



BUILDINGS

**NuRoof®**  
**Retrofit Systems**

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**Technical/Installation Information**

## INTRODUCTION

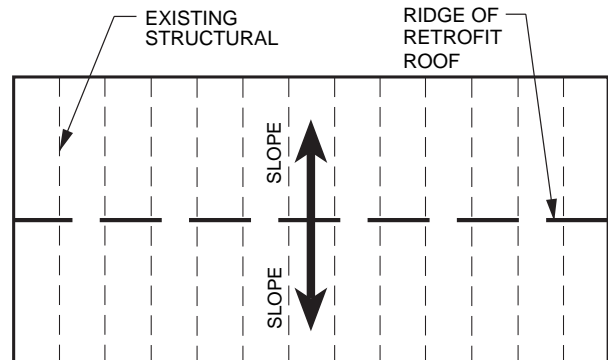
If your roof is causing problems due to leaks, high maintenance costs and low energy efficiency, the MBCI NuRoof® Retrofit System is the remedy. With the NuRoof® Retrofit System, you can install a sloped roof which will eliminate leaks and minimize maintenance costs. Energy efficiency may also be increased substantially with additional insulation.

The NuRoof® Retrofit System allows design flexibility with a choice of roof slopes, hips, valleys, gable endwalls, vertical and trapezoidal standing seam panels, as well as the traditional PBR Panel. These panels are available in a wide range of colors and gauges. So, whether you are retrofitting an old warehouse, manufacturing plant or an office building, the MBCI NuRoof® Retrofit System is the answer.

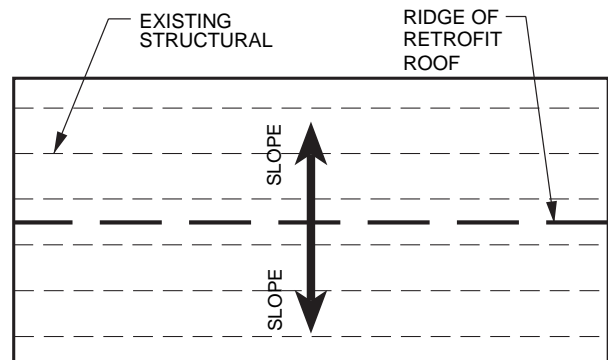
## ARCHITECT/OWNER RESPONSIBILITY

The architect/owner using the MBCI NuRoof® Retrofit System must recognize that the existing structural roof system most likely was designed based on the roof load being applied uniformly by means of a metal deck or similar substrate. The NuRoof® Retrofit System will replace the uniform load with a series of concentrated loads onto the existing roof system which may not be feasible in all applications. Also, as a result of the addition of the retrofit roof, additional weight will be added to the existing roof that must be checked. MBCI highly recommends that a structural engineer conduct an investigation of the entire structure being proposed for a retrofit system to determine the adequacy of the existing roof structure to withstand additional loading. Their investigation should include the condition of the existing structural, existing dead loads, can existing loads be removed, (i.e. rock ballast) and what additional dead loads will the structure accept and at what spacing?

EXISTING STRUCTURAL MEMBERS  
PARALLEL TO ROOF RETROFIT SLOPE  
Installation Sequence Begins on Page NR-9



EXISTING STRUCTURAL MEMBERS  
PERPENDICULAR TO ROOF RETROFIT SLOPE  
Installation Sequence Begins on Page NR-15



### NOTE:

1. Some buildings may have structural members in both directions. In this case, each method may be used where required.
2. Hipped NuRoof® Systems may require both methods.

# TABLE OF CONTENTS

Architect/Engineer Information .....	NR-5 - NR-6
Design Data Sheet .....	NR-7
Material Properties .....	NR-8
Section Dimensions	
Section Properties	
Retrofit Framing over Structural Members Parallel to the Roof Slope	
Base Channel Attachment .....	NR-9
Column Attachment .....	NR-10
“X” Bracing Attachment .....	NR-11
Longitudinal	
Transverse (Recommended every 40’ minimum)	
Purlin Attachment .....	NR-12
Strut Attachment (Every braced column line) .....	NR-13
Panel Attachment .....	NR-14
Retrofit Framing over Structural Members Perpendicular to the Roof Slope	
Base Zee Attachment .....	NR-15
Column Attachment .....	NR-16
“X” Bracing Attachment .....	NR-17
Longitudinal	
Transverse (Recommended every 40’ minimum)	
Purlin Attachment .....	NR-18
Strut Attachment (Every braced column line) .....	NR-19
Panel Attachment .....	NR-20
Gable Endwall	
Isometric/Cross-section .....	NR-21
Hip Roof	
Isometric Showing Combination of Base Zee/Base Shoe Utilization and Columns ..	NR-22
Hip Framing (B-T-B Channels) .....	NR-22
Valley	
Isometric Showing Combination of Base Zee/Base Shoe Utilization and Columns ..	NR-23
Valley Framing (B-T-B Channels) .....	NR-23
Peak Framing	
Isometric/Cross-section .....	NR-24
Details	
Base Channel/Column Connection (Flange) .....	NR-25
Base Zee/Column Connection (Flange) .....	NR-25
Base Zee/Column Connection (Web) .....	NR-26
Base Zee Lap .....	NR-26
High Strength Base Zee/Column Connection (Flange/Web) .....	NR-27
Purlin to Column Connection (Flange) .....	NR-28
Purlin to Column w/Purlin Clip (Flange) .....	NR-28
Purlin Lap to Column Connection (Flange) .....	NR-28
Purlin to Column Connection (Web) .....	NR-29
Purlin to Column w/Purlin Clip (Web) .....	NR-29
Purlin Lap to Column Connection (Web) .....	NR-29
Angle Bracing .....	NR-30 - NR-35
Longitudinal	
Transverse	
Eave .....	NR-36
Overhang (w/Parapet Wall)	
Eave (w/Fascia Wall)	
Eave (w/Angles)	
Edge/Corner Zone (For Use In High Wind Conditions) .....	NR-37
Architect/Engineer Information (Optional Method) .....	NR-38

