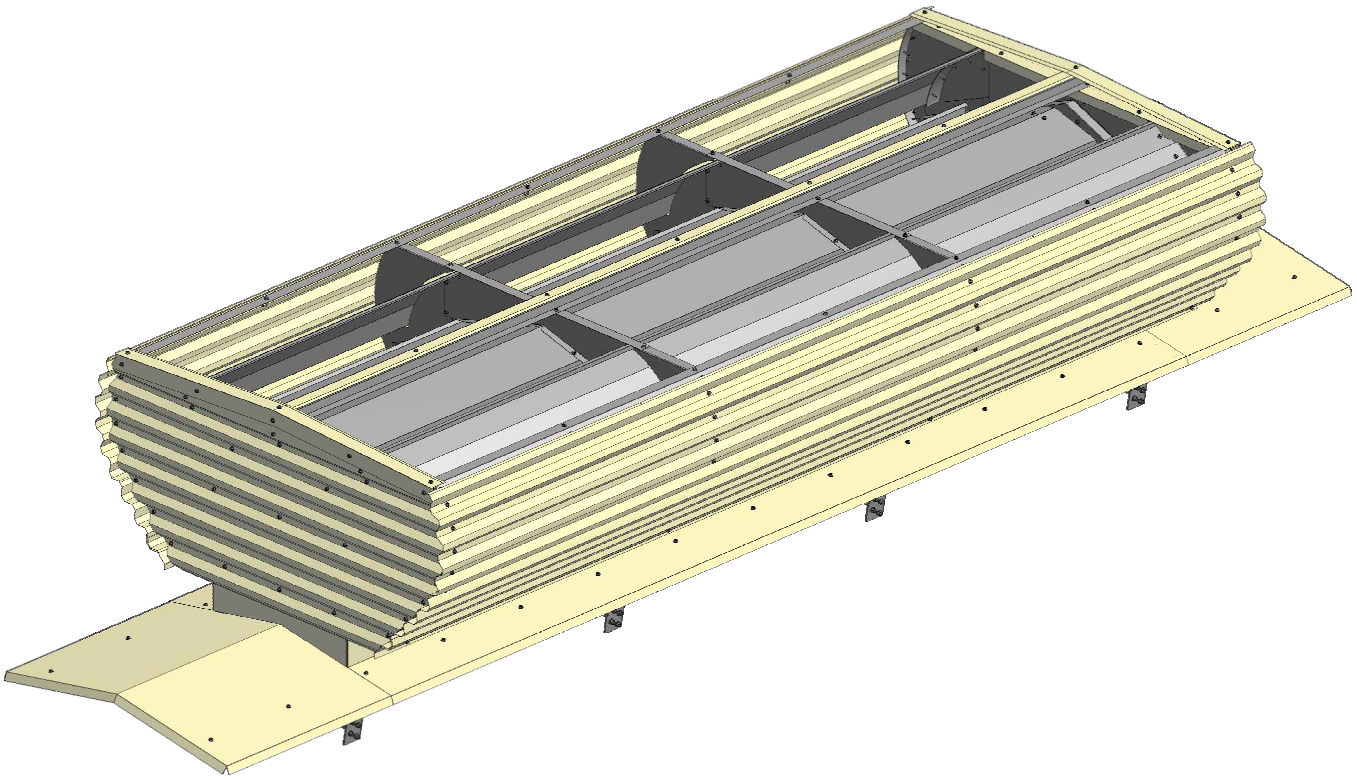
Airocle™



IVR Group Pty Ltd T/as Airocle
HIGH CAPACITY CONTINUOUS RIDGE VENTILATOR
3RV & 3SV 600 - 750

ASSEMBLY INSTRUCTIONS

V:10-2013

CONTENTS

Airocle™

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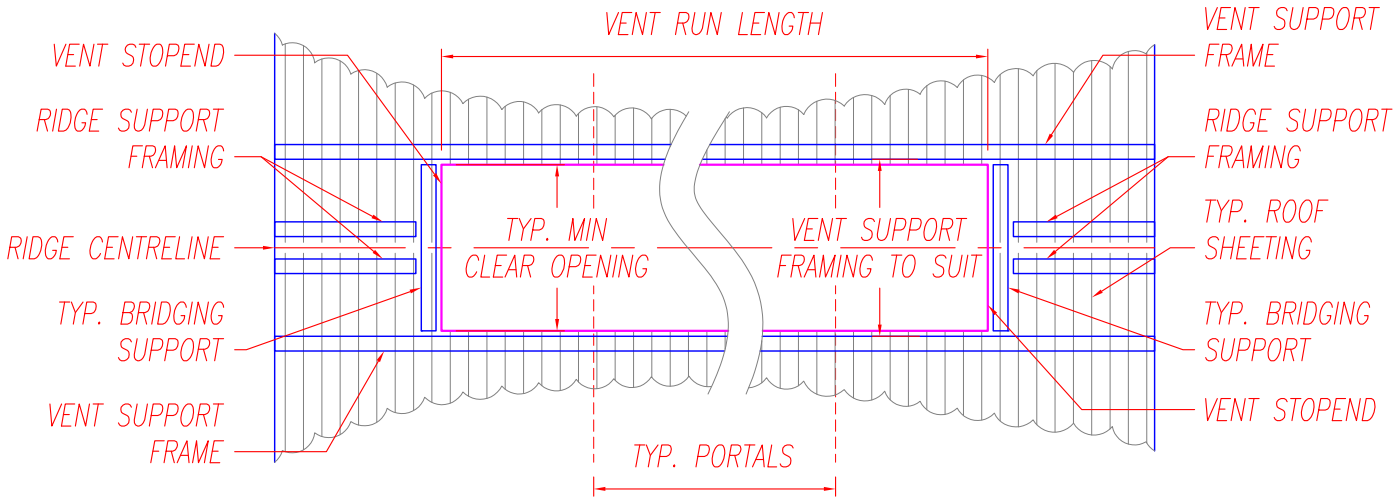
PRE-INSTALLATION CHECK LIST

- Check the roof minimum clear opening conforms with the nominated ridge vent being installed.
- The opening is to be fully prepared by roofer (i.e. pans turned up and top of sheet pans fixed to purlin at every lap on both sides of ridge opening to normal roofing practice).
- Check that the purlins are in the correct position for fixing down the Flashings for the nominated vent (as per Roof Framing Plan).
- Ensure purlins beyond each stopend location provide suitable support for roof sheeting & ridge capping (as per Roof Framing Plan).
- Where cleats are pre installed by builder, check centres in both directions and ensure they conform with the cleat layout plan as provided by IVR.
- Where cleats are to be installed, refer the mounting method and locations conform with the cleat layout and connection plan as provided by IVR.

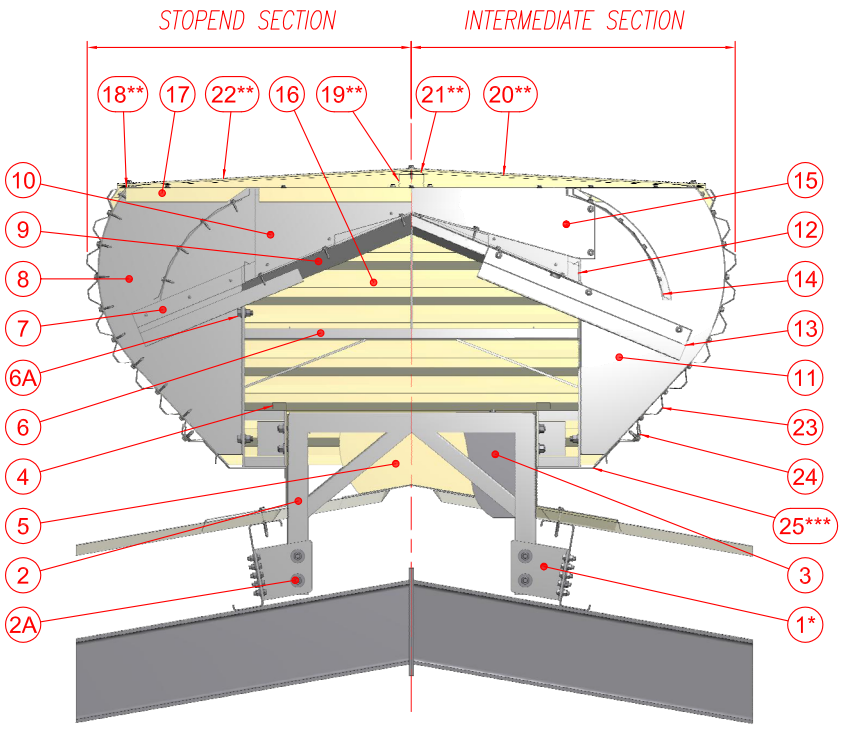


ROOF FRAMING PLAN
PLAN VIEW : NTS

REMEMBER:

- All lap joints except Windband must be water tight using sealant provided.
- Laps of all components are governed by frame centres. In some cases, bolt holes may not appear to align between components. Ensure a podger is used in an adjacent hole to align for fixing.
- The ventilator is assembled using 20-14 x 20 tek screws (with neo washers) throughout, unless specified otherwise.
- Generally, no neo's are required for Windbands or Birdwire/Birdmesh supports & Trims.

TYPICAL SECTIONS



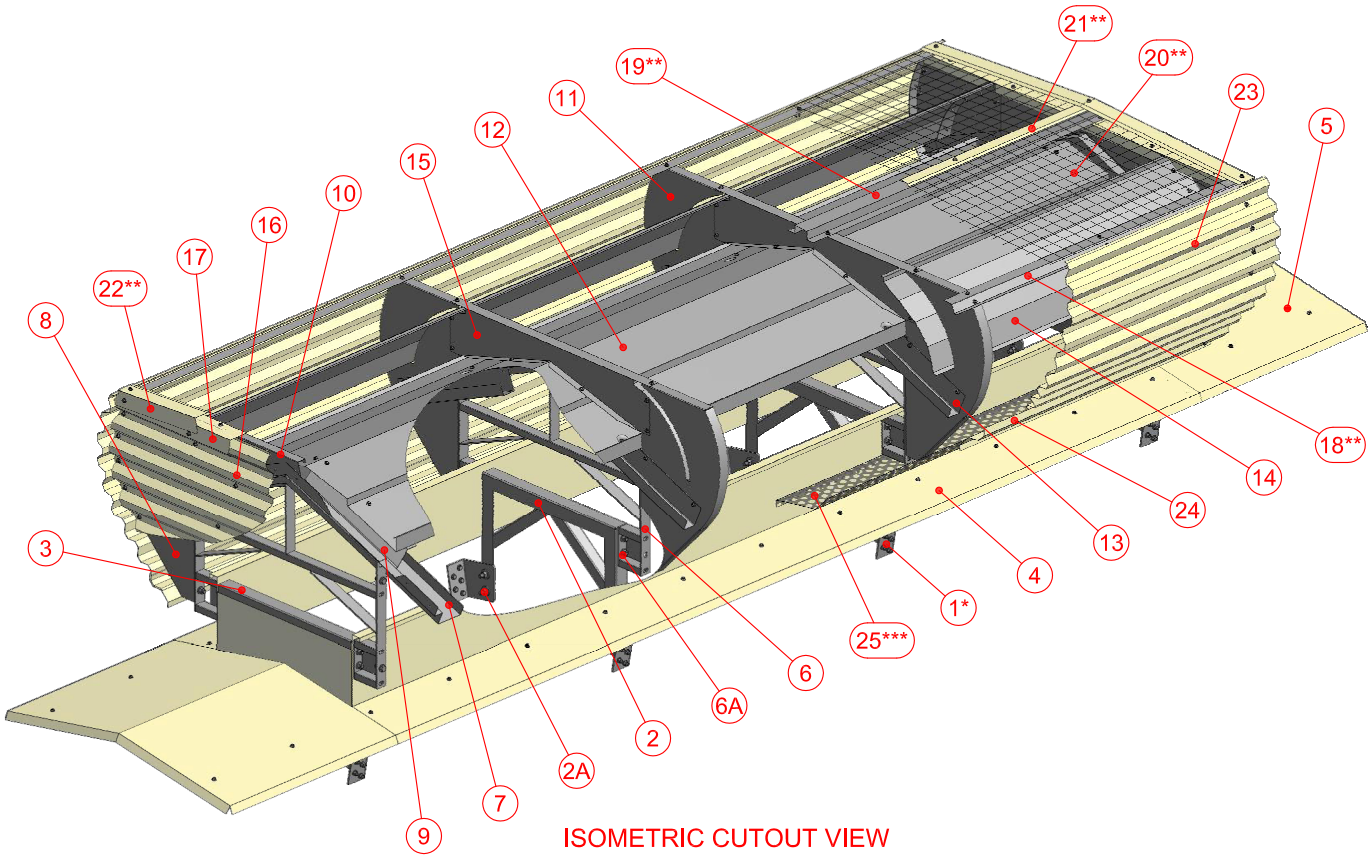
FRONT SECTION VIEW

LRV-HC-600 TO 750 PARTS LIST			
PART #	DESCRIPTION	MAT'L FINISH	QTY
1*	CONNECTION CLEAT	TO ENG DETAIL	2/ FRAME
2	BASE FRAME	GAL	1/ FRAME
2A	BOLT, NUT & WASHERS	M12 x 40	4/ FRAME
3	STOPEND SOAKER SUPPORT	Z/A	1/ RUN
4	STACK FLASHING	C/B or Z/A	REFER LAYOUT
5	STOPEND SOAKER	C/B or Z/A	2/ RUN
6	MAIN FRAME	GAL	1/ FRAME
6A	BOLT, NUT & WASHERS	M12 x 30	8/ FRAME
7	STOPEND DRAIN	Z/A	4/ RUN
8	STOPEND WING (L&R)	PL	4/ RUN
9	STOPEND GUTTER	GAL	2/ RUN
10	STOPEND WINDJUMP	Z/A	2/ RUN
11	INTERMEDIATE WING (L&R)	PL	2/ INTER FRAME
12	STACK CAPPING	Z/A	REFER LAYOUT
13	DRAIN	Z/A	2/ INTER FRAME
14	GUIDEVANE	Z/A	REFER LAYOUT
15	CTR WINDJUMP DIAPHRAGM	Z/A	1/ INTER FRAME
16	STOPEND SHEETING	SPANDEK C/B or Z/A	2/ RUN
17	STOPEND CAPPING	C/B or Z/A	2/ RUN
18**	BIRDWIRE WINDBAND TRIM	GAL	REFER LAYOUT
19**	BIRDWIRE TOPHAT	C/B or Z/A	REFER LAYOUT
20**	BIRDWIRE MESH	AS SPEC.	REFER LAYOUT
21**	BIRDWIRE TOPHAT TRIM	C/B or Z/A	REFER LAYOUT
22**	BIRDWIRE STOPEND CAPPING	C/B or Z/A	2/ RUN
23	WINDBAND SHEETING	SPANDEK C/B or Z/A	REFER LAYOUT
24	LOWER WINDBAND TRIM	C/B or Z/A	REFER LAYOUT
25***	LOWER VERMIN MESH	AS SPEC.	REFER LAYOUT
26	FIXINGS (TYP. TEK SCREWS)	AS SPEC.	TO SUIT

