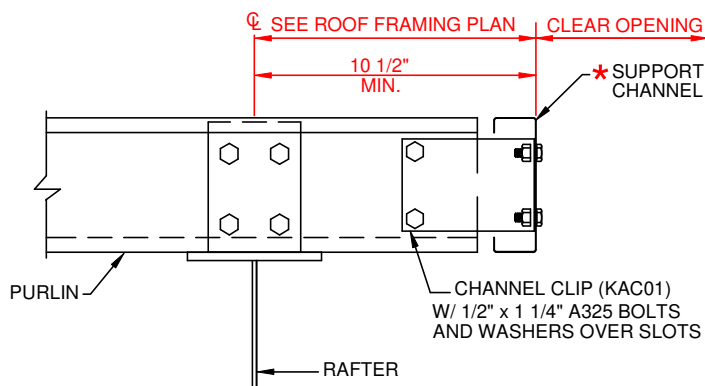
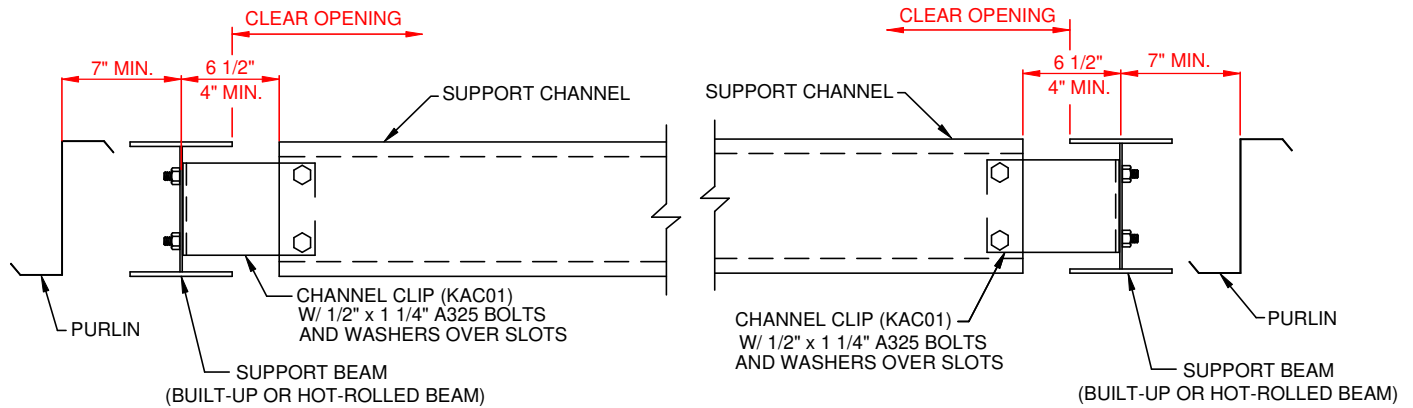