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# TABLE OF CONTENTS

NuRoof® Optional Methods	
Isometric - Grid System	.NR-39
Grid System Details	.NR-40
Isometric - SSR System Over Existing PBR Panel	.NR-41
Eave Detail	.NR-42
Clip Attachment Detail	.NR-42
Rake Detail	.NR-43
Ridge Detail	.NR-43
EndLap Detail	.NR-44
Notes	.NR-45 - NR-47

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11-05/30M

Descriptions and specifications contained herein were in effect at the time this publication was approved for printing. In a continuing effort to refine and improve products, MBCI reserves the right to discontinue products at any time or change specifications and/or designs without notice and without incurring obligation. **To insure you have the latest information available, please inquire or visit our Web Site at [www.mbc.com](http://www.mbc.com).** Application details are for illustration purposes only and may not be appropriate for all environmental conditions, building designs, or panel profiles. Projects should be engineered to conform to applicable building codes, regulations, and accepted industry practices. Insulation is not shown in these details for clarity. **If there is a conflict between this manual and the erection drawings, the erection drawings will take precedence.**

**NuRoof®**

**DESIGN INFORMATION**

**ARCHITECT/ENGINEER INFORMATION**

1. The recommended slope range of the retrofit roof is 1/4:12 - 4:12. For slopes greater than 4:12 please contact MBCI.
2. The maximum recommended height of the retrofit system above the existing roof is 10 feet. This is not due to the capacity of the framing, but to the altered shape of the building and its ability to withstand the new wind loads as well as erection limitations.
3. The NuRoof® Retrofit System will add approximately 2 to 4 PSF to the weight of the existing roof.
4. Load transfer may result in concentrated loads occurring on the existing roof. A professional structural engineer must investigate the existing roof to be sure that no undesirable effects are created on the existing roof by the NuRoof® Retrofit System.
5. Lateral wind forces will be developed at gabled endwalls created by the retrofit roof. These wind forces will be transmitted into the existing roof by the "X" bracing parallel to the retrofit purlins. MBCI cannot be responsible for the adequacy of the existing building to resist the additional wind forces which develop at these gabled endwalls.
6. The uniform retrofit roof loads will be concentrated through the retrofit columns. These concentrated loads are then transmitted to the existing roof deck above the existing roof structural members. The adequacy of the existing metal deck corrugations to resist web crippling must be investigated during the design phase. It is not recommended to install this system over the existing insulation board due to possible creep over the life of the system (consult the manufacturer of the existing insulation board for allowable static compressive loads). If the existing roof has moisture trapped within the layers from water intrusion, MBCI recommends the removal of the roofing materials (down to the existing deck) at all base channels or roof support zee locations. This will allow trapped moisture to be drawn out by proper ventilation. If the deck is corroded through to the structural framing, consult with your structural engineer for possible deck reinforcement at the column base attachments to maintain the integrity of the metal deck. NOTE: Existing metal decks can provide lateral support (diaphragm action) to the overall structure. Removing the metal deck at the column locations may compromise the integrity of the existing metal deck diaphragm system. Since the NuRoof® Retrofit System relies on the existing metal deck to transfer its lateral loads to the existing structural system, the existing metal deck must remain intact.
7. An "attic space" will be created by the NuRoof® Retrofit System. MBCI recommends proper venting of this "attic space" in accordance with applicable codes, to be determined by a mechanical engineer, allowing any trapped moisture to escape. MBCI also recommends that "attic space" be reviewed by other building, fire, or insurance related officials for possible sprinkling or extension of existing fire walls to the bottom of the "new" roof system. Use a minimum of 3" vinyl faced roll insulation between the retrofit panels and the retrofit purlins to help prevent condensation and roof noise. If the use of retrofit framing in "New Construction" will result in the installation of HVAC equipment and ductwork in the "attic space" to conflict with the extensive bracing system required by the NuRoof® Retrofit System, please consult with MBCI's sales engineering staff during the design phase to resolve these issues.
8. The NuRoof® framework is equally effective over existing roof decks made of metal, Tongue and Groove wood and concrete decks. However, each existing roof system must be evaluated independently on its ability to accept multiple point loading from the retrofit system.
9. **The NuRoof® framework will be supplied in unpunched 20'-0" lengths. Field cutting of material will be required.**



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# DESIGN INFORMATION

# NuRoof®

## ARCHITECT/ENGINEER INFORMATION (Continued)

10. For MBCI to properly design the retrofit framing, the following information is required: Retrofit roof live/wind load, collateral load, snow load, seismic zone, existing building size and location, existing structural orientation (parallel or perpendicular to retrofit roof slope) and spacing, type of existing substrate members, governing code, retrofit roof pitch, retrofit roof panel desired, and the use of hipped or gable ends. MBCI is not responsible for the ability of the existing building to accept the loads imposed upon it by the retrofit framework. The MBCI engineering department can conduct an engineering study of the proposed retrofit framing and provide column reactions based on the above information that may be used by your structural engineer to do their study of the existing structure. Following this page is a design data sheet. This sheet can be filled out and sent to MBCI for our Project Service Department to perform estimates, designs, drawings or a combination of all three.