* CLEAT OPTION (TYP BY BUILDER)

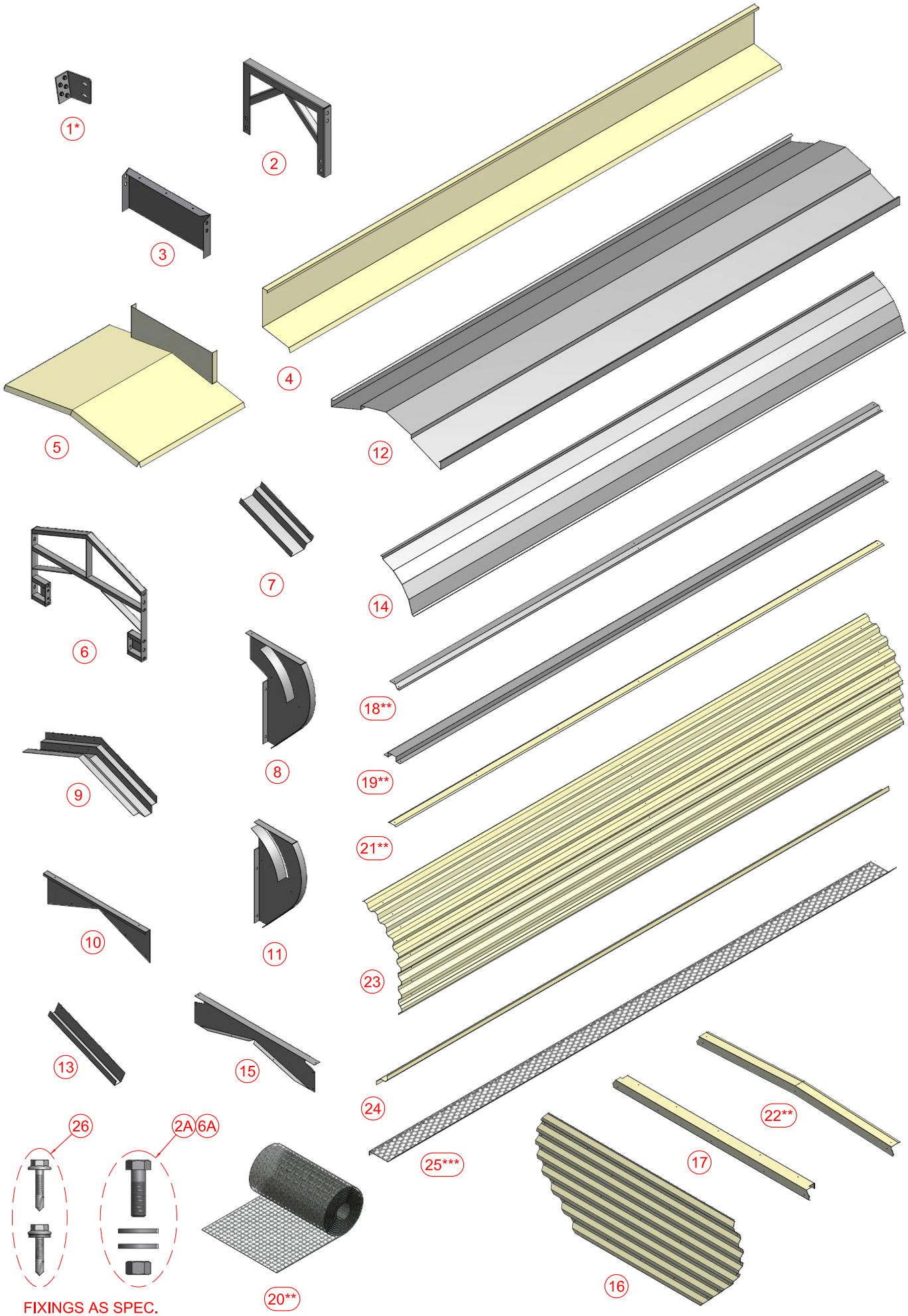
** BIRDMESH OPTION

*** LOWER VERMIN MESH OPTION



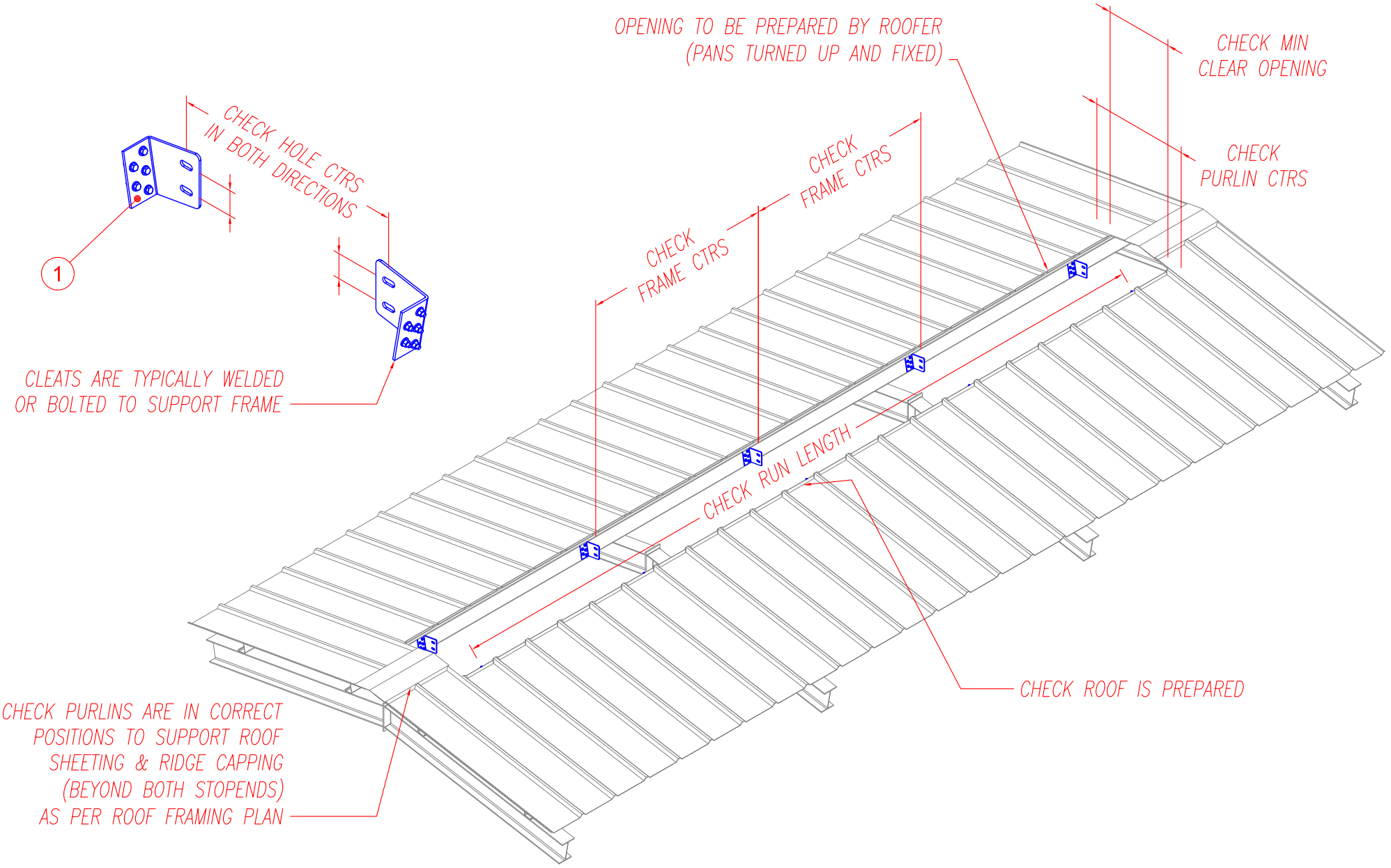
ISOMETRIC CUTOUT VIEW

ITEMS IDENTIFICATION

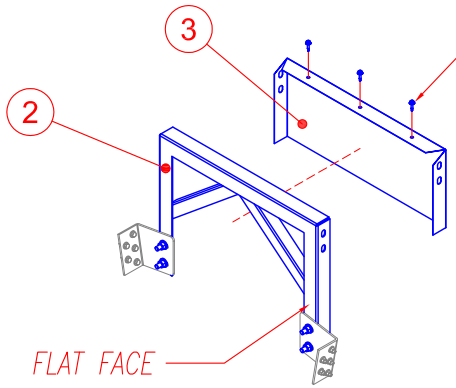


FIXINGS AS SPEC.
PROVIDED BY IVR

* CLEAT OPTION (TYP. BY BUILDER)
** BIRDMESH OPTION
*** LOWER VERMIN MESH OPTION


OPENING TO BE PREPARED BY ROOFER
(PANS TURNED UP AND FIXED)
CHECK MIN
CLEAR OPENING
CHECK HOLE CTRS
IN BOTH DIRECTIONS
CHECK
FRAME CTRS
CHECK
PURLIN CTRS
1
CHECK
FRAME CTRS
CLEATS ARE TYPICALLY WELDED
OR BOLTED TO SUPPORT FRAME
CHECK RUN LENGTH
CHECK ROOF IS PREPARED
CHECK PURLINS ARE IN CORRECT
POSITIONS TO SUPPORT ROOF
SHEETING & RIDGE CAPPING
(BEYOND BOTH STOPENDS)
AS PER ROOF FRAMING PLAN

NOTE: BASE FRAME ORIENTATION IS IMPORTANT, FACE ALL FRAMES IN ONE COMMON DIRECTION.