SECTION - C



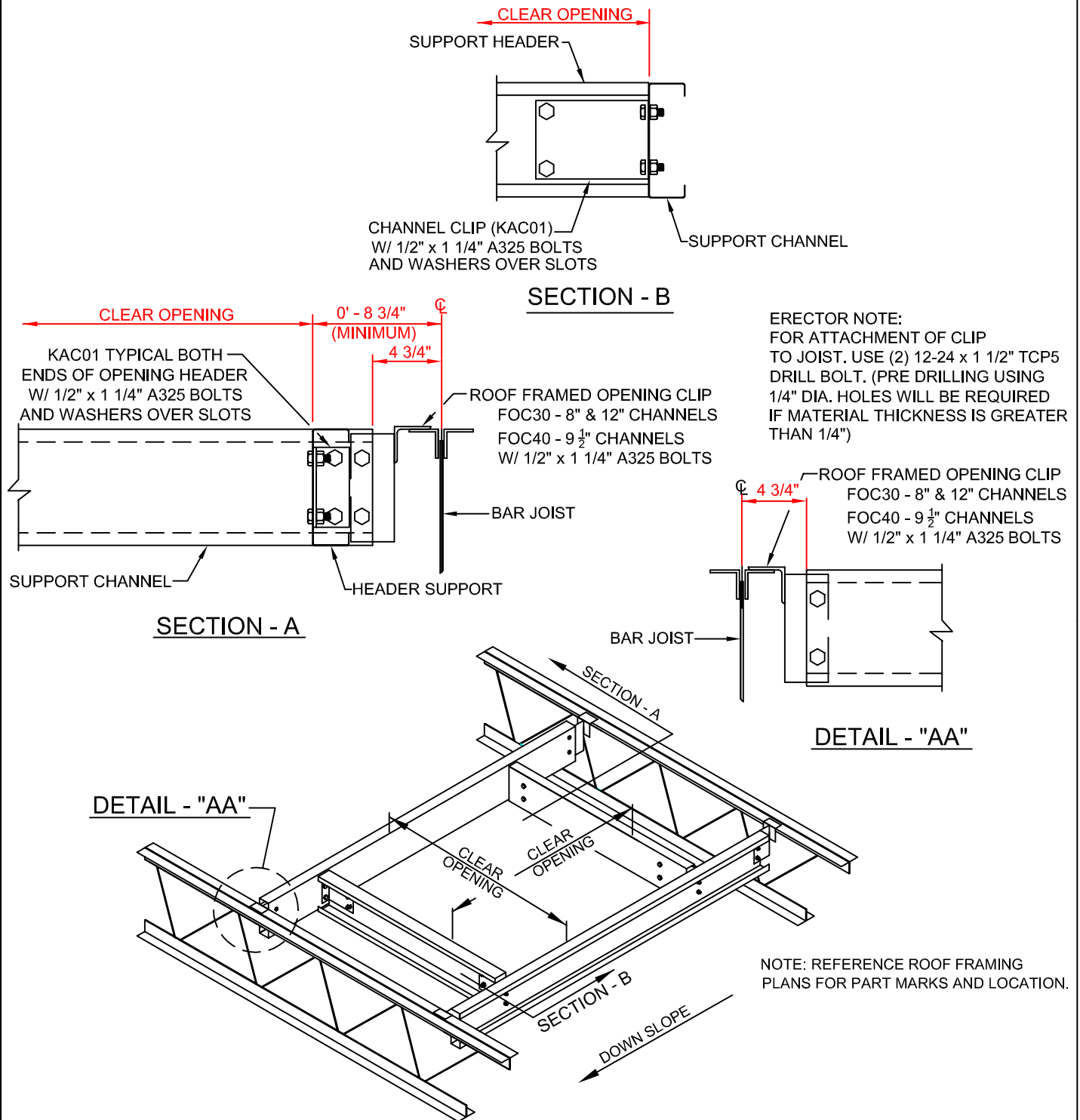
BK1021K

ROOF OPENINGS FOR RTU ≤ 1200# AND > 5'-0"  
NO PURLINS CUT. ALL ROOF TYPES



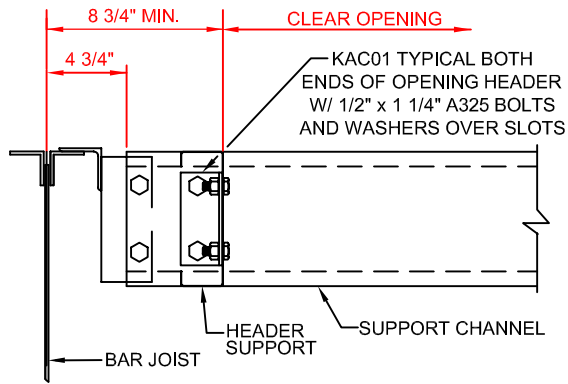
BK1022K

ROOF OPENINGS FOR RTU (NOT BY KBS)  $\leq 1200\#$   
AND  $> 5'-0"$ , W/ PURLINS CUT. ALL ROOF TYPES  
(OPTIONAL FRAMING)

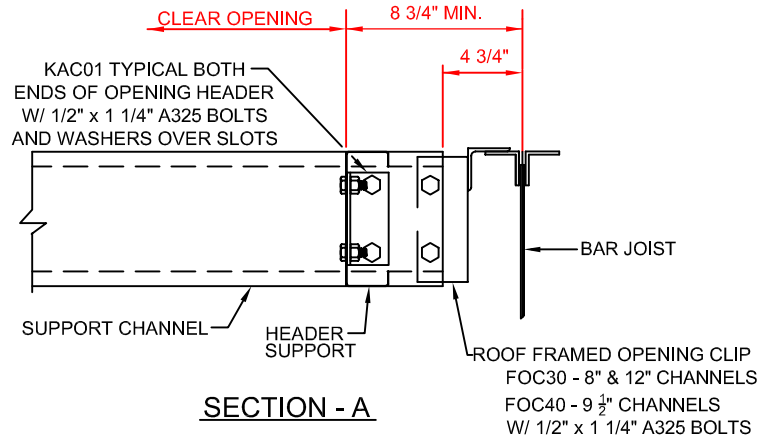


BK1030K

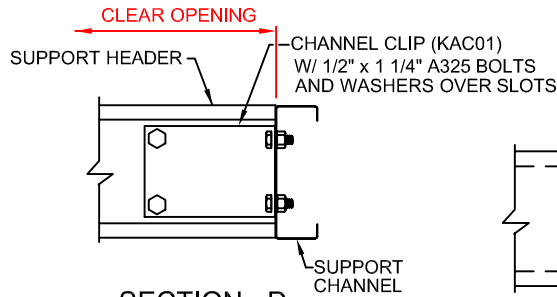
ROOF OPENINGS FOR RTU (NOT BY KBS) ≤ 1200#  
AND <5'-0", BOLTED JOIST, ALL ROOF TYPES