### CAUTION

In certain cases the retrofit roof panel selected may require additional retrofit purlins at the perimeter of the roof to ensure that the panel is capable of resisting the additional wind/snow load in this area.

# NuRoof® DESIGN INFORMATION

## DESIGN DATA SHEET

### PROJECT INFORMATION

From: _____	Live Load: _____ psf	ASTM E1592 <input type="checkbox"/>
Date: _____	Dead Load: _____ psf	UL90 <input type="checkbox"/>
Project Name: _____	Collateral Load: _____ psf	Factory Mutual <input type="checkbox"/>
Project Location: _____	Snow Load: _____ psf	SREF <input type="checkbox"/>
(City, State, County): _____	Wind Speed: _____ mph	
Building Code: _____	Importance Factor: _____	
Deflection Rqmts.: _____	Exposure Category: _____	

### EXISTING ROOF GEOMETRY

Length: _____ ft	Eave Height: _____ ft
Width: _____ ft	Overhang: _____ ft
Slope: _____ :12	Parapet Height: _____ ft

(Please provide drawings of existing building - Including structural drawings)

### EXISTING ROOF TYPE

Built Up <input type="checkbox"/>	Shingle <input type="checkbox"/>	Other - Specify - _____
Modified Bitumen <input type="checkbox"/>	Trocal <input type="checkbox"/>	_____
Single Ply <input type="checkbox"/>	PVC <input type="checkbox"/>	_____

### EXISTING ROOF SUBSTRATE

Insulation Type: _____ in.	Tectum Thickness: _____ in.
Insulation Thickness: _____ in.	Concrete Thickness: _____ in.
Plywood Thickness: _____ in.	Lightweight <input type="checkbox"/>
Wood Thickness: _____ in.	Structural <input type="checkbox"/>
Metal Deck Thickness: _____ in.	Precast <input type="checkbox"/>
Metal Deck Gauge: _____	Other - Specify _____

### EXISTING STRUCTURAL MEMBERS

Bar Joists: @ _____ " o.c.	Wood Trusses: @ _____ " o.c.
"Hot Rolled" Steel: @ _____ " o.c.	Concrete Beams: @ _____ " o.c.
Wood Rafters: @ _____ " o.c.	Other - Specify: @ _____ " o.c.

Has the existing structure been analyzed by a professional engineer?

yes  Engineer's name: \_\_\_\_\_  
 no  Engineer's phone #: \_\_\_\_\_

### NUROOF® GEOMETRY

Length: _____ ft	Ridge Condition: _____
Width: _____ ft	Gable <input type="checkbox"/>
Slope: _____ :12	Hip <input type="checkbox"/>
Eave Height: _____ ft	Roof Panels: _____ (Profile, Width, Gauge)
Overhang: _____ ft	Wall Panels: _____ (Profile, Width, Gauge)
Eave Condition: Eave Trim <input type="checkbox"/>	Fascia: _____ (Profile, Width, Gauge)
Box Gutter <input type="checkbox"/>	Structural Members: Red Oxide <input type="checkbox"/>
Sculptured Gutter <input type="checkbox"/>	Galvanized <input type="checkbox"/>
Snow Gutter <input type="checkbox"/>	

(Please provide drawings of new proposed roof plan)

### NOTES

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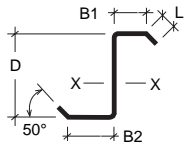
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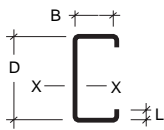
# DESIGN INFORMATION

**NuRoof**®

## SECTION PROPERTIES



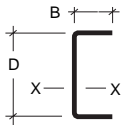
D x B1 x B2 (in.)	Section	Ga.	Weight (PLF)	AXIS X-X			Ma (in.-Kips)
				Ix (in.4/ft.)	Sx (in.3/ft.)	Rx (in.)	
4 x 2 x 2	Zee	16	1.793	1.375	0.688	1.615	23.473
4 x 2.125 x 2.375	Zee	16	1.793	1.277	0.561	1.556	19.153
3.5 x 1.5 x 1.5	Zee	16	1.592	0.876	0.500	1.367	17.075
6 x 2.125 x 2.375	Zee	16	2.395	3.948	1.344	2.368	45.866
8 x 2.125 x 2.375	Zee	16	2.796	7.759	1.975	3.072	67.407



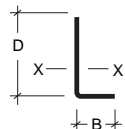
D x B (in.)	Section	Ga.	Weight (PLF)	AXIS X-X			Ma (in.-Kips)
				Ix (in.4/ft.)	Sx (in.3/ft.)	Rx (in.)	
4 x 2.5	Cee	16	1.994	1.560	0.780	1.631	26.616
4 x 2.5	Cee	18	1.581	1.261	0.630	1.647	21.503
6 x 2.5	Cee	16	2.395	3.971	1.324	2.375	45.180
8 x 2.5	Cee	16	2.796	7.791	1.948	3.078	66.482
CS-1	Cee	18	0.815	0.116	0.138	0.694	4.717



D x B (in.)	Section	Ga.	Weight (PLF)	AXIS X-X			Ma (in.-Kips)
				Ix (in.4/ft.)	Sx (in.3/ft.)	Rx (in.)	
HS-1	Hat	16	1.276	0.130	0.167	0.588	5.710