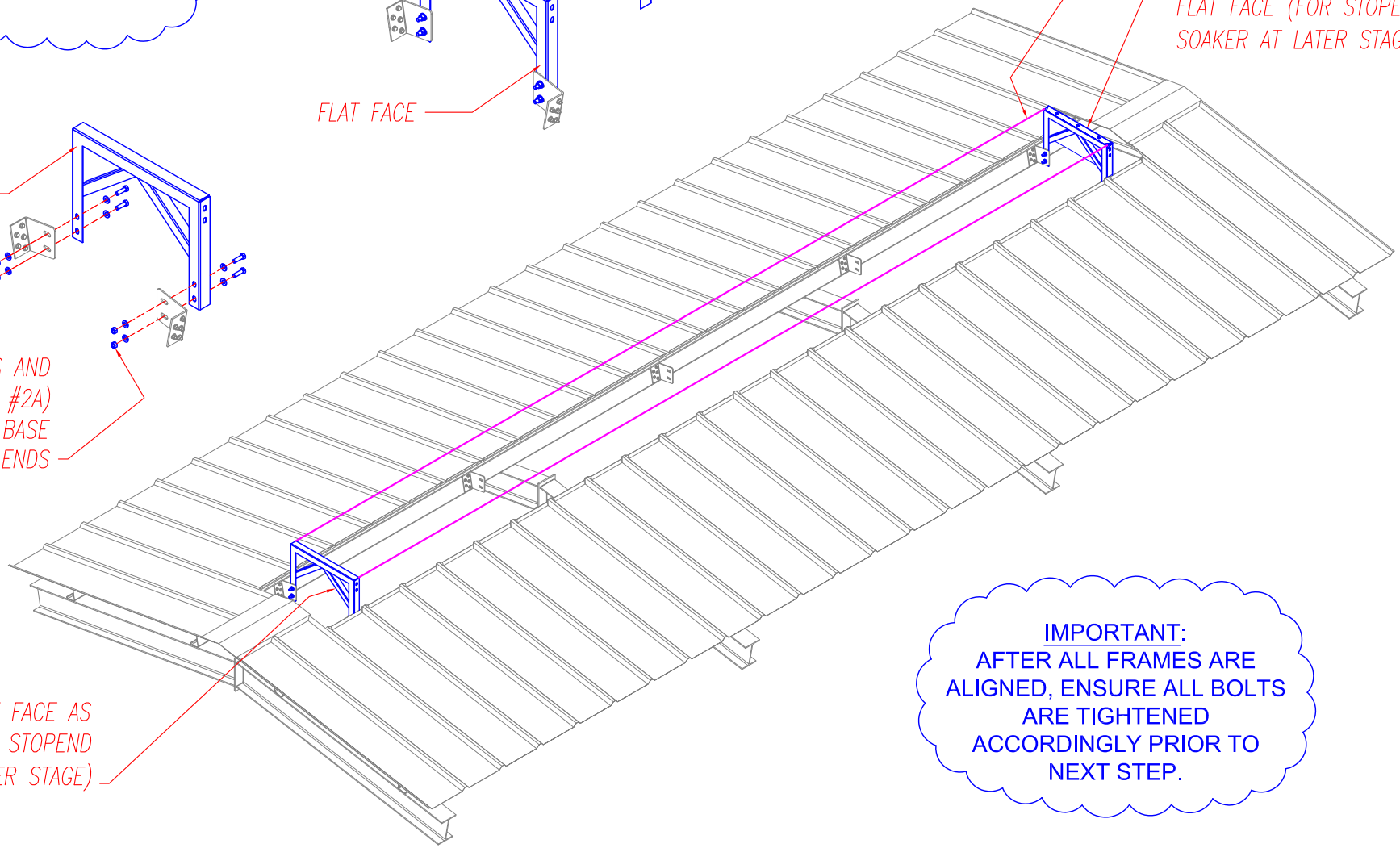


USING TEK SCREWS, FIX STOPEND SOAKER SUPPORT TO THE STOPEND FRAME WITHOUT AN EXTERNAL FLAT FACE

TYPICAL STRING LINE FOR ALIGNMENT OF FRAMES

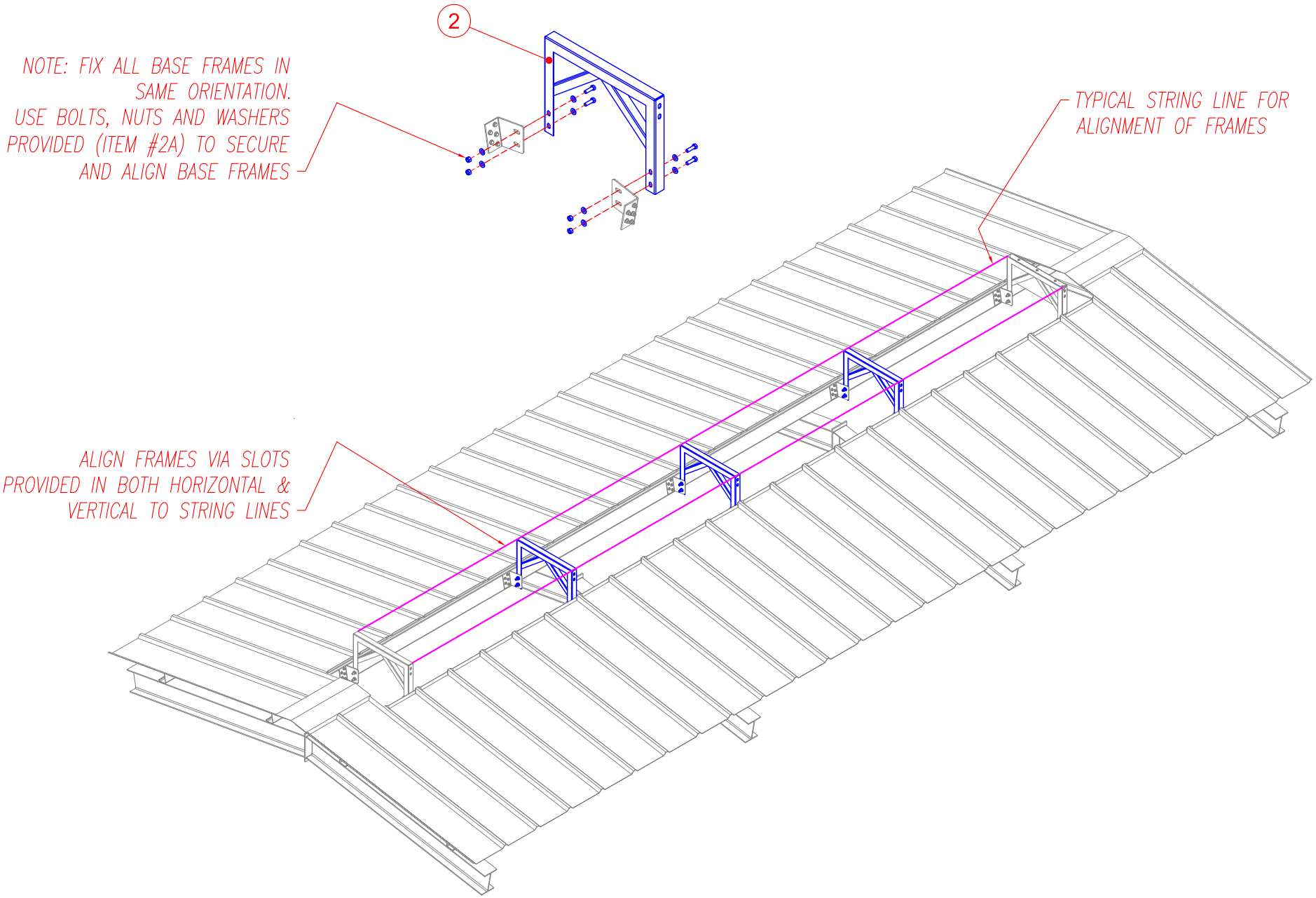
SOAKER SUPPORT AS FLAT FACE (FOR STOPEND SOAKER AT LATER STAGE)

USE BOLTS, NUTS AND WASHERS PROVIDED (ITEM #2A) TO SECURE AND ALIGN BASE FRAMES AT ENDS



BASE FRAME WITH FLAT FACE AS SOAKER SUPPORT (FOR STOPEND SOAKER AT LATER STAGE)

IMPORTANT:
AFTER ALL FRAMES ARE ALIGNED, ENSURE ALL BOLTS ARE TIGHTENED ACCORDINGLY PRIOR TO NEXT STEP.

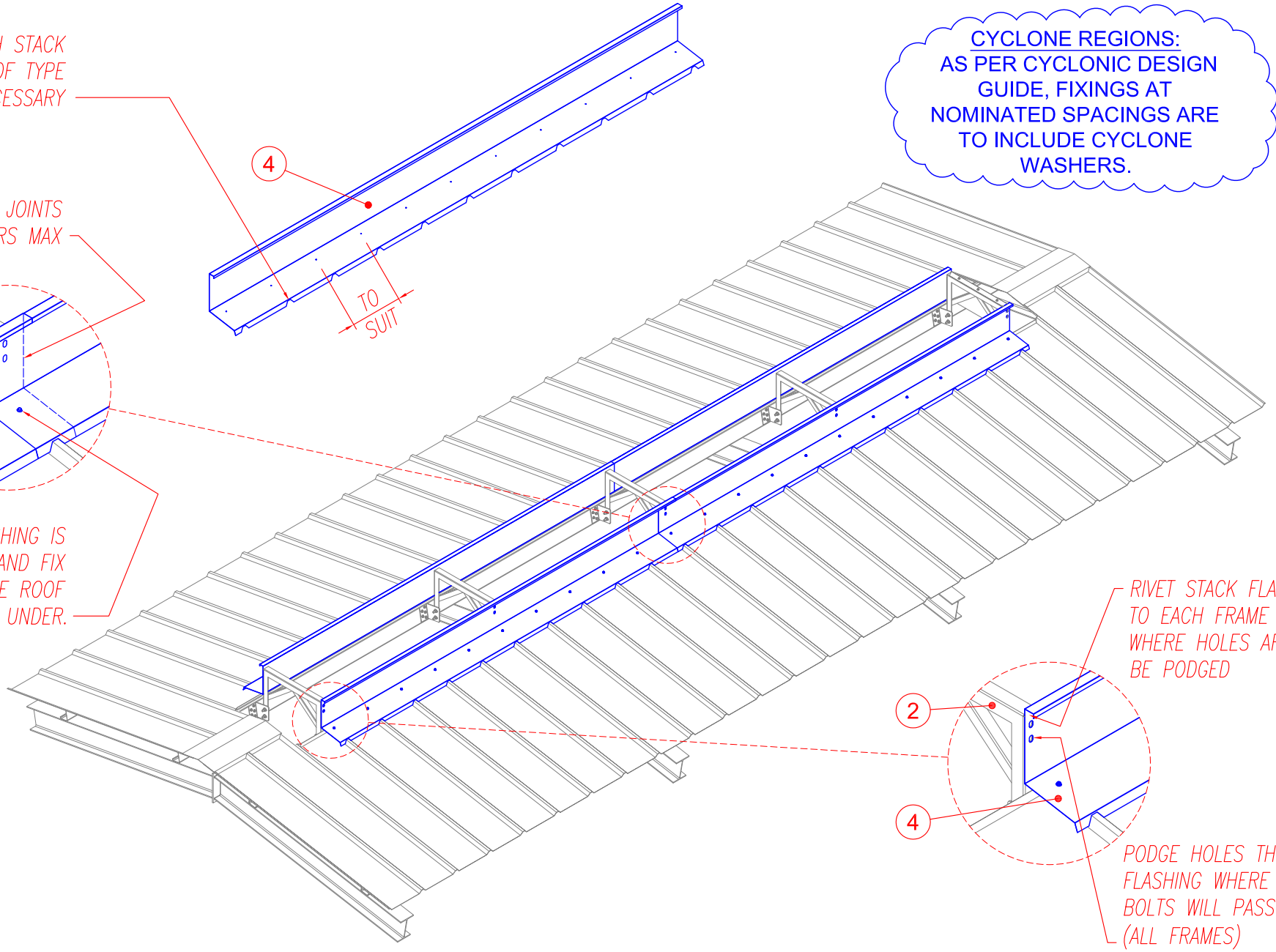

2
NOTE: FIX ALL BASE FRAMES IN SAME ORIENTATION. USE BOLTS, NUTS AND WASHERS PROVIDED (ITEM #2A) TO SECURE AND ALIGN BASE FRAMES
TYPICAL STRING LINE FOR ALIGNMENT OF FRAMES
ALIGN FRAMES VIA SLOTS PROVIDED IN BOTH HORIZONTAL & VERTICAL TO STRING LINES

MARK & NOTCH STACK FLASHING TO SUIT ROOF TYPE AS NECESSARY

RIVET AND SEAL LAP JOINTS AT 50mm CTRS MAX

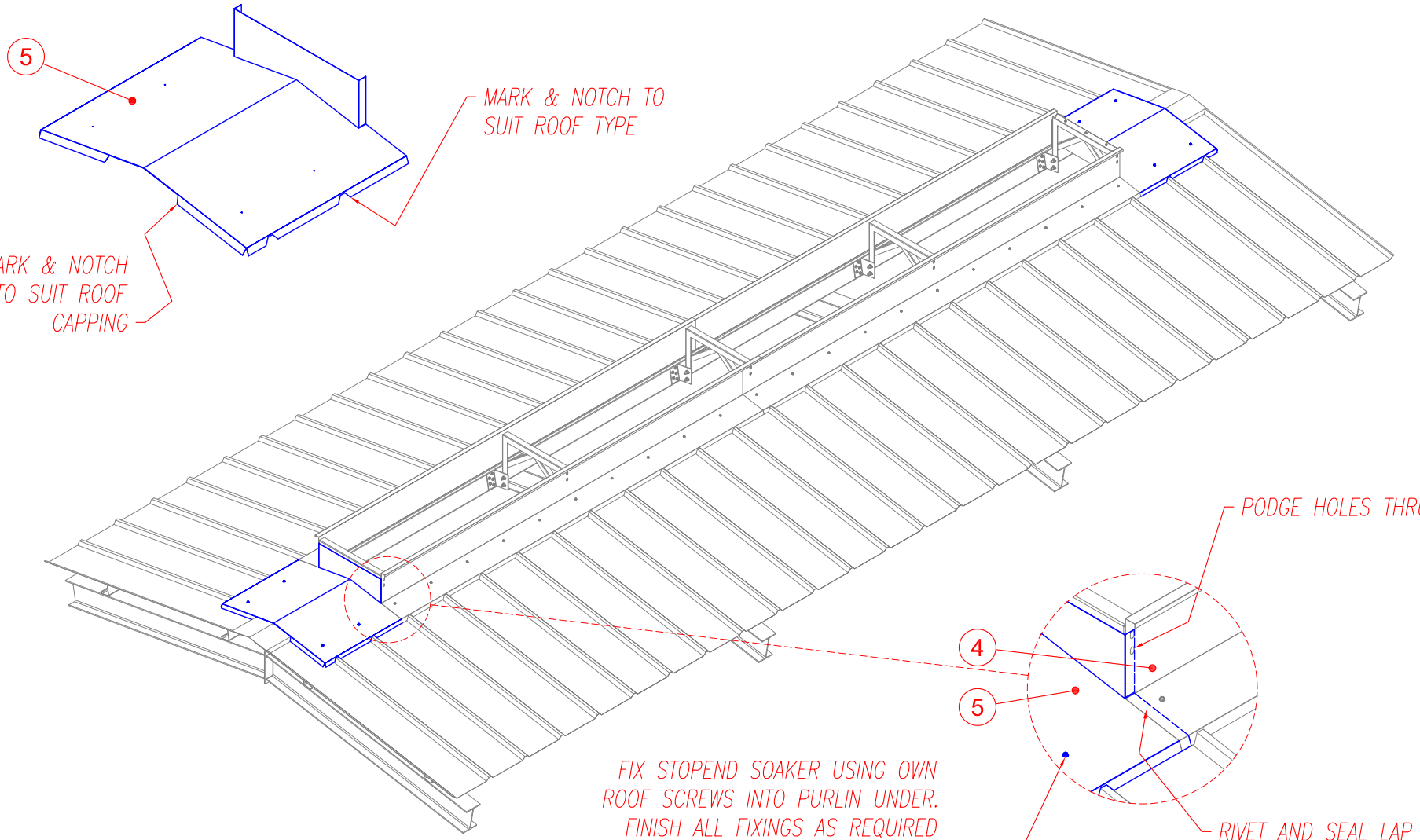
ENSURE STACK FLASHING IS AGAINST MAIN FRAME AND FIX DOWN USING OWN SUITABLE ROOF SCREWS INTO PURLIN UNDER.

CYCLONE REGIONS:
AS PER CYCLONIC DESIGN GUIDE, FIXINGS AT NOMINATED SPACINGS ARE TO INCLUDE CYCLONE WASHERS.