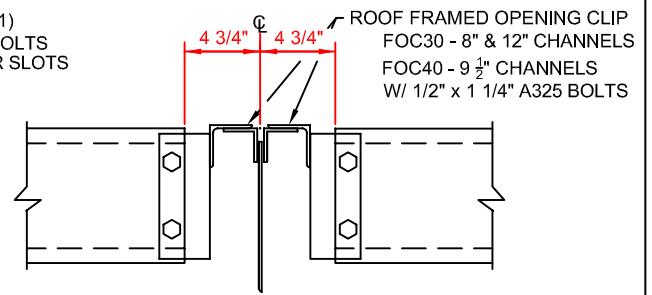
SECTION - B



SECTION - A

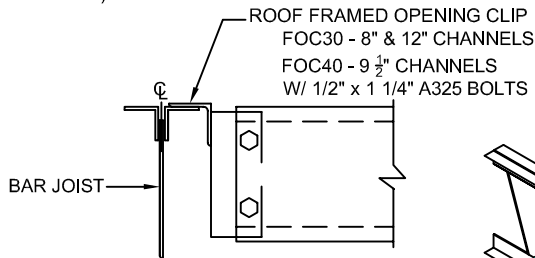


SECTION - D



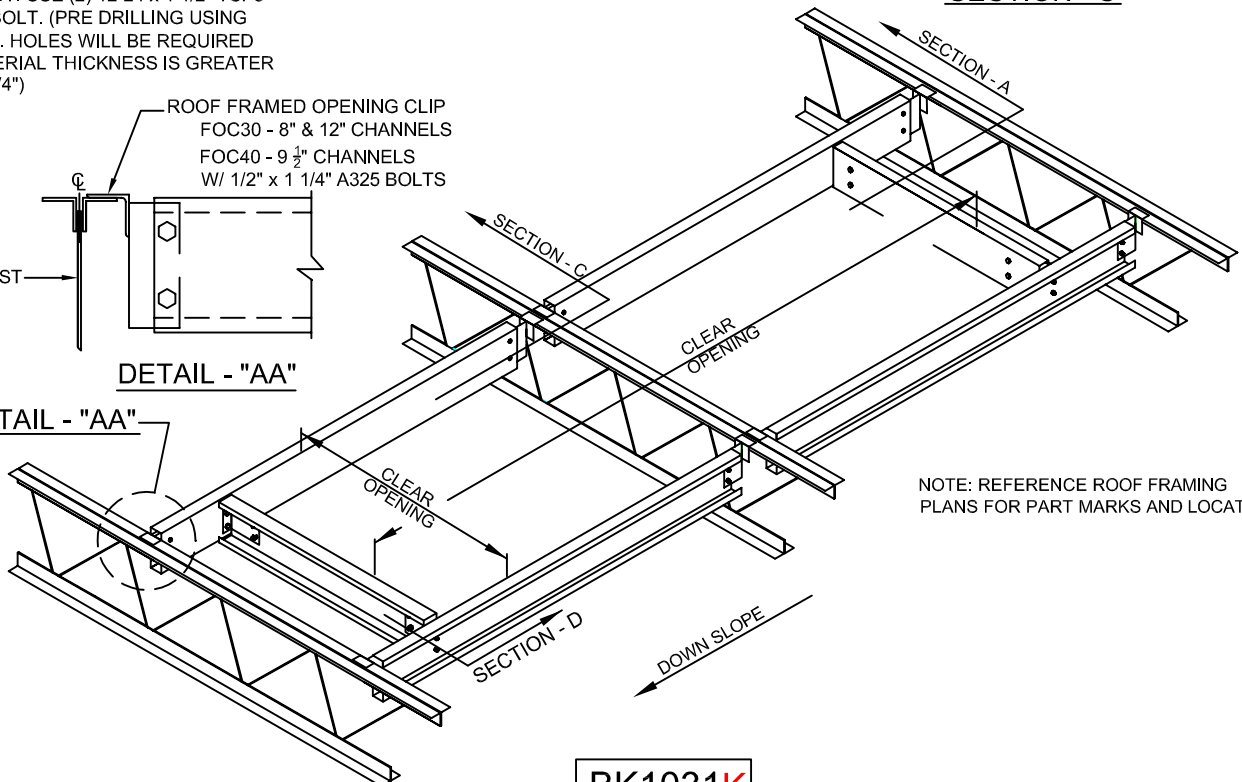
SECTION - C

ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP  
TO JOIST. USE (2) 12-24 x 1 1/2" TCP5  
DRILL BOLT. (PRE DRILLING USING  
1/4" DIA. HOLES WILL BE REQUIRED  
IF MATERIAL THICKNESS IS GREATER  
THAN 1/4")



DETAIL - "AA"

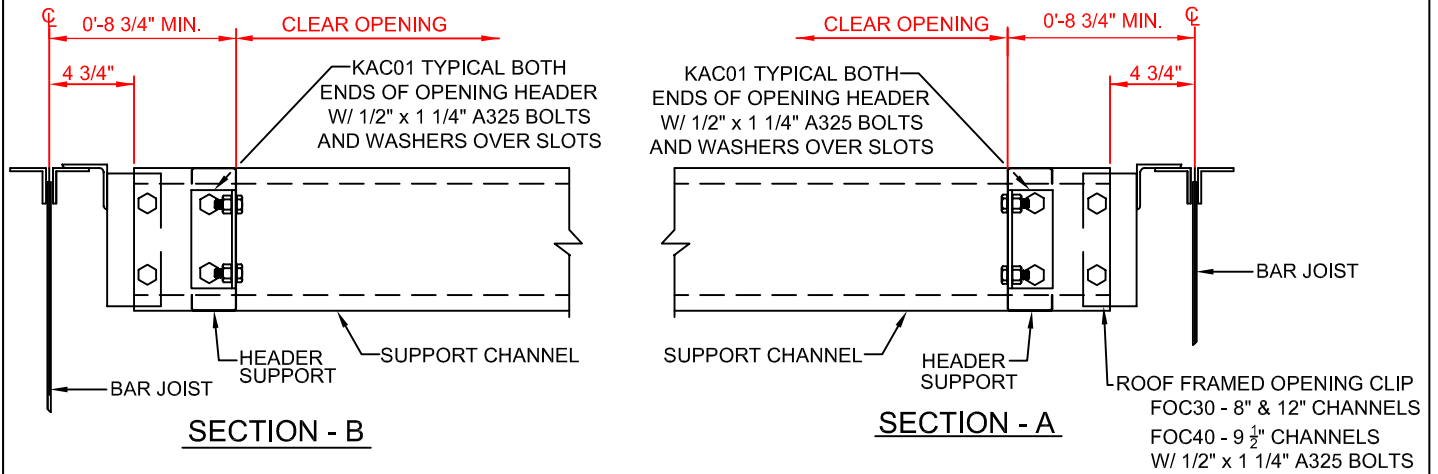
DETAIL - "AA"



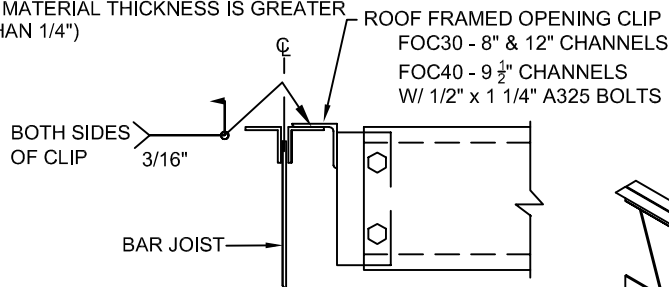
NOTE: REFERENCE ROOF FRAMING  
PLANS FOR PART MARKS AND LOCATION.

BK1031K

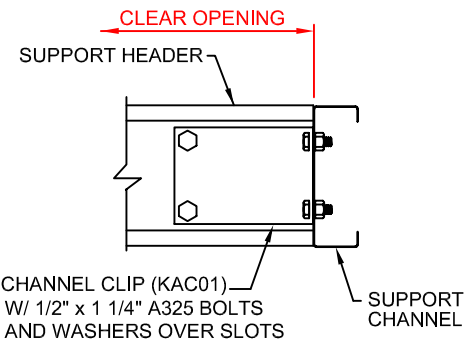
ROOF OPENINGS FOR RTU (NOT BY KBS) <= 1200#  
AND > 5'-0, BOLTED JOIST. ALL ROOF TYPES