D x B (in.)	Section	Ga.	Weight (PLF)	AXIS X-X			Ma (in.-Kips)
				Ix (in.4/ft.)	Sx (in.3/ft.)	Rx (in.)	
4.125 x 2	Channel	16	1.592	1.273	0.617	1.649	21.070
6.125 x 2	Channel	16	1.994	3.197	1.044	2.335	35.627
8.125 x 2	Channel	16	2.395	6.293	1.549	2.989	52.870



D x B (in.)	Section	Ga.	Weight (PLF)	AXIS X-X			Ma (in.-Kips)
				Ix (in.4/ft.)	Sx (in.3/ft.)	Rx (in.)	
2 x 2	Angle	16	0.772	0.093	0.173	0.639	5.906
2.5 x 1.5	Angle	22	0.382	0.077	0.096	0.827	3.272

**Notes:**

- 1) All calculations for the properties of cees and zeos are calculated in accordance with the 2001 North American Specification for the Design of Cold-Formed Steel Structural Members published by the American Iron and Steel Institute (A.I.S.I.).
- 2) Ix is for deflection determination.
- 3) Sx is for bending.
- 4) Ma is allow able bending moment.
- 5) The allow able bending moment (Ma) assumes that the compressive flange is laterally braced so as to provide the full moment capacity of the section.