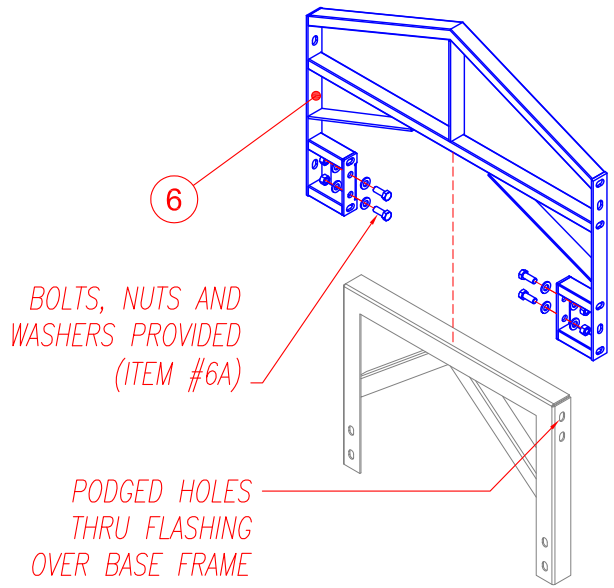


RIVET STACK FLASHING TO EACH FRAME ABOVE WHERE HOLES ARE TO BE PODGED

PODGE HOLES THRU FLASHING WHERE ALL BOLTS WILL PASS (ALL FRAMES)

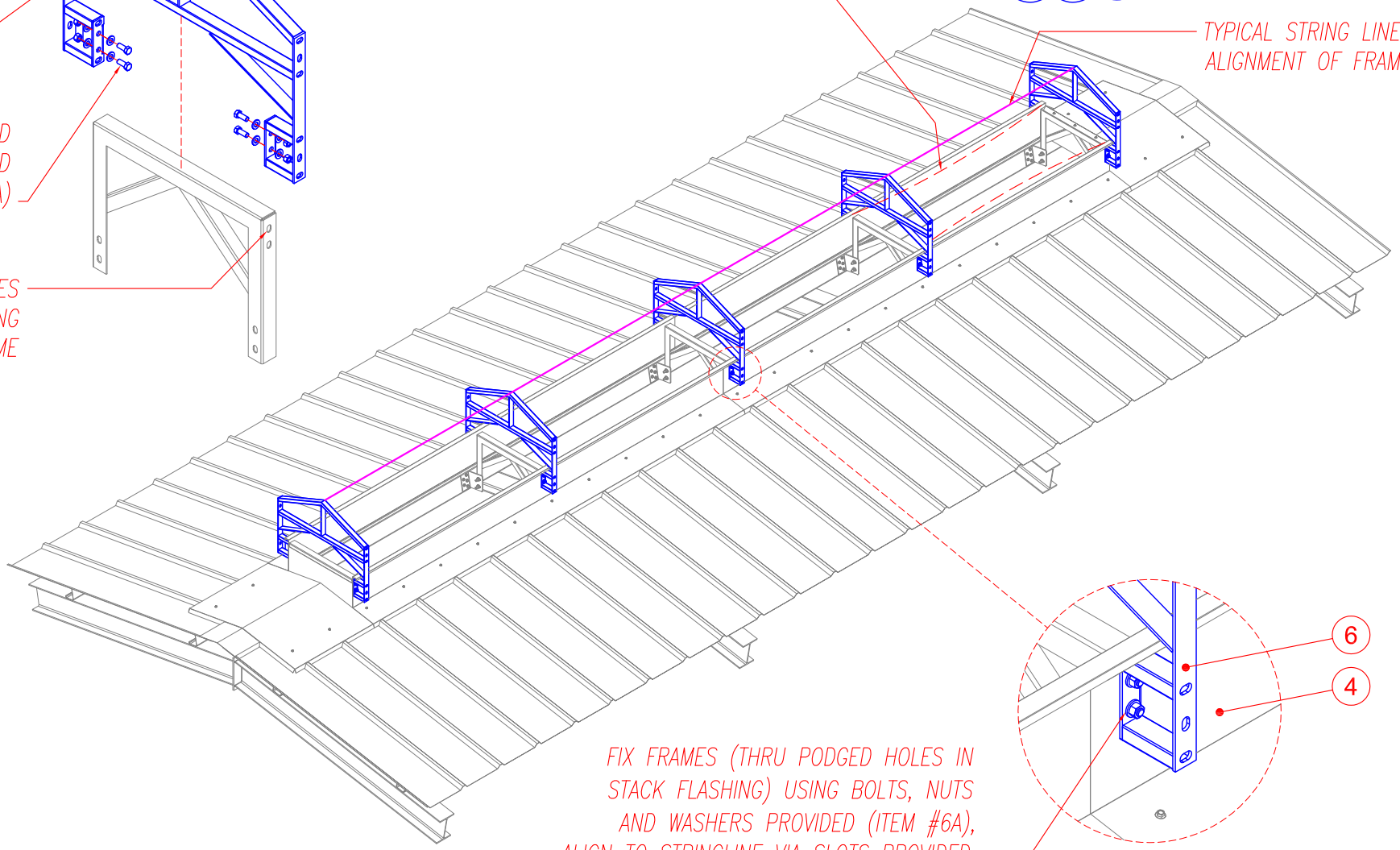

5
MARK & NOTCH TO SUIT ROOF TYPE
MARK & NOTCH TO SUIT ROOF CAPPING
PODGE HOLES THRU
4
5
FIX STOPEND SOAKER USING OWN ROOF SCREWS INTO PURLIN UNDER. FINISH ALL FIXINGS AS REQUIRED INTO PURLINS UNDER.
RIVET AND SEAL LAP JOINTS AT 50mm MAX TO STACK FLASHING AND ROOF CAPPING

NOTE: MAIN FRAME ORIENTATION IS GENERALLY NOT IMPORTANT, BUT FACING ALL IN ONE COMMON DIRECTION IS PREFFERED.



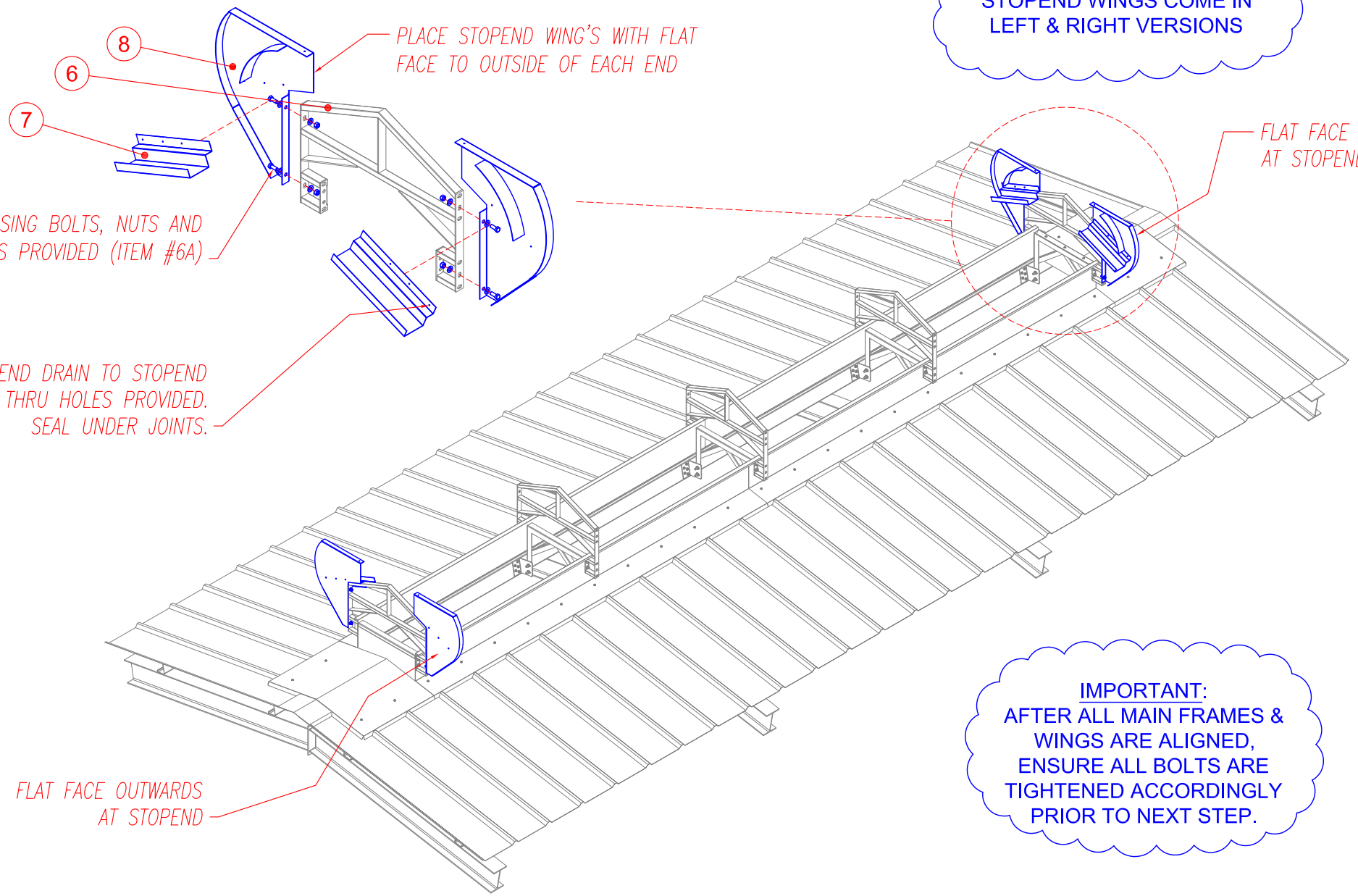
SPRING BACK STACK FLASHING BETWEEN FRAMES TO FIT MAIN FRAME OVER. SLIDE ALONG TO POSITION AT BASE FRAME LOCATION.

TYPICAL STRING LINE FOR ALIGNMENT OF FRAMES

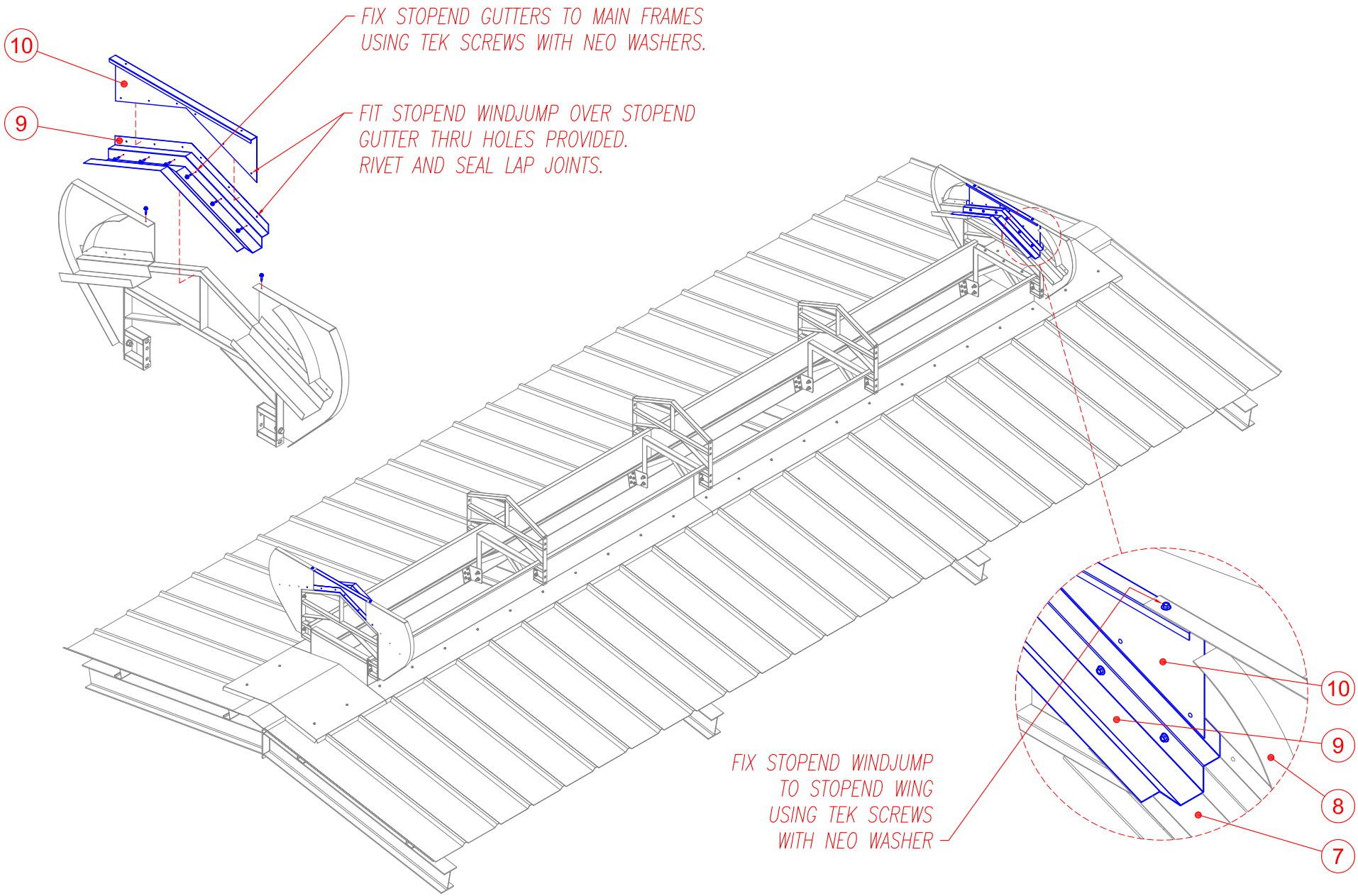


FIX FRAMES (THRU PODGED HOLES IN STACK FLASHING) USING BOLTS, NUTS AND WASHERS PROVIDED (ITEM #6A), ALIGN TO STRINGLINE VIA SLOTS PROVIDED.