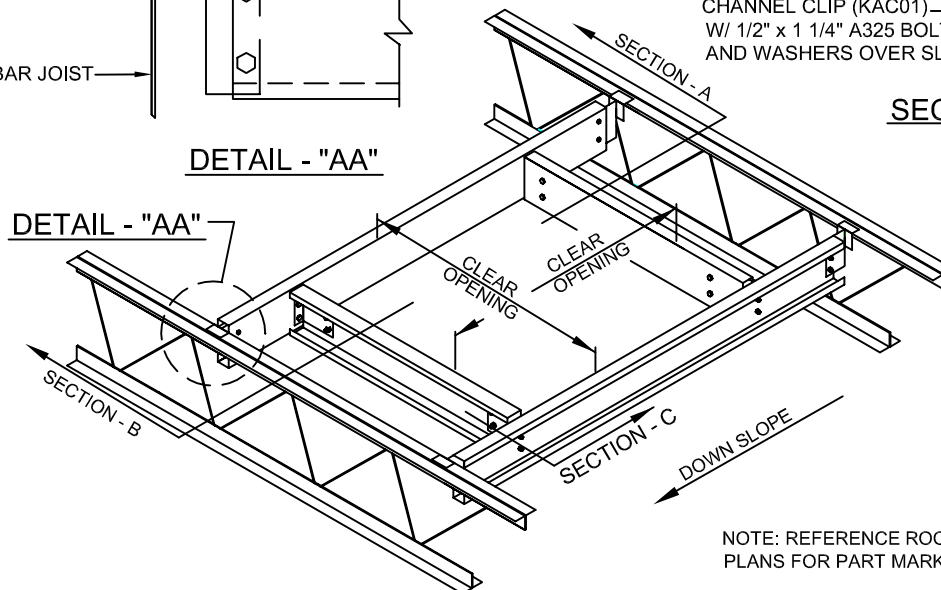
ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP TO JOIST, OPTION. USE (2) 12-24 x 1 1/2" TCP5 DRILL BOLT. (PRE DRILLING USING 1/4" DIA. HOLES WILL BE REQUIRED IF MATERIAL THICKNESS IS GREATER THAN 1/4")



DETAIL - "AA"



SECTION - C

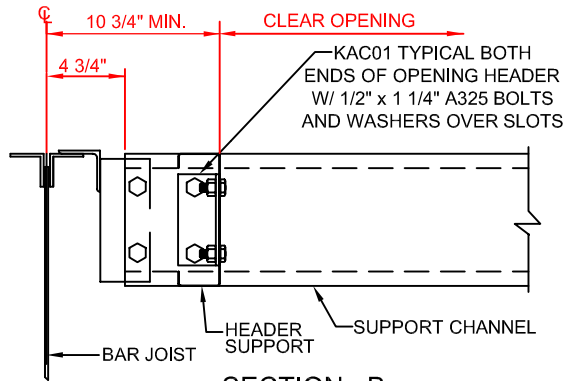


NOTE: REFERENCE ROOF FRAMING PLANS FOR PART MARKS AND LOCATION.