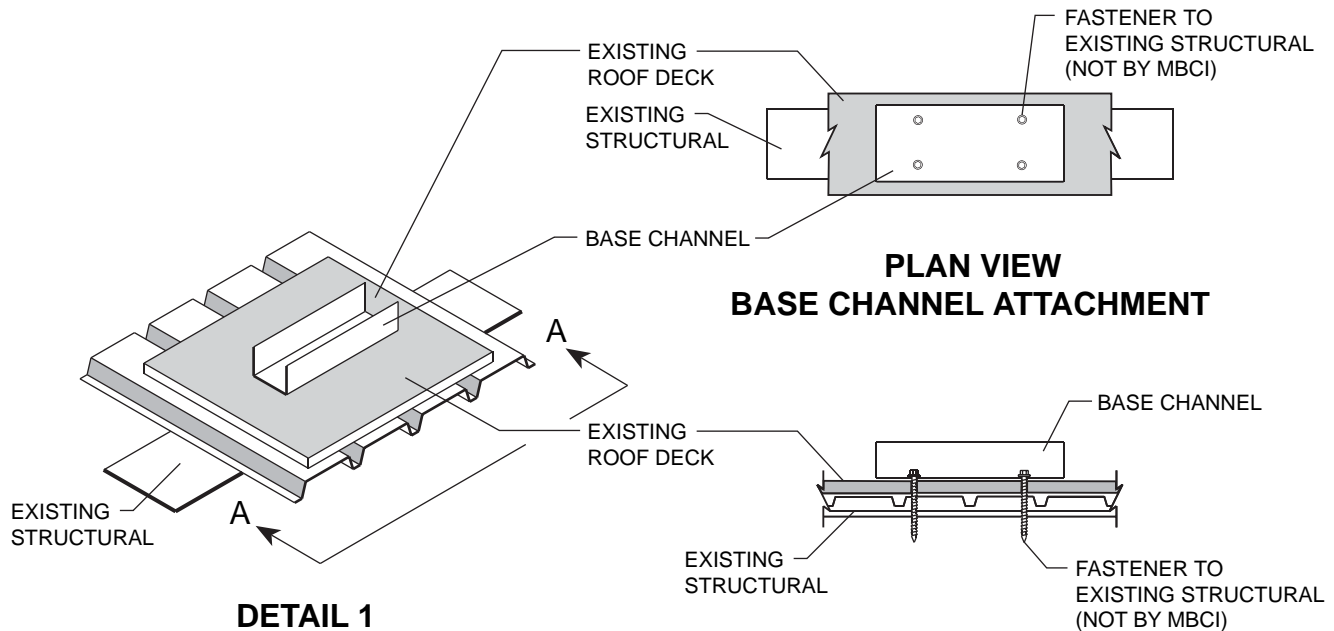
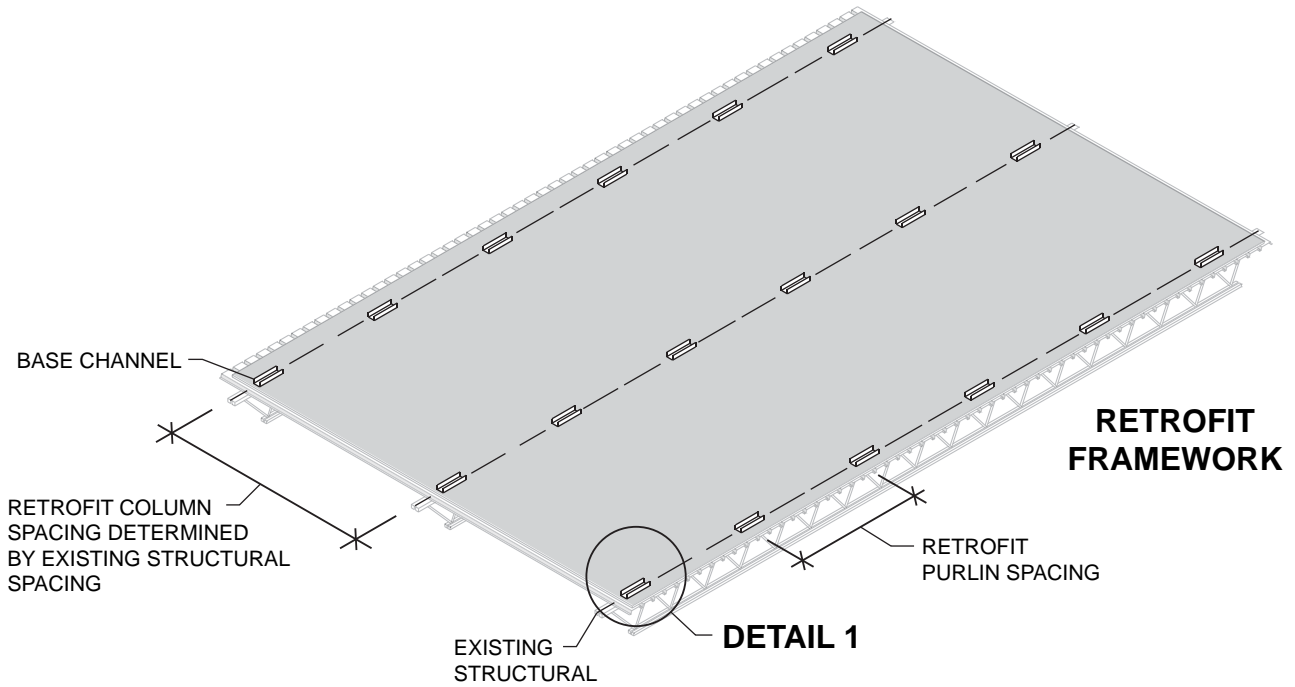
The Engineering data contained herein is for the expressed use of customers and design professionals. Along with this data, it is recommended that the design professional have a copy of the most current version of the North American Specification for the Design of Cold-Formed Steel Structural Members published by the American Iron and Steel Institute to facilitate design. This Specification contains the design criteria for cold-formed steel components. Along with the Specification, the designer should reference the most current building code applicable to the project jobsite in order to determine environmental loads. If further information or guidance regarding cold-formed design practices is desired, please contact the manufacturer.