NOTE:
STOPEND WINGS COME IN
LEFT & RIGHT VERSIONS

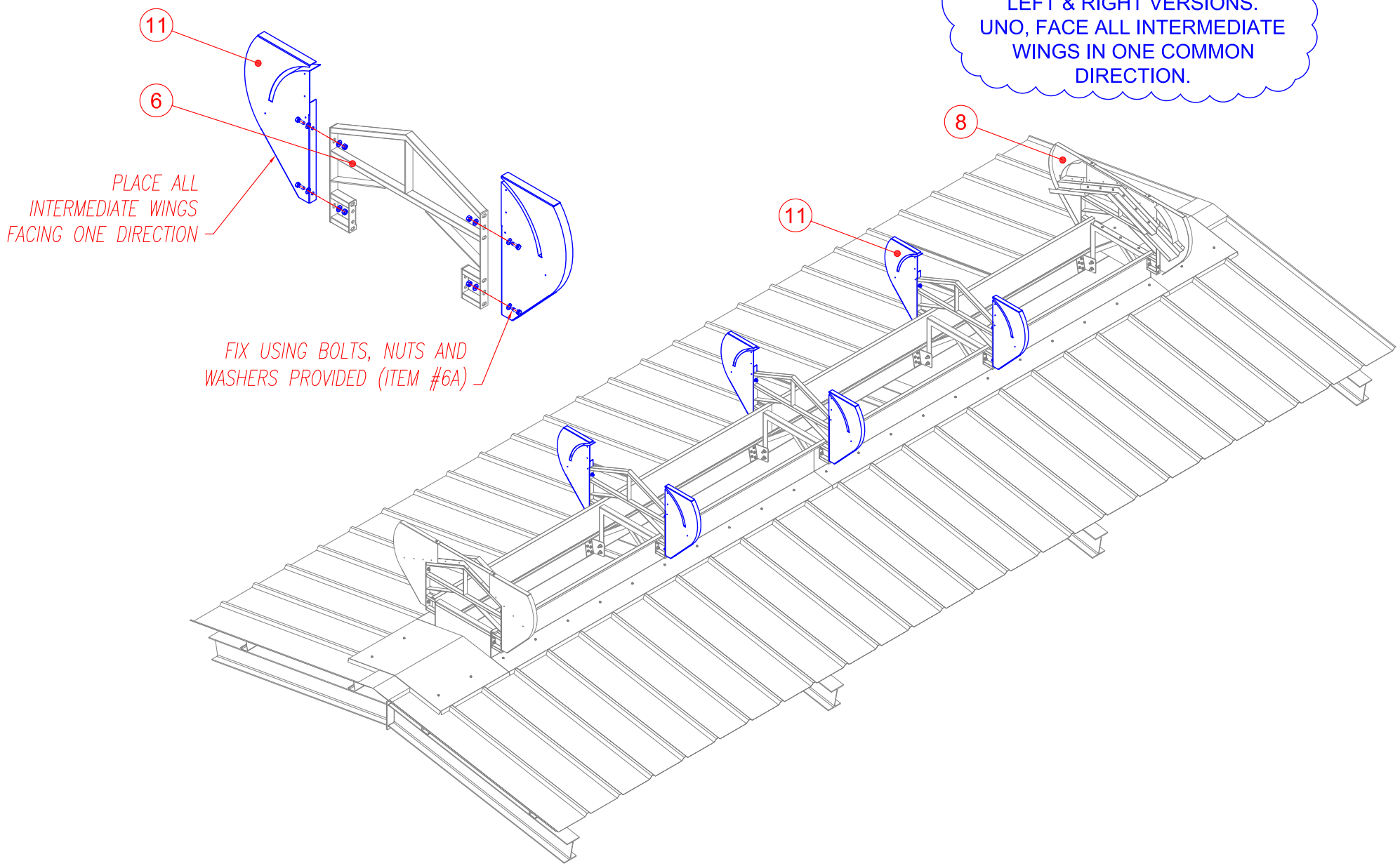


IMPORTANT:
AFTER ALL MAIN FRAMES & WINGS ARE ALIGNED, ENSURE ALL BOLTS ARE TIGHTENED ACCORDINGLY PRIOR TO NEXT STEP.


FIX STOPEND GUTTERS TO MAIN FRAMES
USING TEK SCREWS WITH NEO WASHERS.
FIT STOPEND WINDJUMP OVER STOPEND
GUTTER THRU HOLES PROVIDED.
RIVET AND SEAL LAP JOINTS.
10
9
FIX STOPEND WINDJUMP
TO STOPEND WING
USING TEK SCREWS
WITH NEO WASHER
10
9
8
7

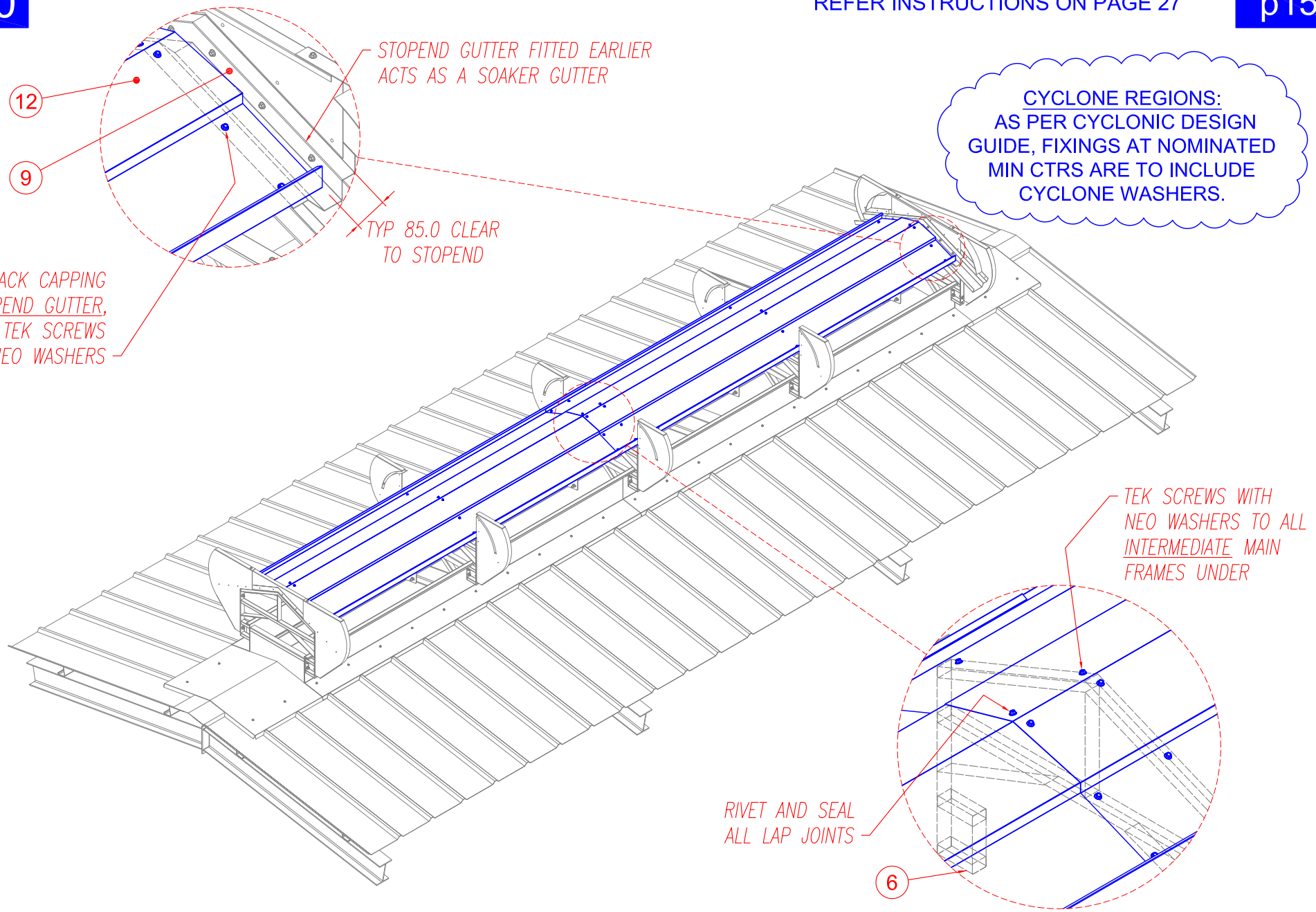
REFER INSTRUCTIONS ON PAGE 27

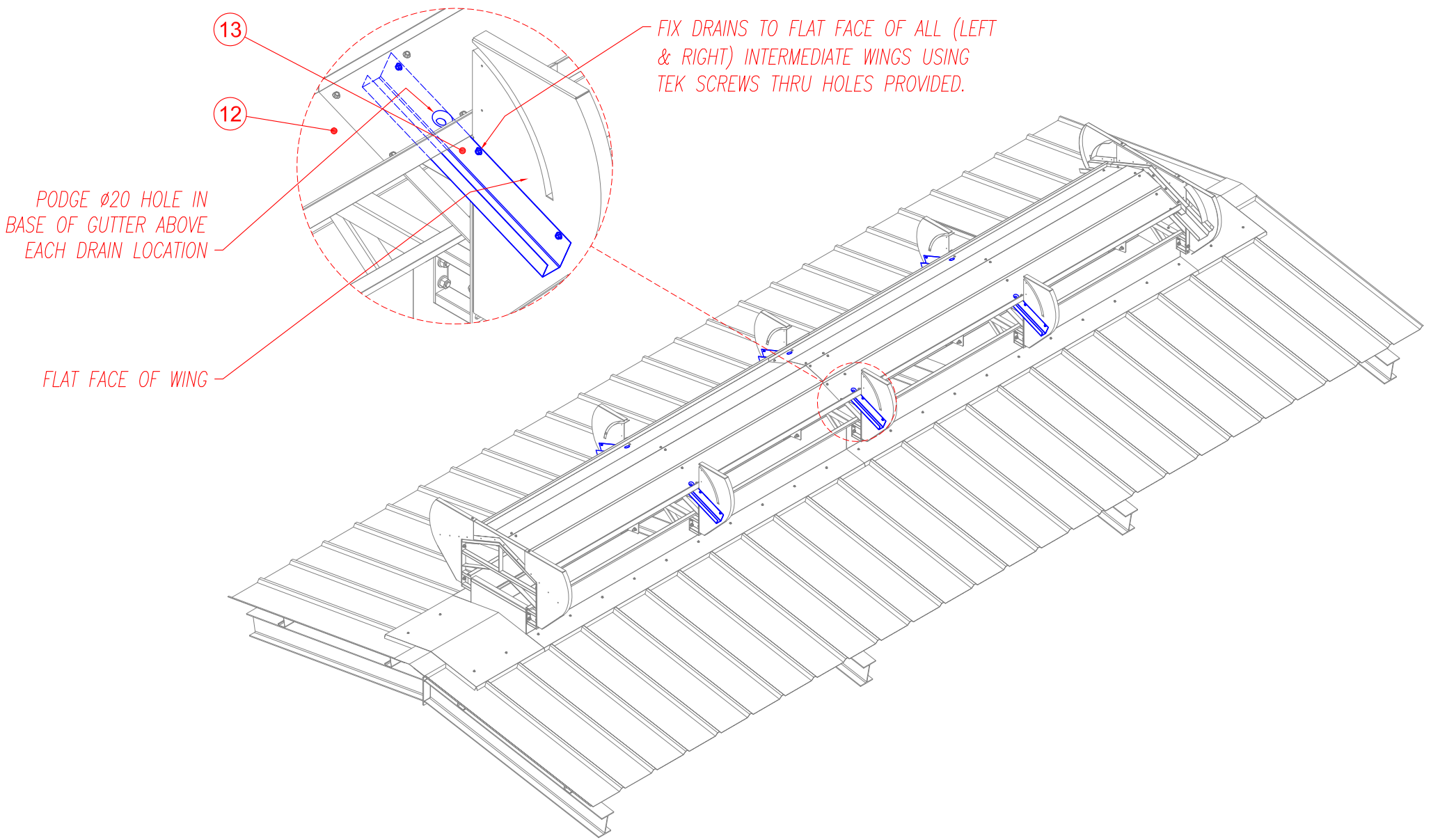
NOTE:
INTERMEDIATE WINGS COME IN LEFT & RIGHT VERSIONS.
UNO, FACE ALL INTERMEDIATE WINGS IN ONE COMMON DIRECTION.