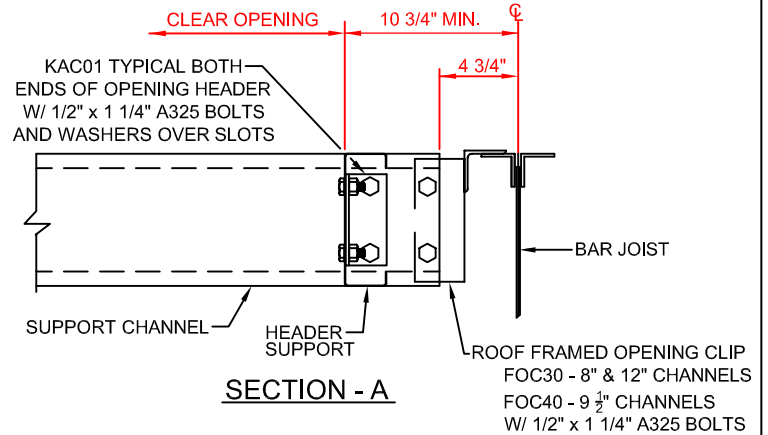
BK1040K

ROOF OPENINGS FOR RTU (NOT BY KBS) <= 1200#  
AND <5'-0", WELDED JOIST. ALL ROOF TYPES

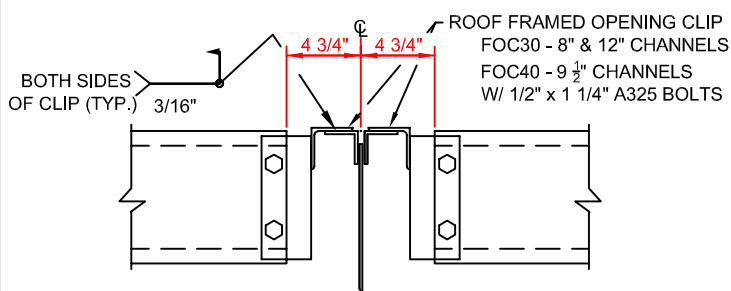




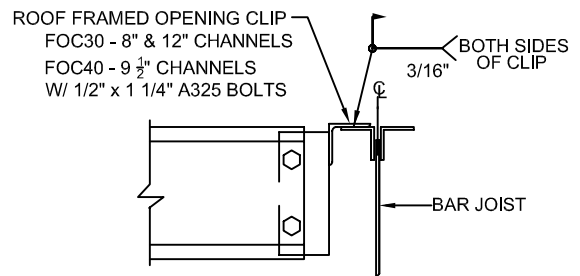
SECTION - B



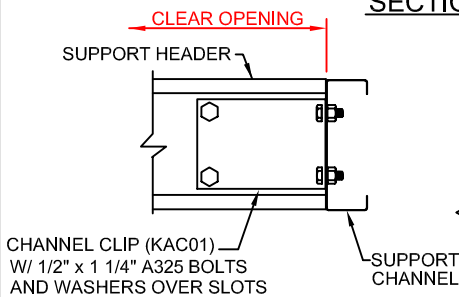
SECTION - A



SECTION - C

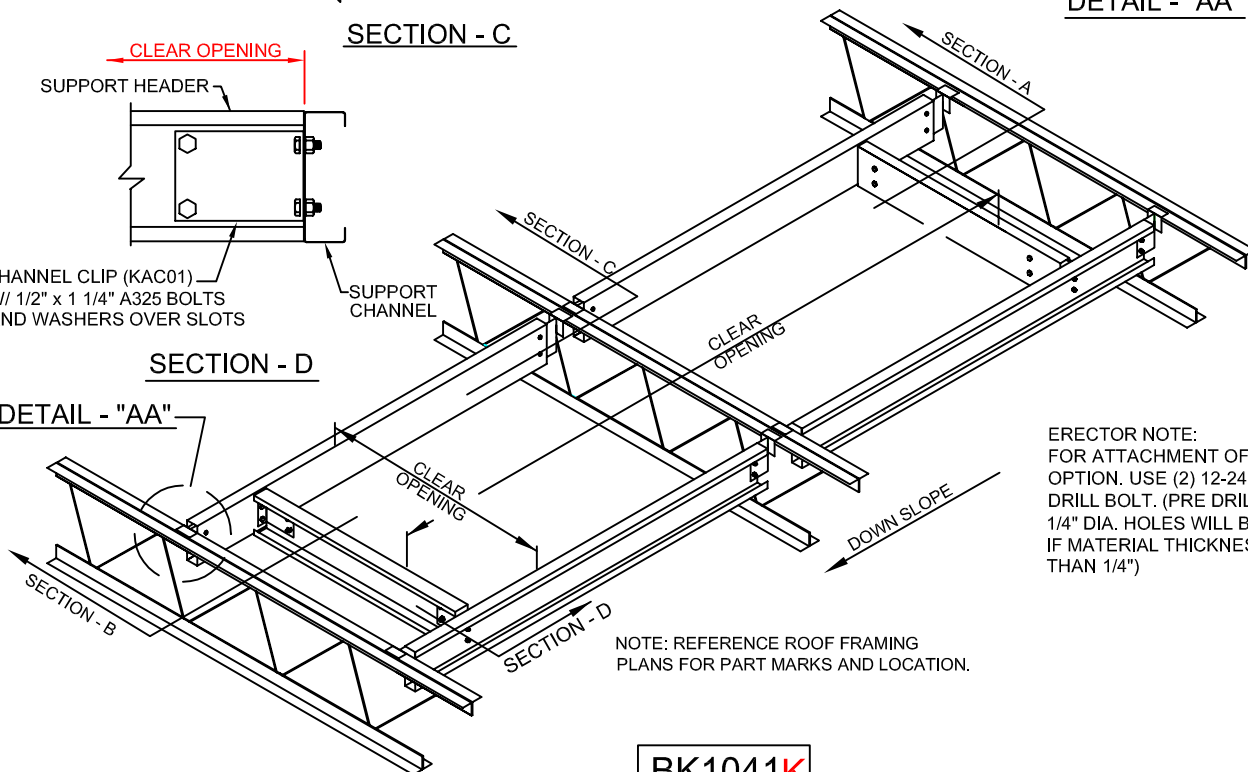


DETAIL - "AA"



SECTION - D

DETAIL - "AA"

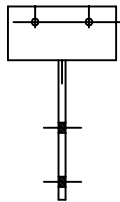
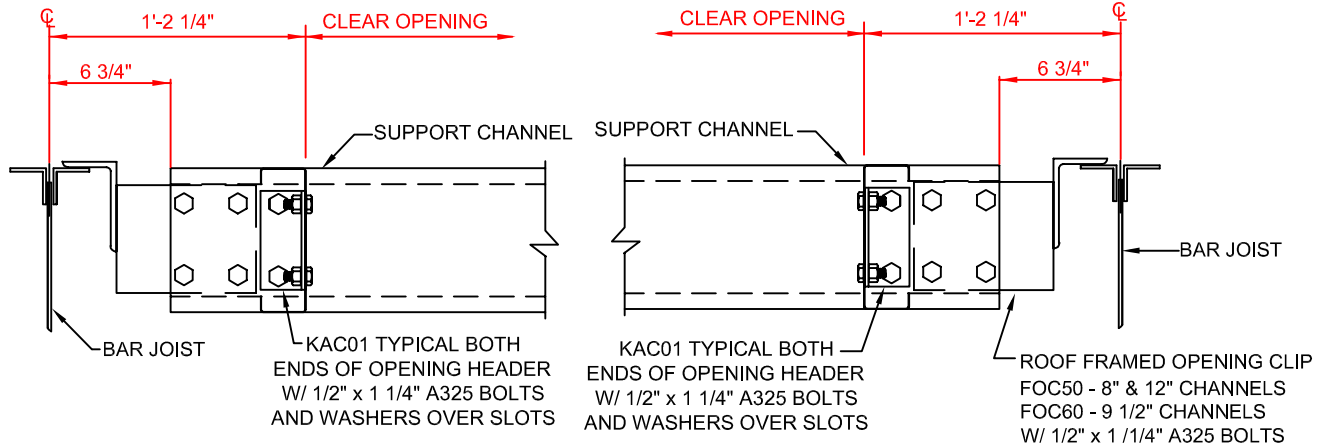


ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP TO JOIST,  
OPTION. USE (2) 12-24 x 1 1/2" TCP5  
DRILL BOLT. (PRE DRILLING USING  
1/4" DIA. HOLES WILL BE REQUIRED  
IF MATERIAL THICKNESS IS GREATER  
THAN 1/4")

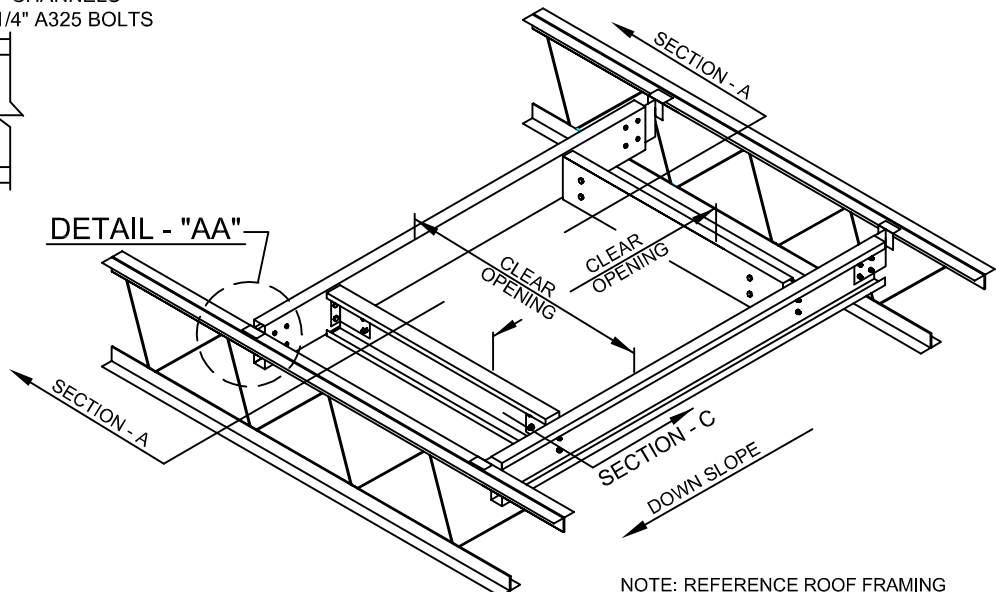
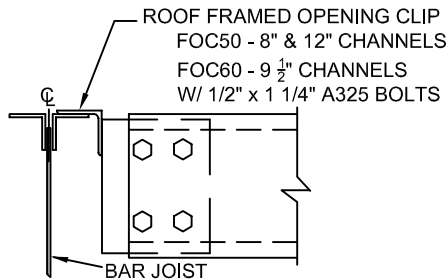
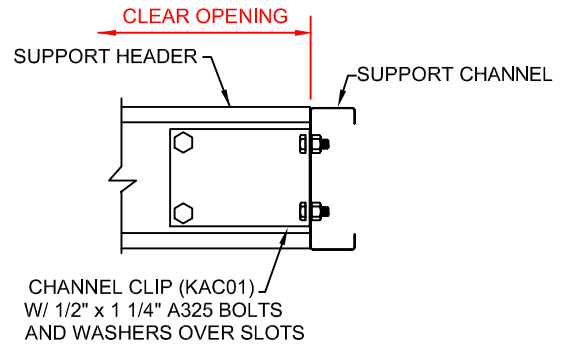
NOTE: REFERENCE ROOF FRAMING  
PLANS FOR PART MARKS AND LOCATION.