# NuRoof®

# DESIGN INFORMATION

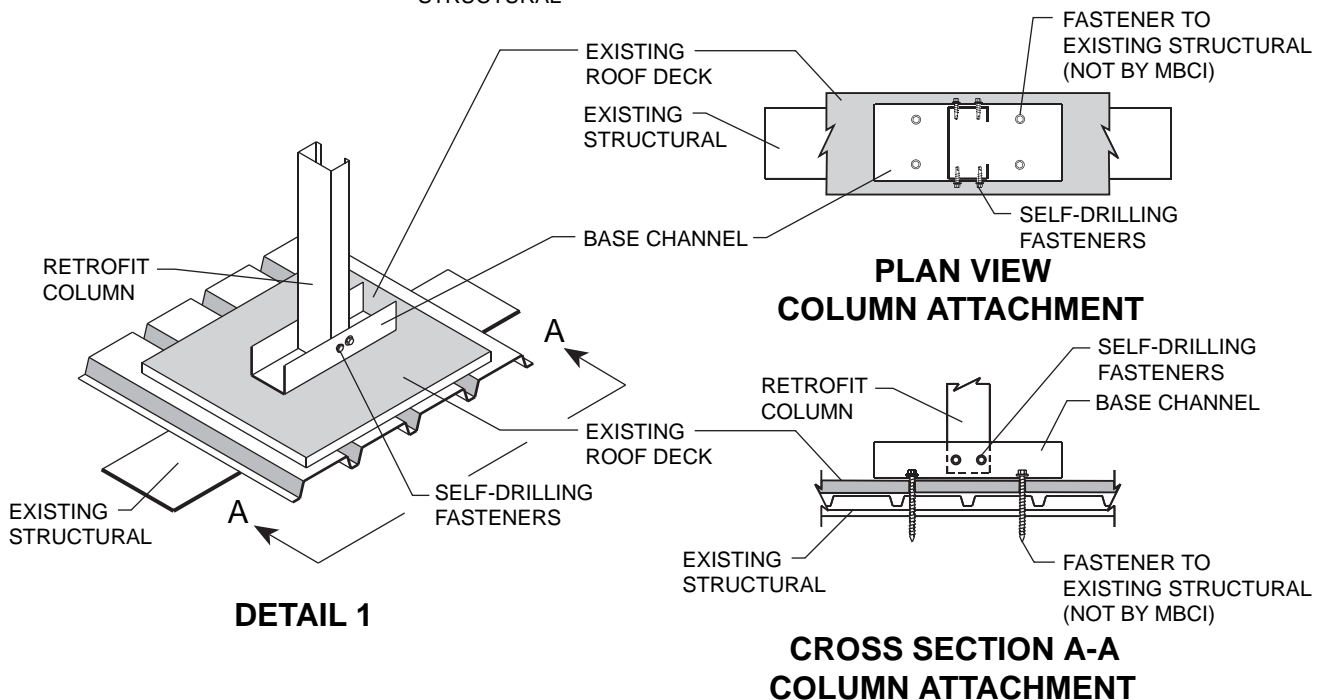
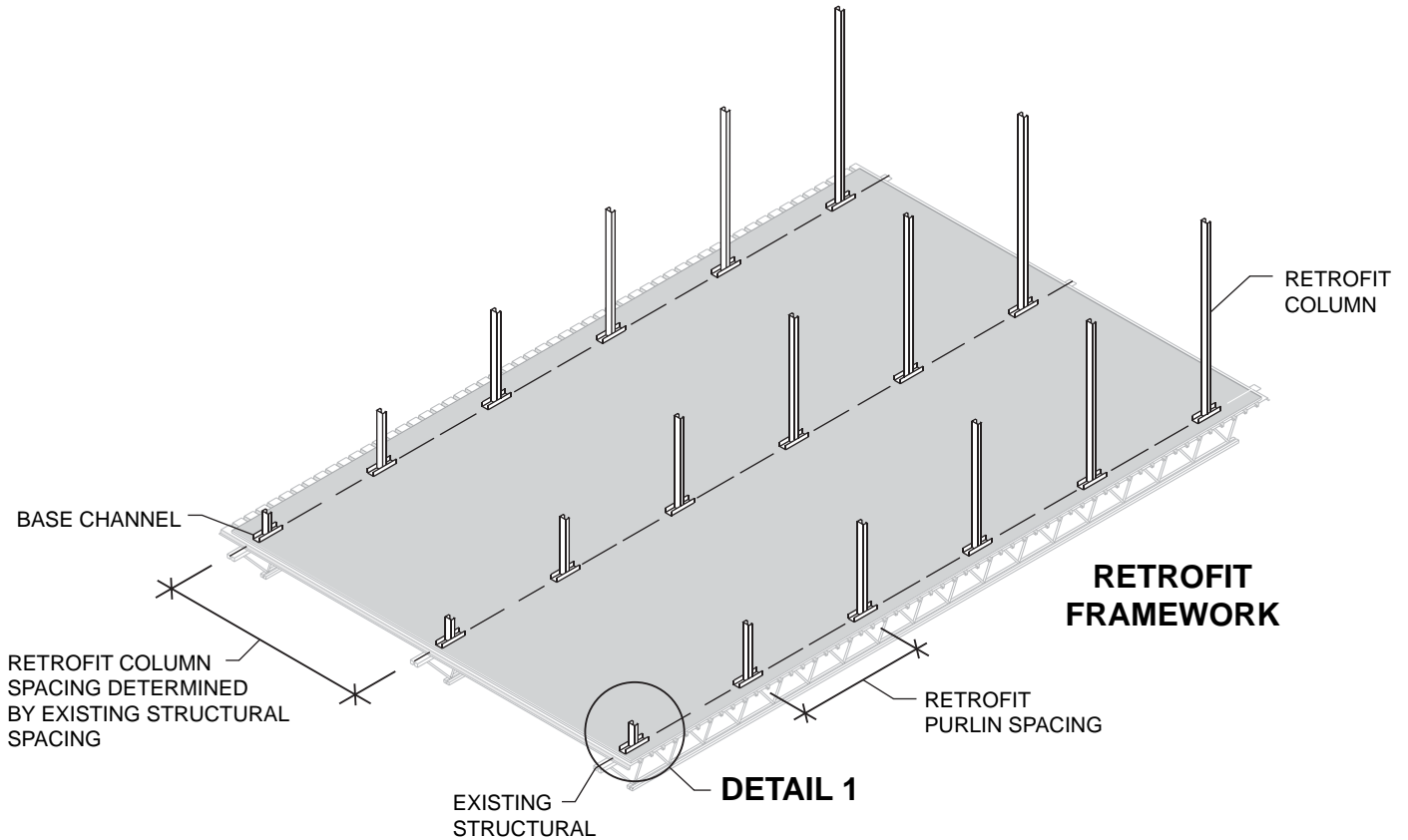
## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PARALLEL TO THE ROOF SLOPE (Base Channel Attachment)