STEP 10

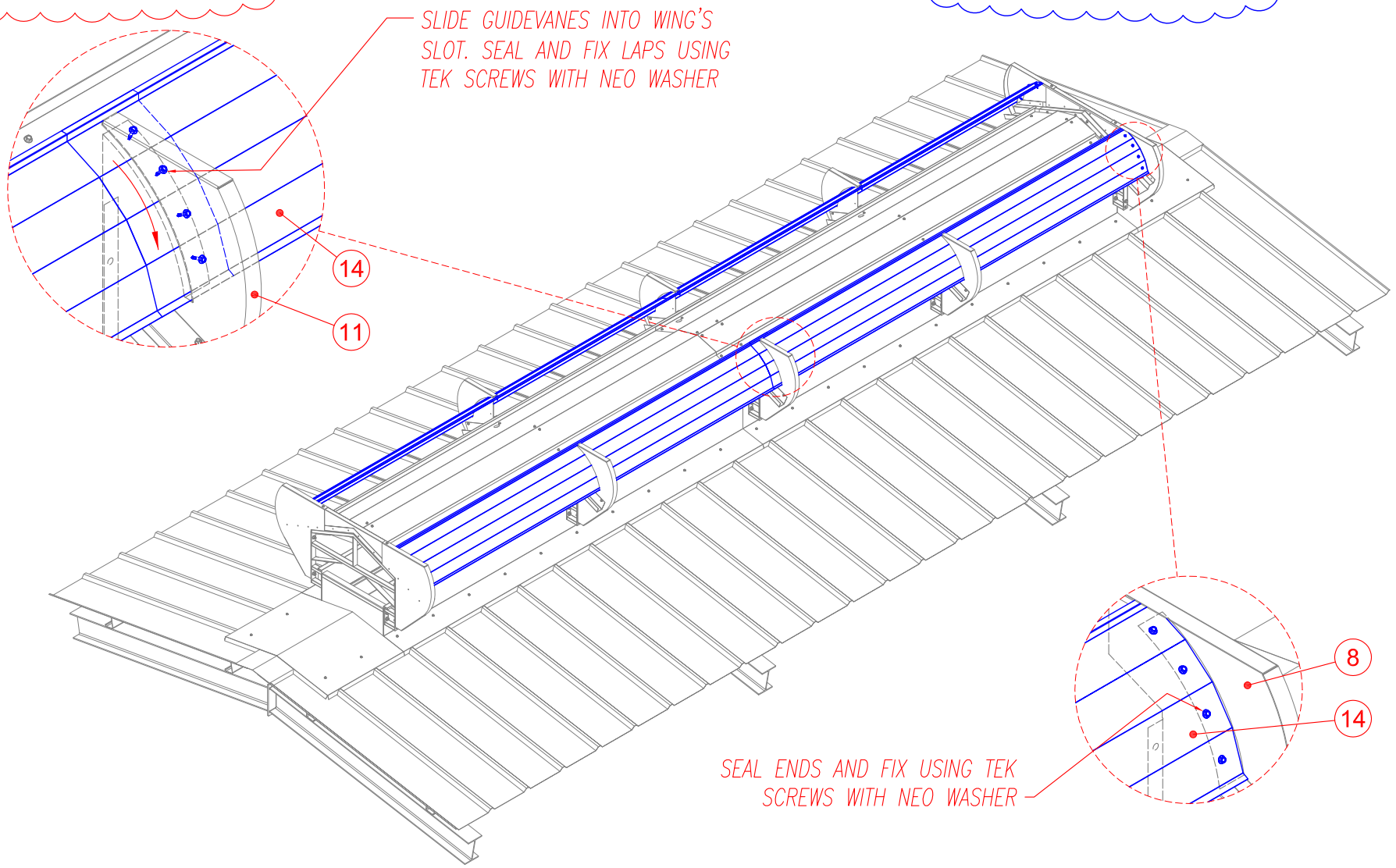
REFER INSTRUCTIONS ON PAGE 27

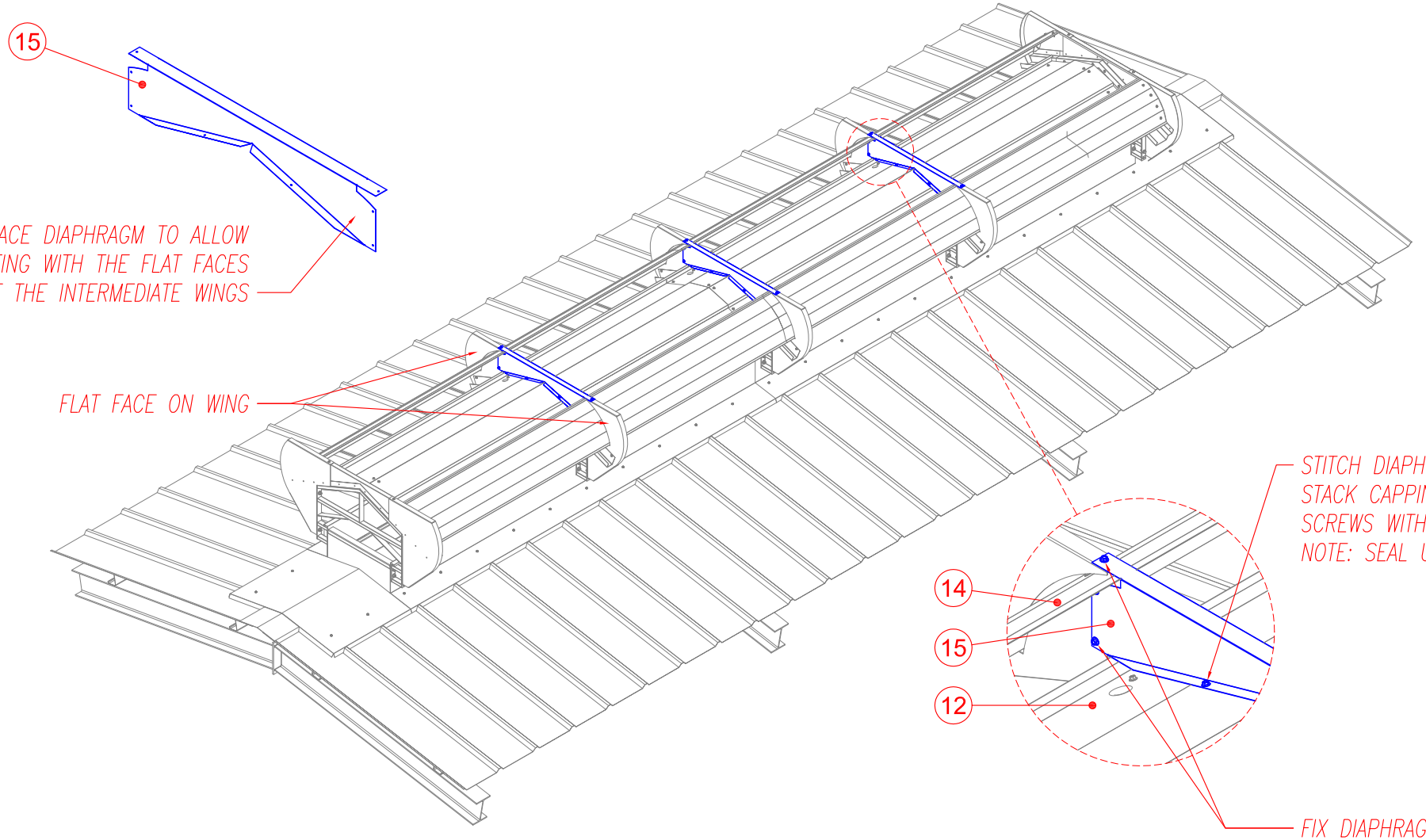


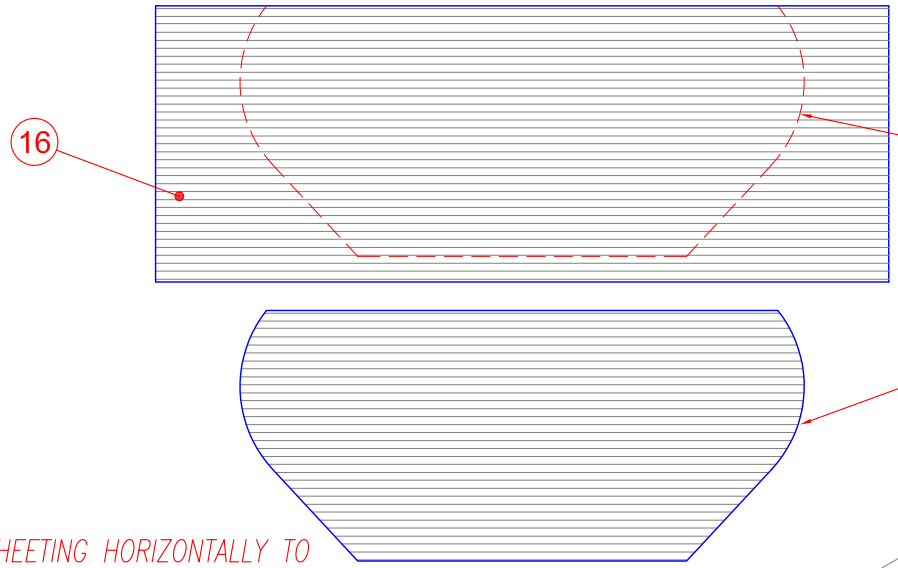

13
12
FIX DRAINS TO FLAT FACE OF ALL (LEFT & RIGHT) INTERMEDIATE WINGS USING TEK SCREWS THRU HOLES PROVIDED.
PODGE ø20 HOLE IN BASE OF GUTTER ABOVE EACH DRAIN LOCATION
FLAT FACE OF WING

NOTE:
FOR DAMPER OPTION, REFER LRV-HC SERIES DAMPER ASSEMBLY INSTRUCTIONS

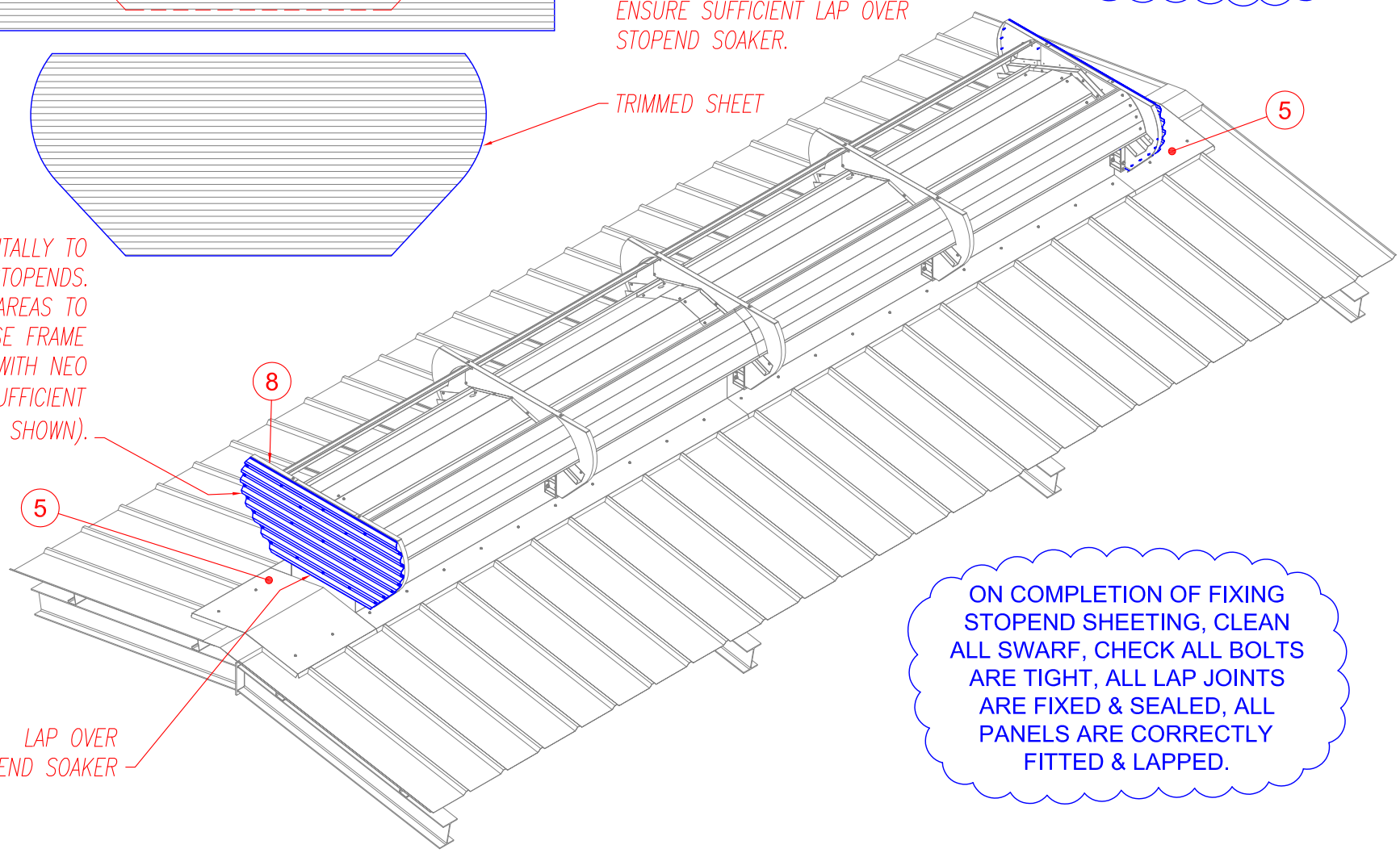
CYCLONE REGIONS:
AS PER CYCLONIC DESIGN GUIDE, FIXINGS AT NOMINATED MIN CTRS ARE TO INCLUDE CYCLONE WASHERS.




15
FACE DIAPHRAGM TO ALLOW MATING WITH THE FLAT FACES OF THE INTERMEDIATE WINGS
FLAT FACE ON WING
14
15
12
STITCH DIAPHRAGM RETURNS TO STACK CAPPING USING TEK SCREWS WITH NEO WASHER. NOTE: SEAL UNDER TAB.
FIX DIAPHRAGMS TO ALL INTERMEDIATE WINGS THRU HOLES PROVIDED USING TEK SCREWS.



CYCLONE REGIONS:
AS PER CYCLONIC DESIGN GUIDE, FIXINGS AT NOMINATED PAN SPACINGS ARE TO INCLUDE CYCLONE WASHERS.

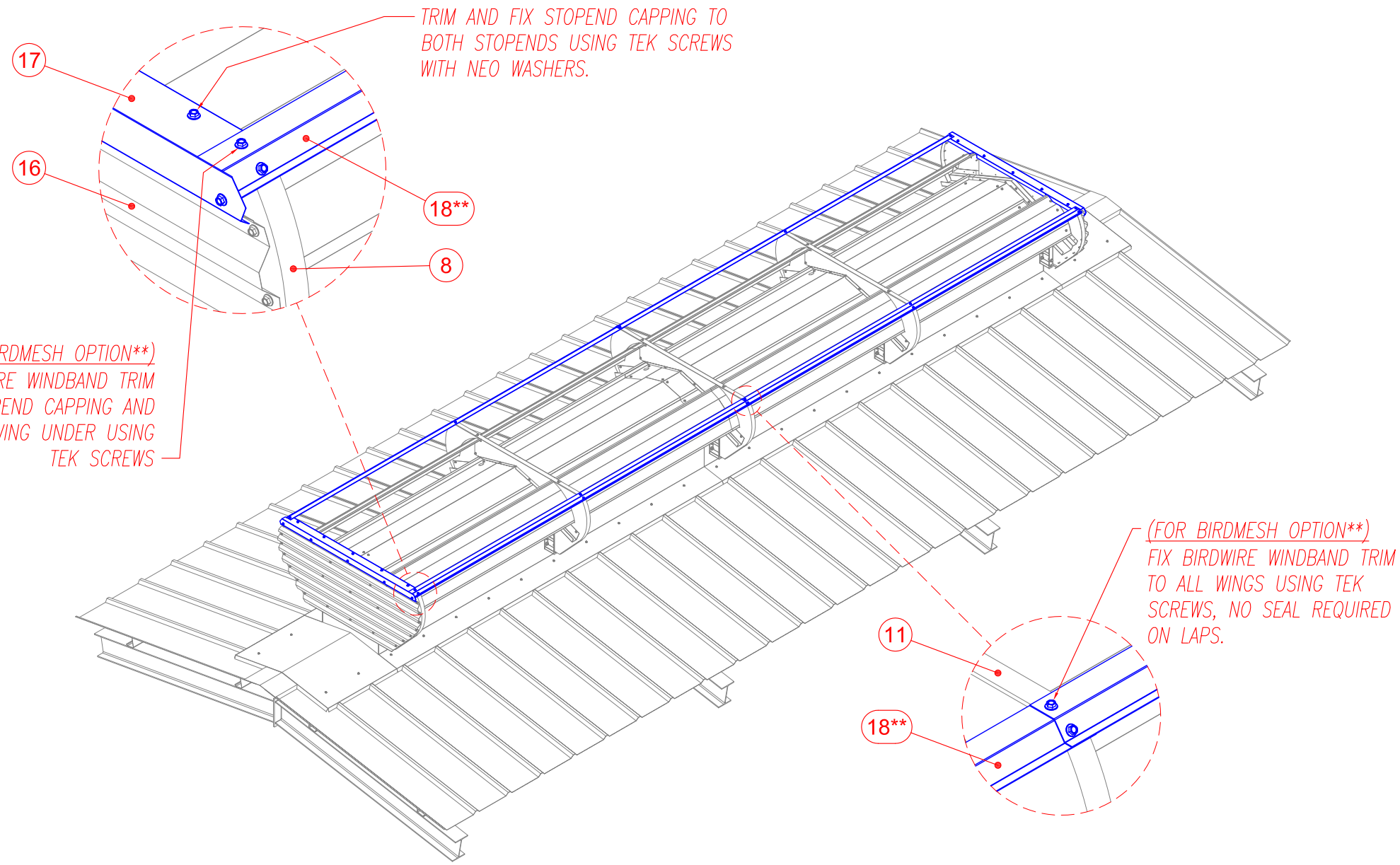


ON COMPLETION OF FIXING STOPEND SHEETING, CLEAN ALL SWARF, CHECK ALL BOLTS ARE TIGHT, ALL LAP JOINTS ARE FIXED & SEALED, ALL PANELS ARE CORRECTLY FITTED & LAPPED.