BK1041K

ROOF OPENINGS FOR RTU (NOT BY KBS) <= 1200#  
AND > 5'-0, WELDED JOIST. ALL ROOF TYPES



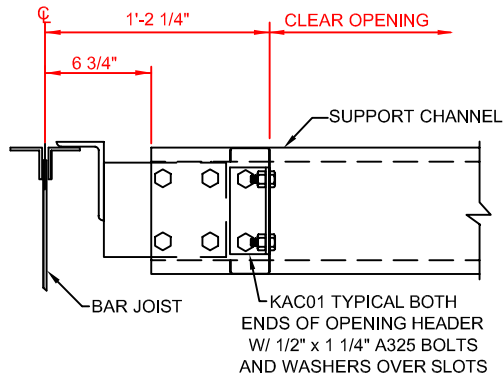
ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP  
TO JOIST. USE (2) 12-24 x 1 1/2" TCP5  
DRILL BOLT. (PRE DRILLING USING  
1/4" DIA. HOLES WILL BE REQUIRED  
IF MATERIAL THICKNESS IS GREATER  
THAN 1/4")



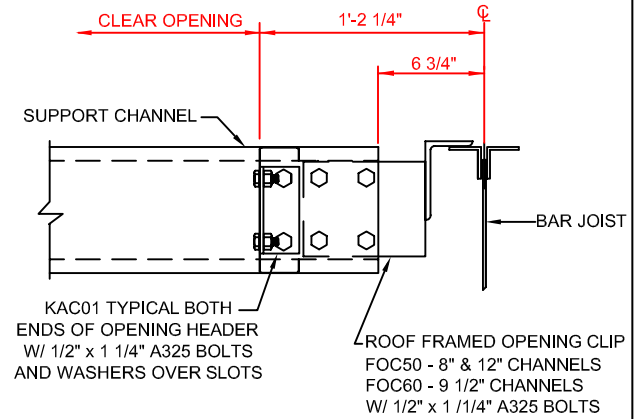
NOTE: REFERENCE ROOF FRAMING  
PLANS FOR PART MARKS AND LOCATION.

BK1050K

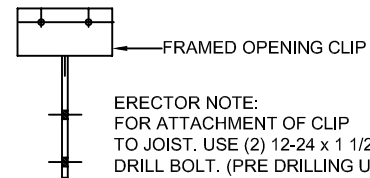
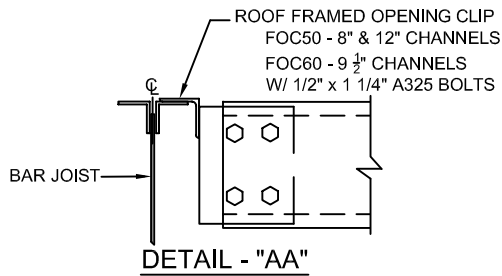
ROOF OPENINGS FOR RTU (NOT BY KBS) > 1200#  
AND <5'-0, BOLTED JOIST. ALL ROOF TYPES