# DESIGN INFORMATION

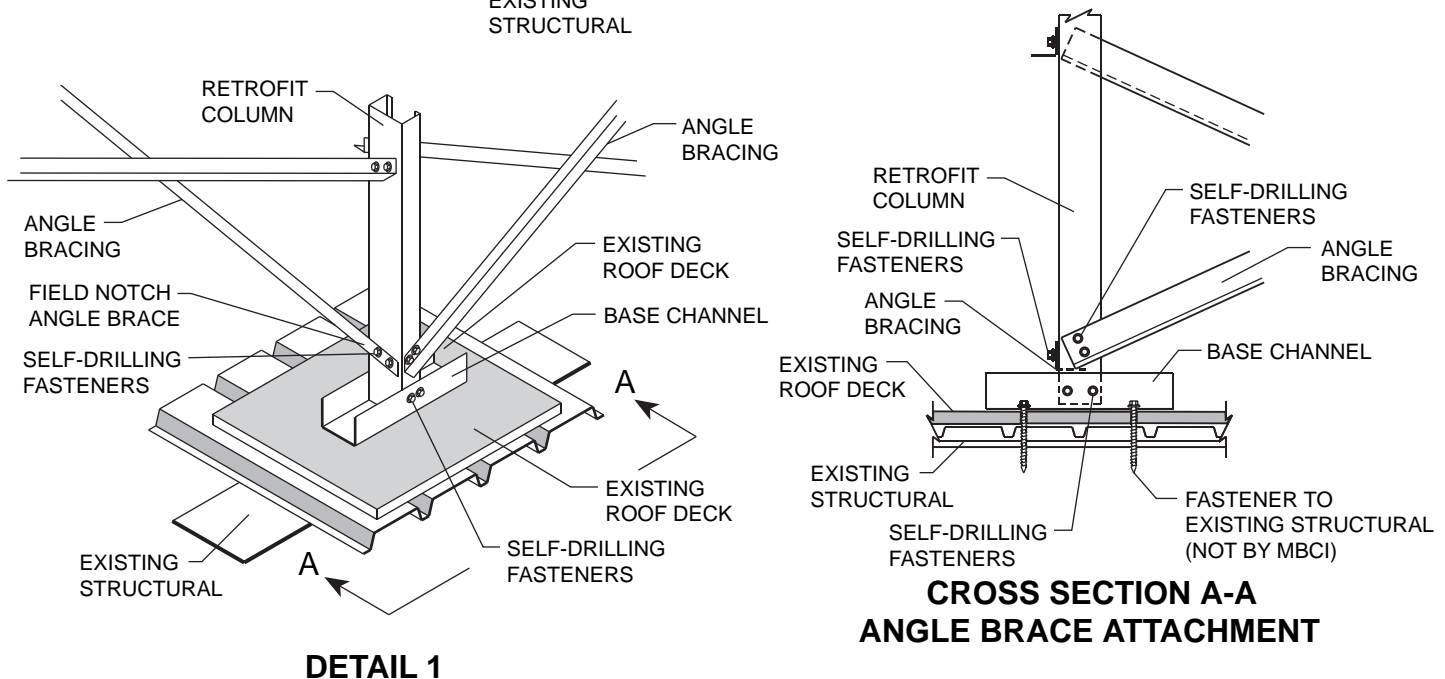
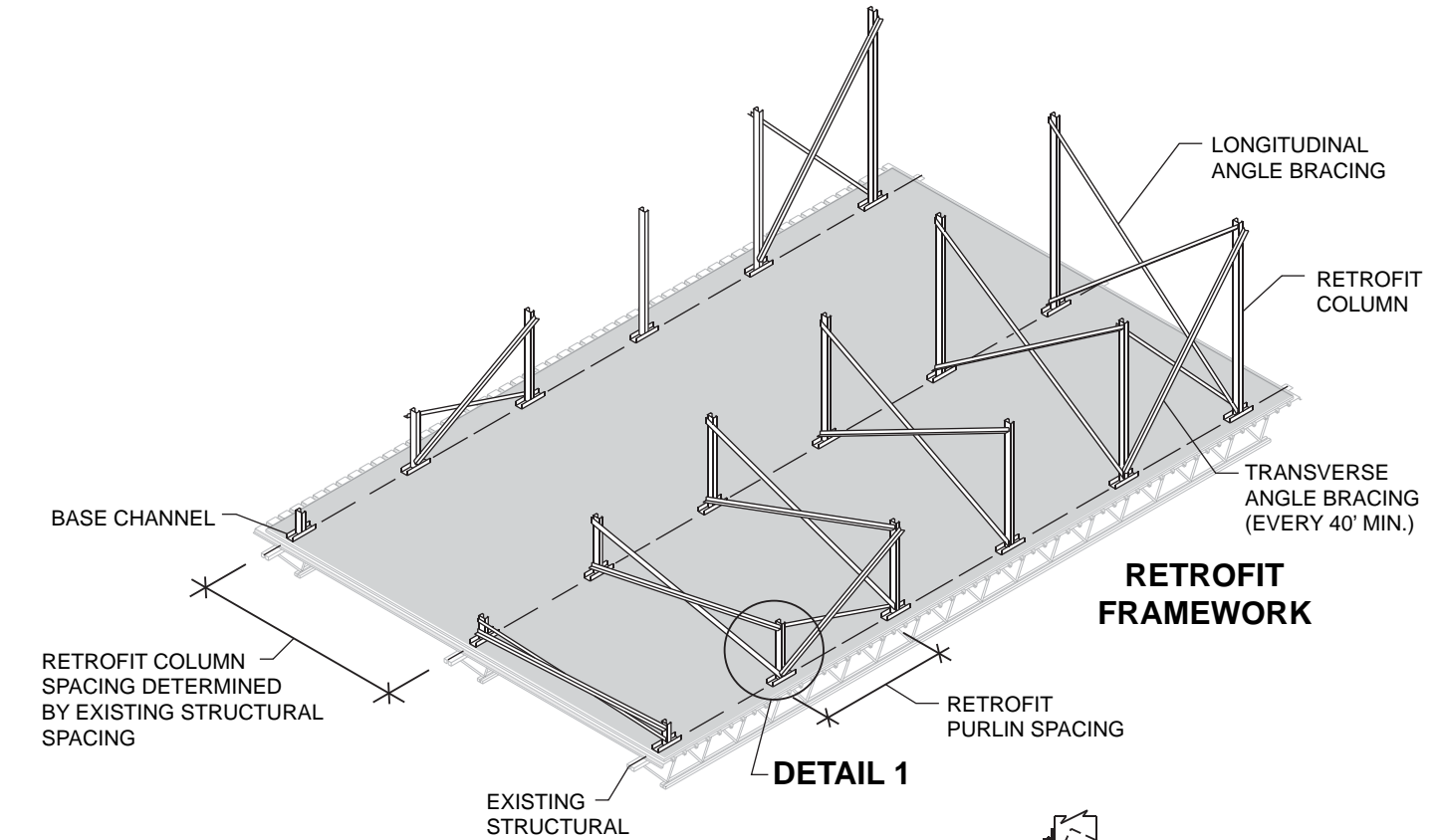
# NuRoof®

## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PARALLEL TO THE ROOF SLOPE (Column Attachment)