STEP 15

REFER INSTRUCTIONS ON PAGE 28

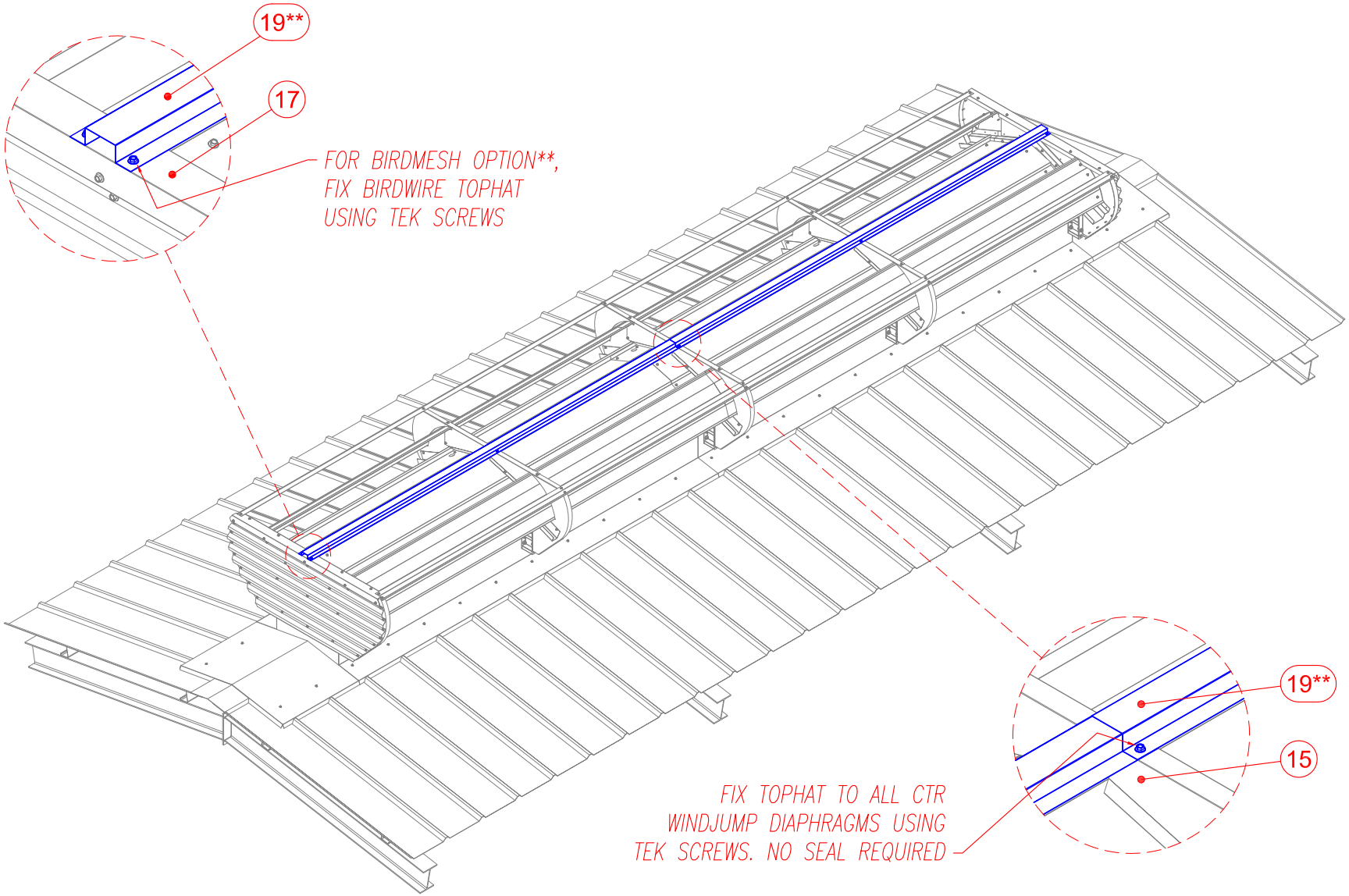
(INCLUDES BIRDMESH OPTION)



STEP 16

REFER INSTRUCTIONS ON PAGE 29

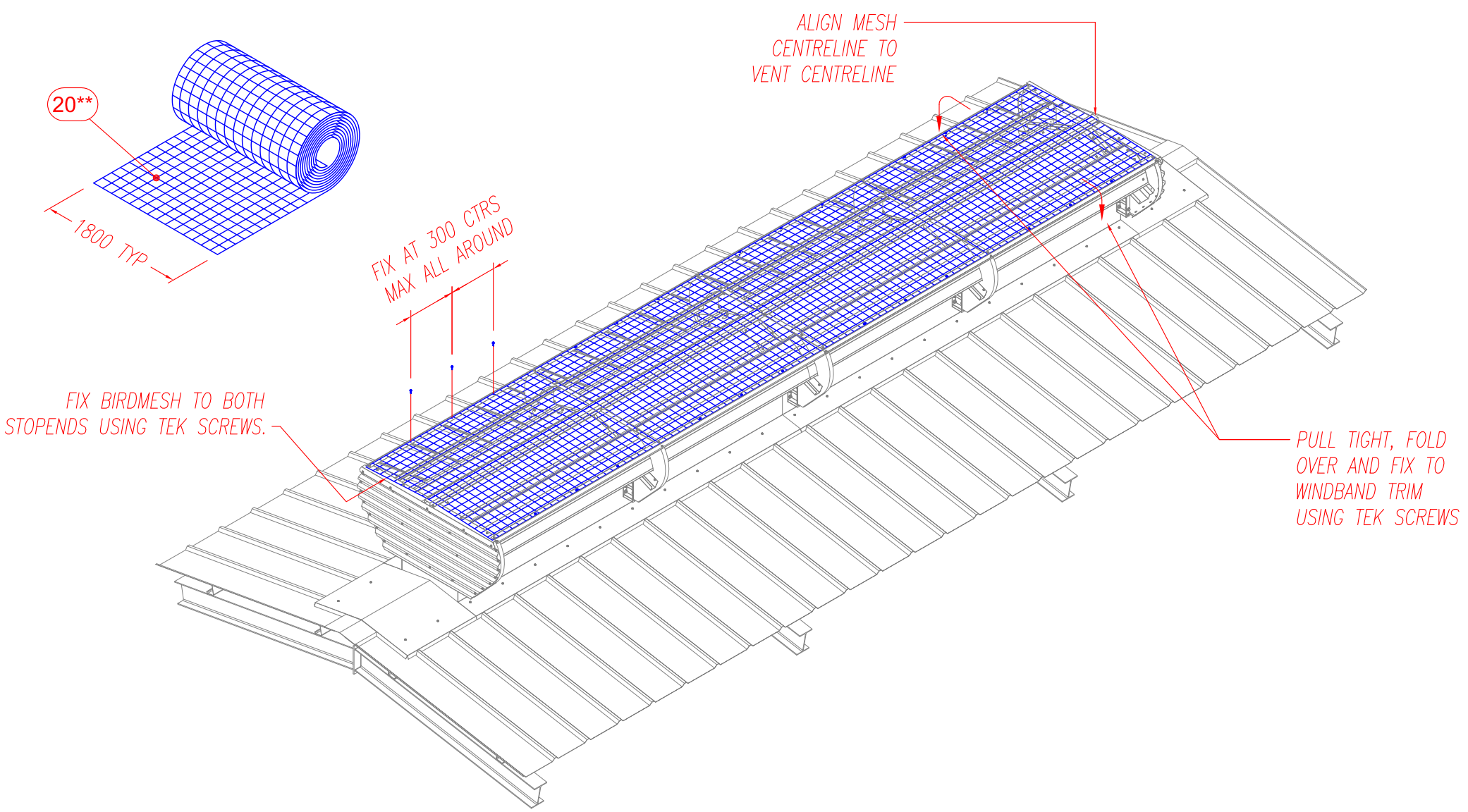
(FOR BIRDMESH OPTION** ONLY)
OTHERWISE, GO TO STEP 19.



STEP 17

REFER INSTRUCTIONS ON PAGE 29

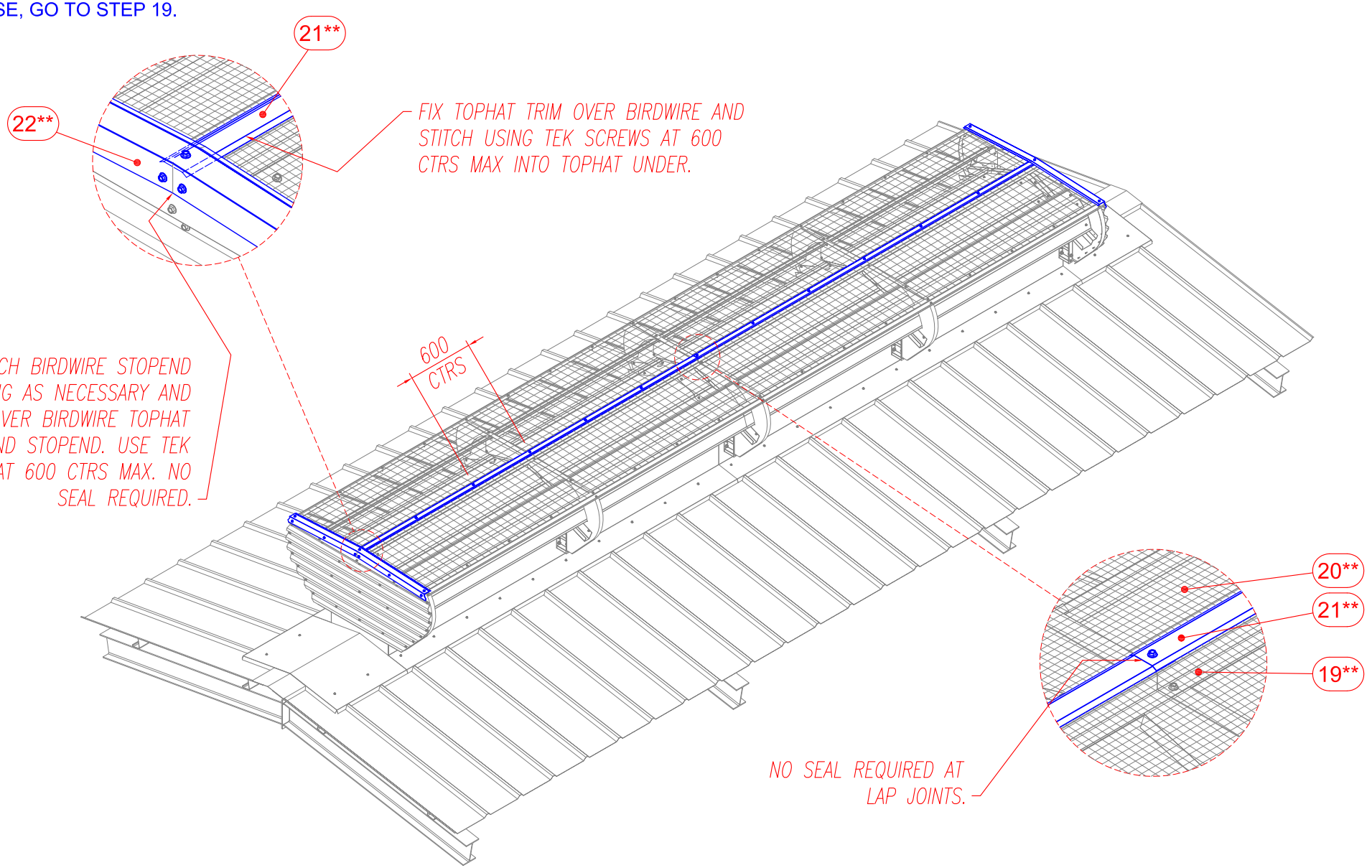
(FOR BIRDMESH OPTION** ONLY)
OTHERWISE, GO TO STEP 19.



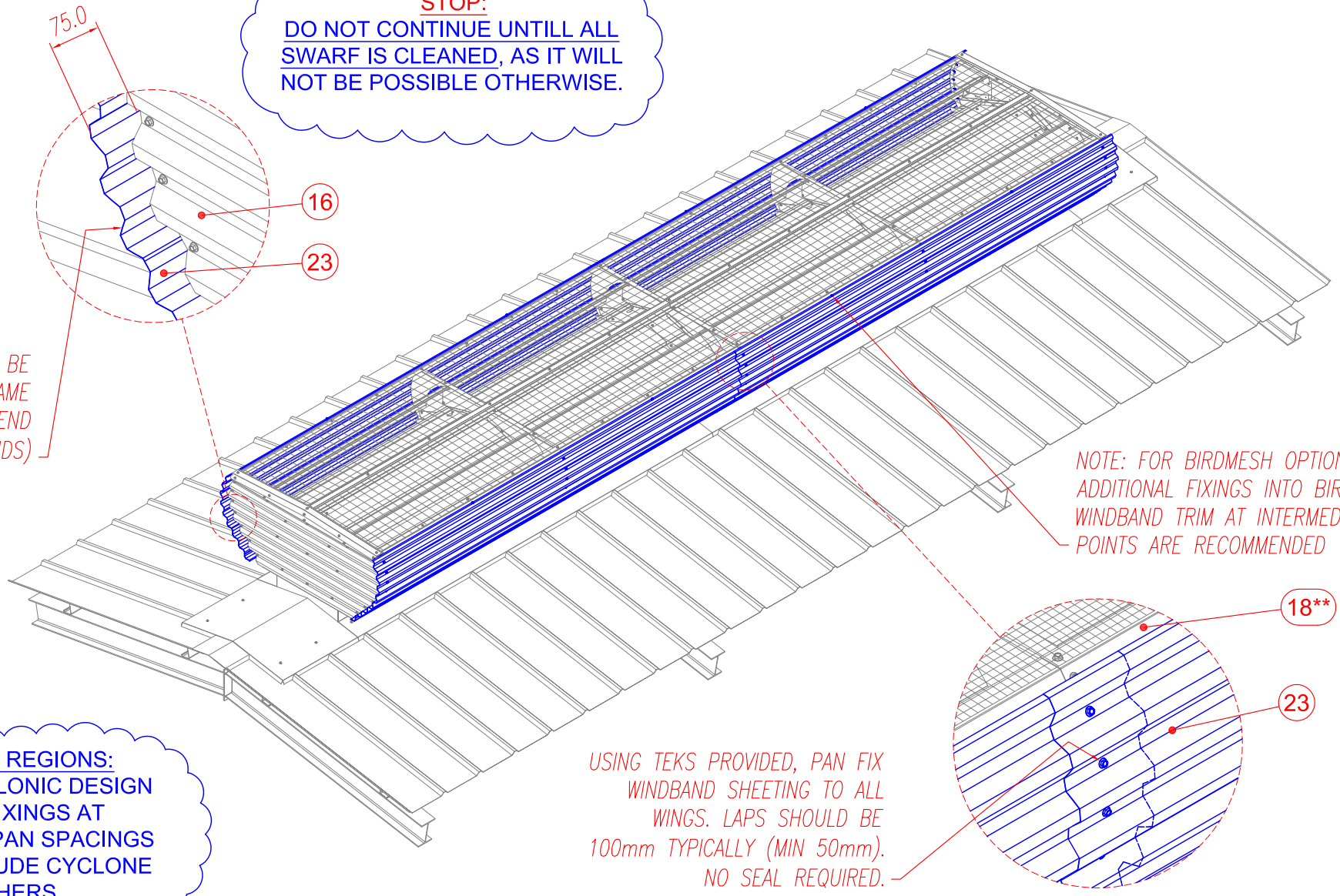
STEP 18

REFER INSTRUCTIONS ON PAGE 29

(FOR BIRDMESH OPTION** ONLY)
OTHERWISE, GO TO STEP 19.