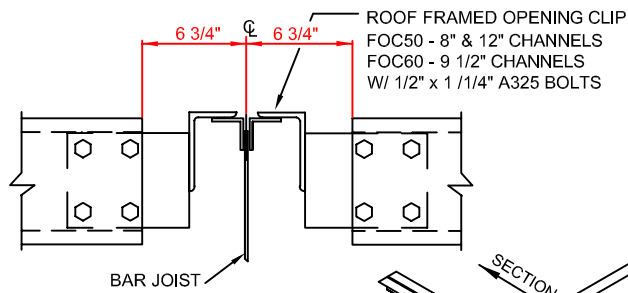
SECTION - B



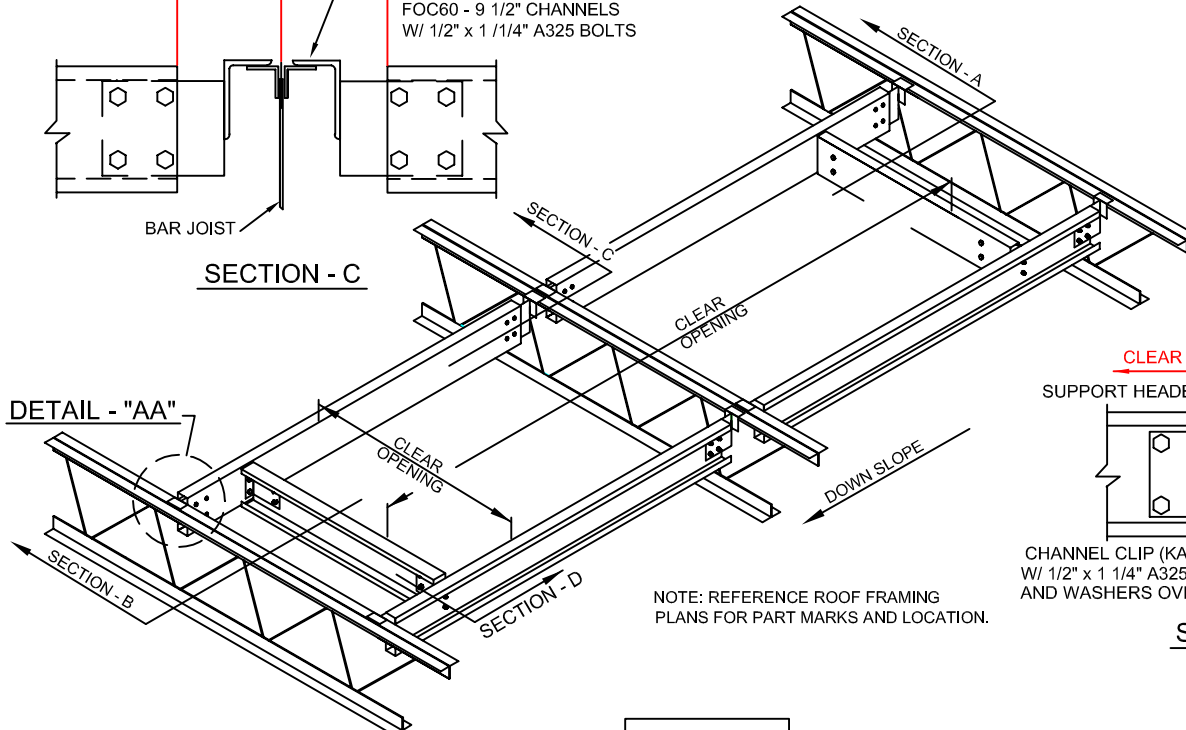
SECTION - A



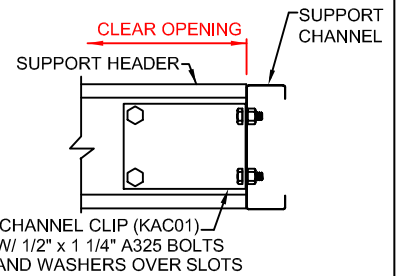
ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP  
TO JOIST. USE (2) 12-24 x 1 1/2" TCP5  
DRILL BOLT. (PRE DRILLING USING  
1/4" DIA. HOLES WILL BE REQUIRED  
IF MATERIAL THICKNESS IS GREATER  
THAN 1/4")



SECTION - C



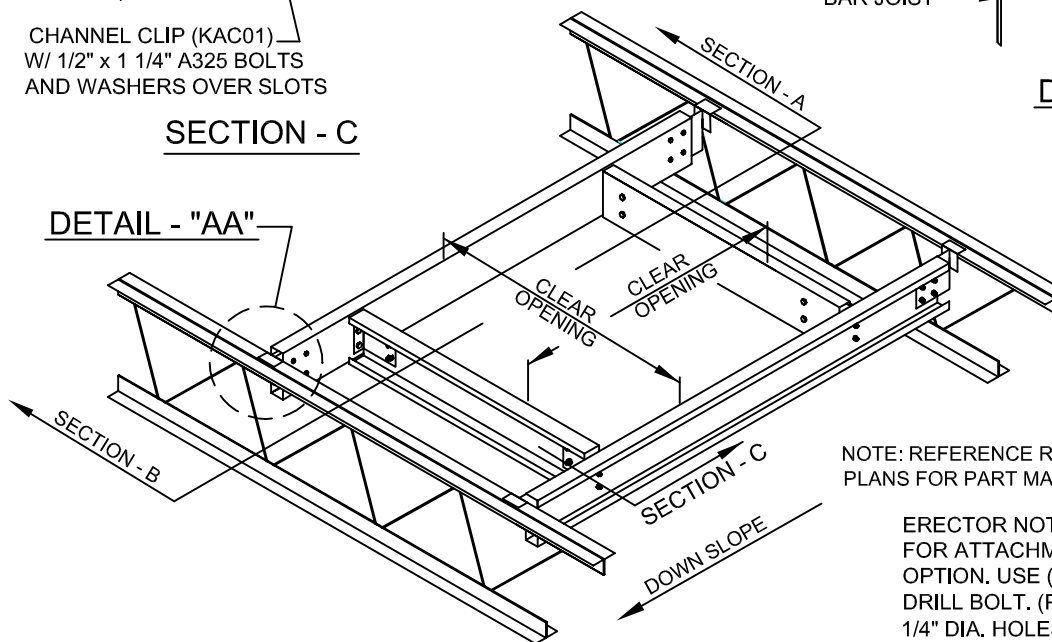
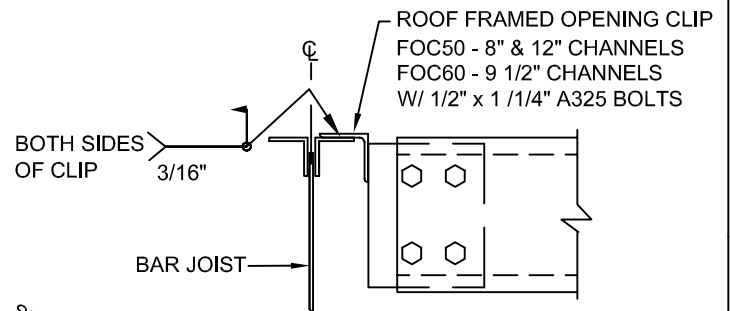
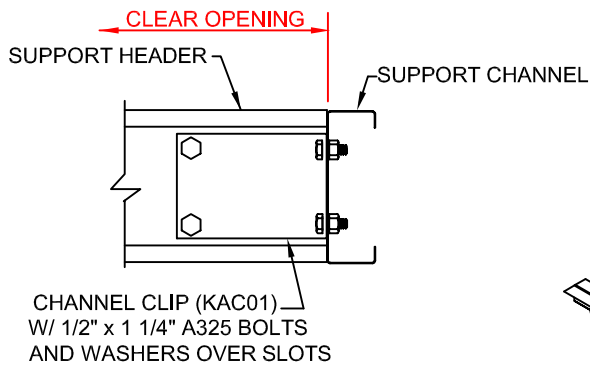
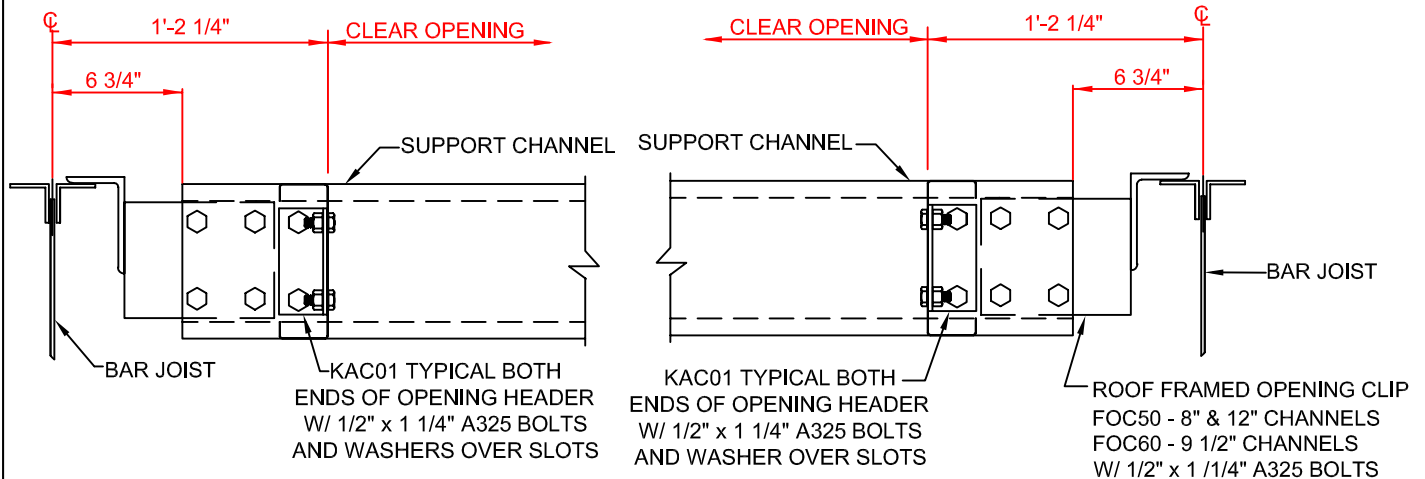
NOTE: REFERENCE ROOF FRAMING  
PLANS FOR PART MARKS AND LOCATION.



SECTION - D

BK1051K

ROOF OPENINGS FOR RTU (NOT BY KBS) > 1200#  
AND > 5'-0", BOLTED JOIST. ALL ROOF TYPES

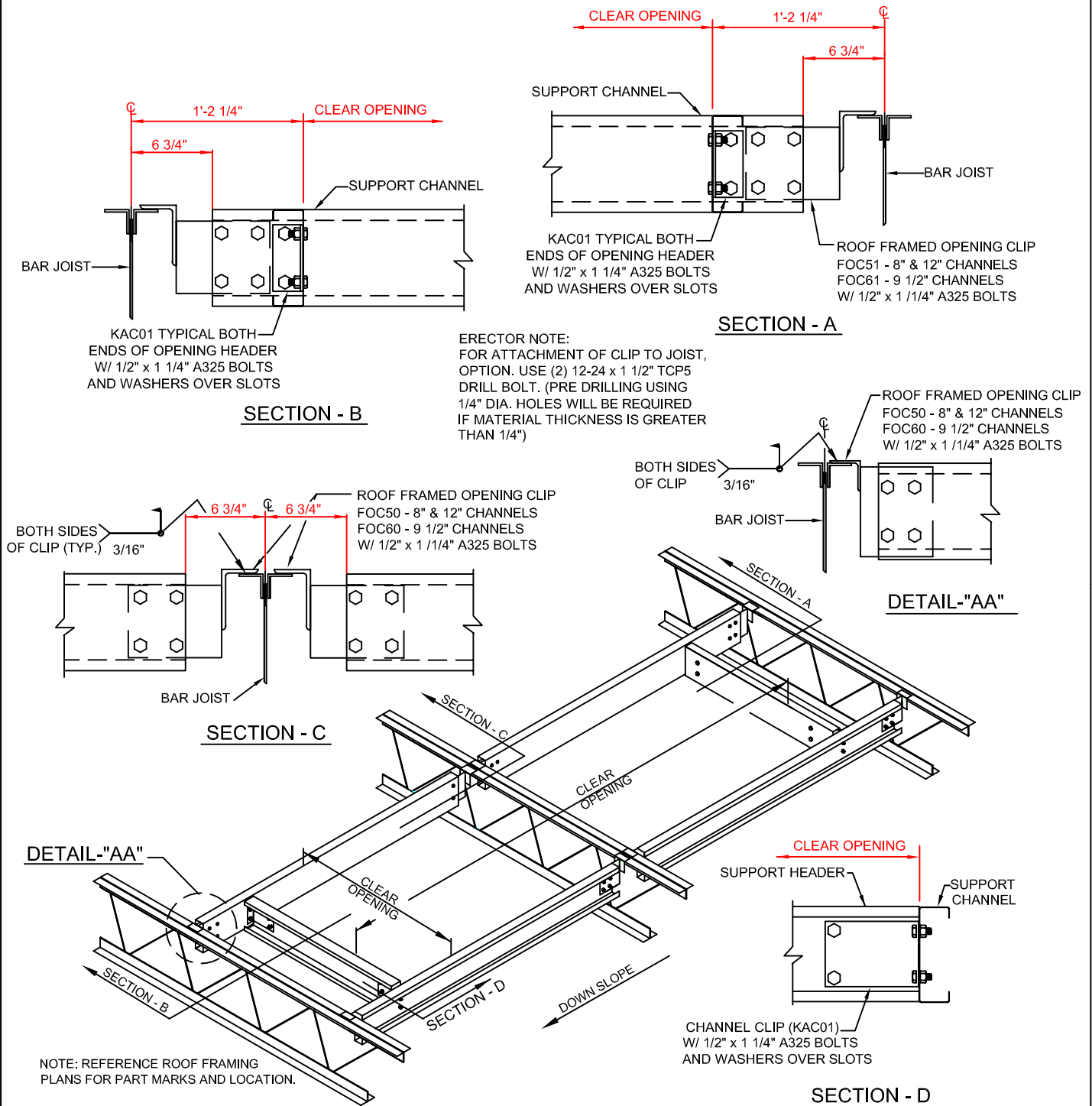


NOTE: REFERENCE ROOF FRAMING PLANS FOR PART MARKS AND LOCATION.

ERECTOR NOTE:  
FOR ATTACHMENT OF CLIP TO JOIST, OPTION. USE (2) 12-24 x 1 1/2" TCP5 DRILL BOLT. (PRE DRILLING USING 1/4" DIA. HOLES WILL BE REQUIRED IF MATERIAL THICKNESS IS GREATER THAN 1/4")

**BK1060**

ROOF OPENINGS FOR RTU (NOT BY KBS) > 1200#  
AND <5'-0, WELDED JOIST. ALL ROOF TYPES



BK1061K

ROOF OPENINGS FOR RTU (NOT BY KBS) > 1200#  
AND > 5'-0", WELDED JOIST. ALL ROOF TYPES