STOP:
DO NOT CONTINUE UNTILL ALL SWARF IS CLEANED, AS IT WILL NOT BE POSSIBLE OTHERWISE.



CYCLONE REGIONS:
AS PER CYCLONIC DESIGN GUIDE, FIXINGS AT NOMINATED PAN SPACINGS ARE TO INCLUDE CYCLONE WASHERS.

STEP 20

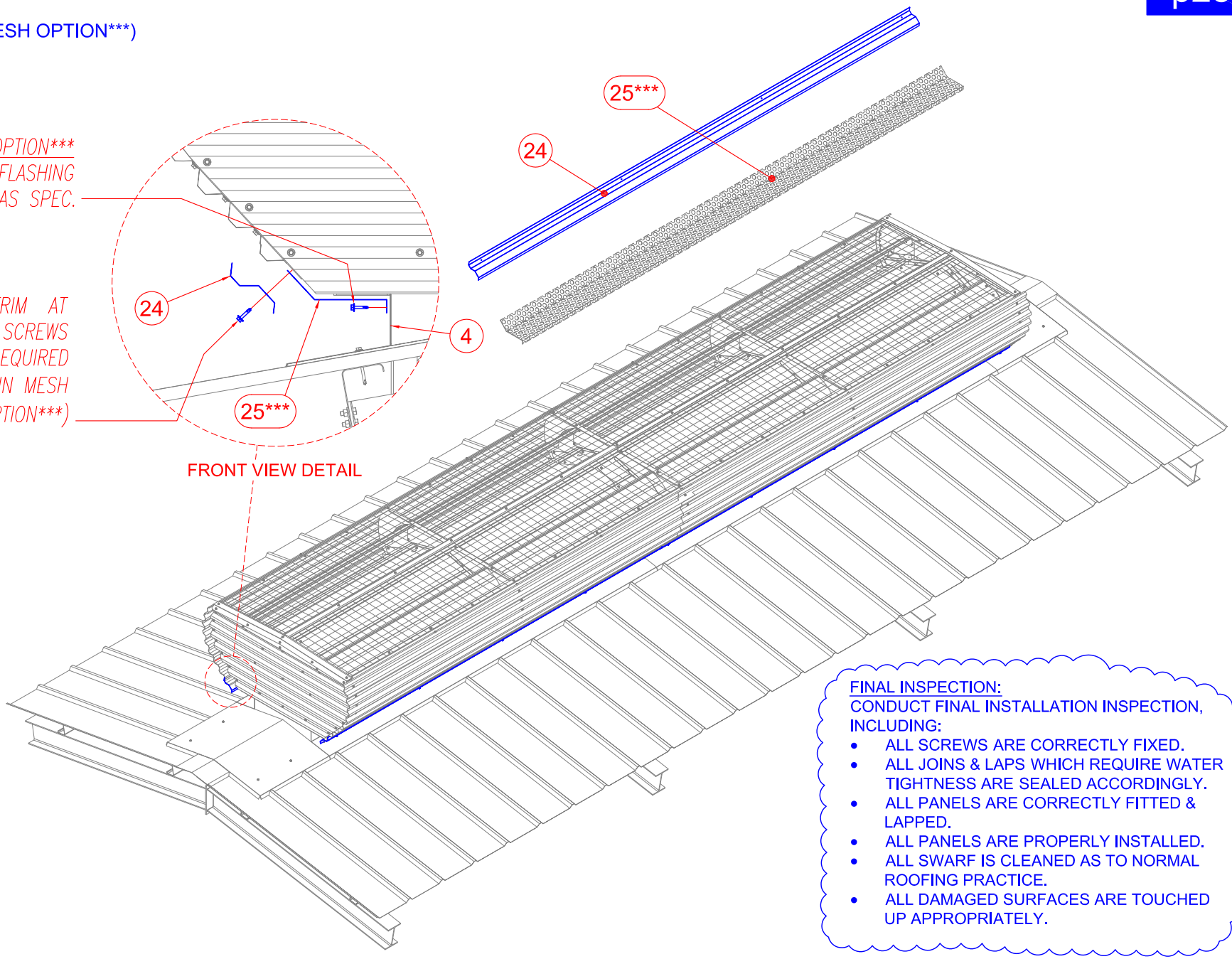
REFER INSTRUCTIONS ON PAGE 29

(INCLUDES LOWER VERMIN MESH OPTION***)

FOR LOWER VERMIN MESH OPTION***
FIX VERMIN MESH TO STACK FLASHING AS SHOWN USING FIXINGS AS SPEC.

FIX LOWER WINDBAND TRIM AT 600 CTRS MAX USING TEK SCREWS PROVIDED. NO SEAL REQUIRED (FITS OVER LOWER VERMIN MESH OPTION***)

FRONT VIEW DETAIL



FINAL INSPECTION:
CONDUCT FINAL INSTALLATION INSPECTION, INCLUDING:

- ALL SCREWS ARE CORRECTLY FIXED.
- ALL JOINS & LAPS WHICH REQUIRE WATER TIGHTNESS ARE SEALED ACCORDINGLY.
- ALL PANELS ARE CORRECTLY FITTED & LAPPED.
- ALL PANELS ARE PROPERLY INSTALLED.
- ALL SWARF IS CLEANED AS TO NORMAL ROOFING PRACTICE.
- ALL DAMAGED SURFACES ARE TOUCHED UP APPROPRIATELY.

INSTRUCTIONS DESCRIPTIONS

STEP 1

- Check cleat hole centres in both directions. Check mesurements of openings and frame centres.
- Check purlins are in correct positions as per Roof Framing Plan.

STEP 2

- Place two Base Frames (item #2), one at each end of ridge vent run length.
- Ensure frames are orientated according to Base Frame layout plan.
- Use four bolts, nuts and washers supplied (item #2A) to fit Base Frames to cleats on building frame.
- Adjust Base Frames to be level across the top and centred using the slots provided (along ridge centreline).
- At the one end frame installed without external flat face, fix Stopend Soaker Support (item #3).

Ensure orientation of frames is as required from one end (i.e. all frames will face in the same direction, as indicated on the base frame layout drawings by IVR)

STEP 3

- Fit stringlines as shown, and place all other intermediate Base Frames (item #2) along the vent run.
- Ensure frames are orientated according to Base Frame Layout Plan.
- Use four bolts, nuts and washers supplied (item #2A) to fit each Base Frame to cleats on building frame.
- Align all frames via slots provided in both horizontal and vertical to stringlines .
- On completion, ensure all bolts are tightened accordingly and remove stringline.

STEP 4

- Place Stack Flashing (item #4) against Base Frame (item #2), mark and notch to suit roof type as necessary.
- Pin outer edge of flashing to roof.
- Rivet upper edge of flashing to Base Frame at a position above the bolt holes provided in the upper section of the Base Frame.
- Seal and rivet lap joints @ 50mm CTRs max. Laps should be minimum 50mm (material lengths should typically allow 100mm lap).
- Ensure upturn of Stack Flashing is against Base Frame.
- Punch through Stack Flashing using a podger where all bolts will pass through (for the Main Frame at a later stage).

STEP 5

- Place Stopend Soaker (item #5) against stopend Base Frames (item #2) and lap under Stack Flashing (item #4). Mark and notch to suit roof type as necessary.
- Seal and rivet to Stack Flashing's laps @ 50mm CTRs max (also, seal and rivet Stopend Soaker to roof ridge / barge capping as applicable).
- Cyclonic regions: as per cyclonic design guide, ensure all sheet materials from here on are fixed using cyclone washers at suitable centers.
- Using your own screws and suitable pattern, fix all Stack Flashing and both Stopend Soakers over roof sheeting to purlins under.

STEP 6

- Fix a Main Frame (item #6) at each stopend using bolts, nuts and washers and fit a stringline as shown.
- To fit Main Frames at intermediate locations, place each Main Frame over the top edge of Stack Flashing (item #4) at a location between the Base Frames (item #2), spring back the Stack Flashing, set frame down and slide along to align with podged holes thru flashing at Base Frame.
- Fix to Base Frame (sandwich the Stack Flashing) using bolts, nuts and washers (item #6A).

STEP 7

- Rivet and seal Stopend Drain (item #7) to Stopend Wings (item #8) thru holes provided.
- Place one left and one right Stopend Wing with the flat face to outside on both ends of the vent run and fix to Main Frame using bolts, washers and nuts (item #6A). Ensure bolts are tightened.

STEP 8

- Fix Stopend Gutter (item #9) to Main Frame (item #6) at both stopends using teks (with neo washers) thru holes provided.
- Fix Stopend Windjump (item #10) over and rivet and seal thru holes provided.
- Fix Stopend Windjump's top edge under Stopend Wings top edge using tek screws.

STEP 9

- Place all Intermediate Wings (item #11) facing one direction (place one left and one right version per Main Frame) and fix to Main Frame using bolts, washers and nuts (item #6A).
- On completion, ensure all bolts to Main Frame and wings are tightened.

STEP 10

- Place Stack Capping (item #12) over Main Frames (item #6) toward Stopend Gutters (item #9) at each end.
- At stopends, keep around 85mm clear as shown.
- Fix to all intermediate Main Frames (item #6) and stitch to Stopend Gutters under (item #9) using tek screws with neo washers.
- Rivet and seal all lap joints.

STEP 11

- Fix Drains (item #13) to flat face of all Intermediate Wings (item #11) using tek screws thru holes provided.
- Using a podger, punch a Ø20mm hole through the base of gutter at a point directly above every Drain.
- Important: podging from above leaves a drip edge ensuring water is channeled into the Drain below.

STEP 12

- Slide Guidevanes (item #14) into Intermediate Wing's slot (item #11). Fix and seal all lap joints using tek screws with neo washers.
- Fix and seal ends at Stopend Wings using tek screws with neo washers.

For damper versions, refer to LRV-HC series damper assembly instructions

STEP 13

- Slide CTR Windjump Diaphragms (item #15) into central position over Stack Capping as shown, mating with the flat faces of the wings each side.
- Seal under return tabs and stitch to Stack Capping using tek screws with neo washer.
- On wings, fix thru holes provided using tek screws.

STEP 14

- Place Stopend Sheeting (item #16) horizontally against external face of stopends.
- Mark and cut outer edges to suit stopend perimeter ensuring sufficient lap over Stopend Soaker (item #4).
- Fix in appropriate locations around perimeter using tek screws with neo washer. Additional fixings should be located on central area of sheeting into Stopend Wings, Base Frame and Main Frame.
- Note: On completion, inspect and clean all swarf.

STEP 15

- Trim and fix Stopend Capping (item #17) to Stopend Wings over Stopend Sheeting using tek screws.

(For Birdmesh Option**), otherwise go to step 19.

- Fit Birdwire Windband Trim (item #18**) over Intermediate Wings (item #11) and Stopend Capping (item #17) and fix to all wings using tek screws. No seal required.
- Next, follow steps 16 to 18.

STEP 16

(For Birdmesh Option**) cont.

- Place Birdwire Tophat (item #19**) along centreline of vent and fix to all diaphragms and laps using tek screws. No seal required.

STEP 17

(For Birdmesh Option**) cont.

- Align Birdwire Mesh centreline (item #20**) to centreline of vent opening as shown and fix to stopends using tek screws.
- Stretch over Windband Trims both sides and fix using tek screws @ 300mm CTRs max.

STEP 18

(For Birdmesh Option**) cont.

- Fix Birdwire Tophat Trim (item #21**) over Birdwire Tophat (item #19**) and stitch using tek screws @ 600mm CTRs max into Tophat under.
- Notch to suit and fix Birdwire Stopend Capping (item #22**) over Stopend Capping (item #17) and Tophat Trim. Fix using tek screws @ 600mm CTRs max.
- No seal required.

STEP 19

- Note: Inspect and clean all swarf.
- Fit Windband Sheeting (item #23) with 75mm overhang at each stopend frame (or 50mm overhang from Stopend Sheeting) and pan fix to all wings using tek screws. Laps should be min 50mm (material lengths should typically allow 100mm lap)

(For Birdmesh Option**)

- Additional fixings into Birdwire Windband Trim at intermediate points are recommended as shown.
- No seal required for lap joints of Windband Sheeting.

STEP 20

- Fit Lower Windband Trim (item #24) to outer bottom edge of Windband Sheeting and fix using tek screws @ 600 CTRs max.
- No seal required.

FINAL INSPECTION

Conduct final installation inspection, including:

- All screws are correctly fixed.
- All joins & laps which require water tightness are sealed accordingly.
- All panels are correctly fitted & lapped.
- All panels are properly installed.
- All swarf is cleaned as to normal roofing practice.
- All damaged surfaces are touched up appropriately.