# NuRoof® DESIGN INFORMATION

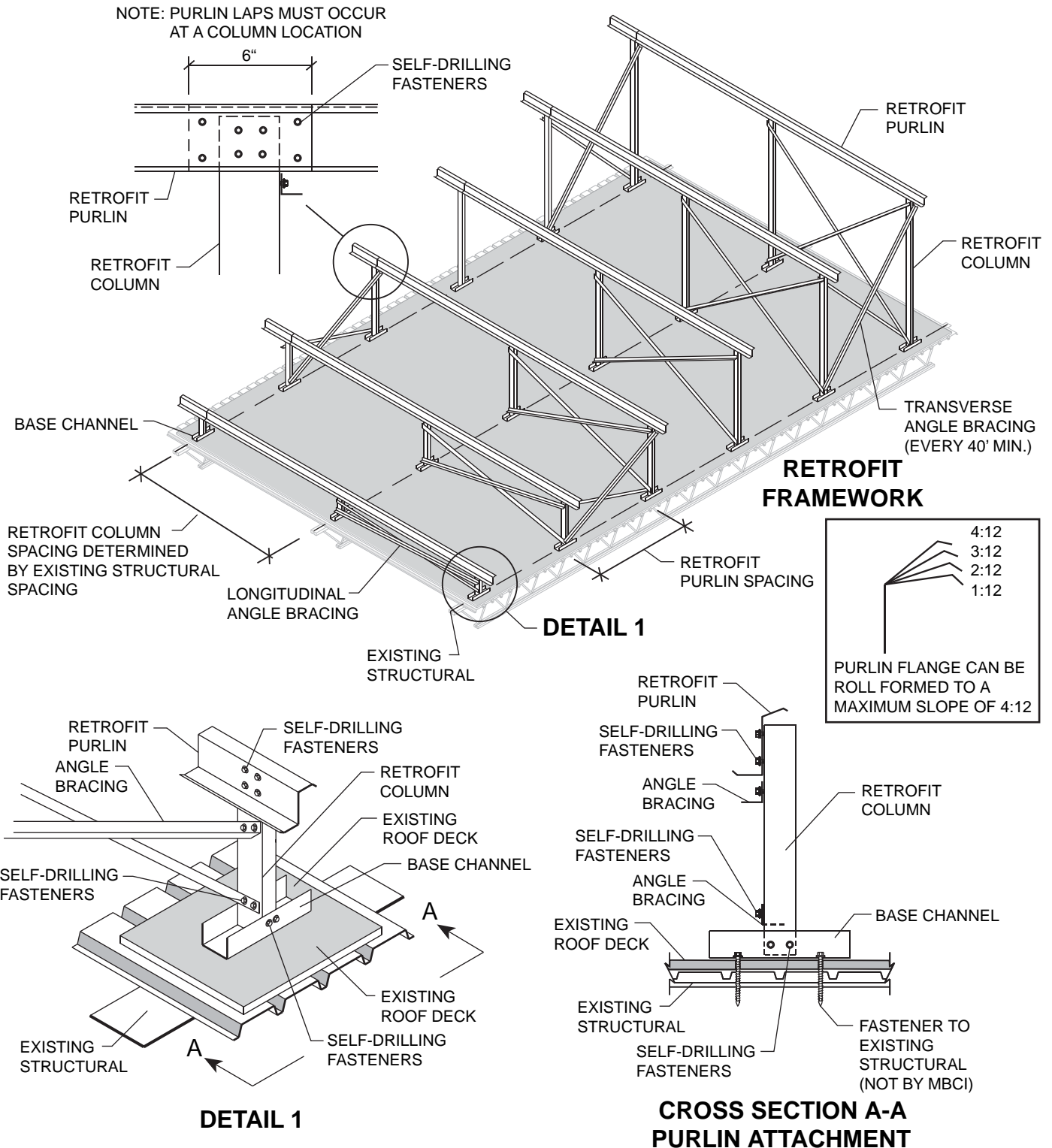
## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PARALLEL TO THE ROOF SLOPE ("X" Bracing Attachment)



# DESIGN INFORMATION

**NuRoof**®

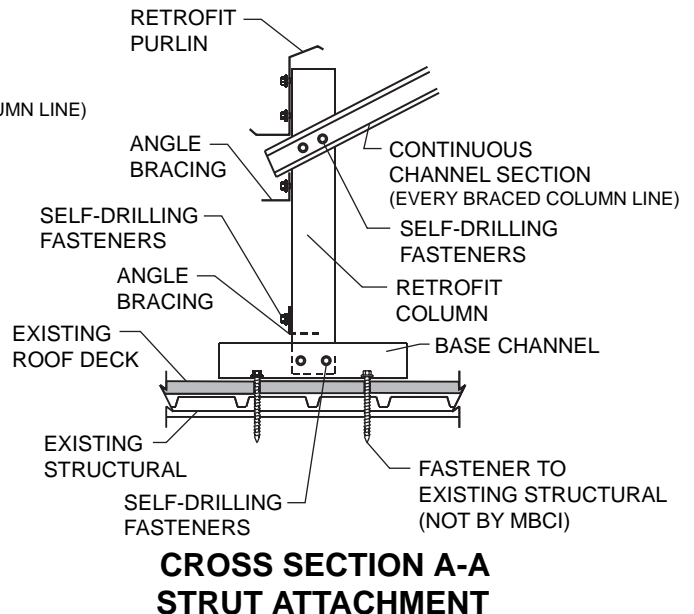
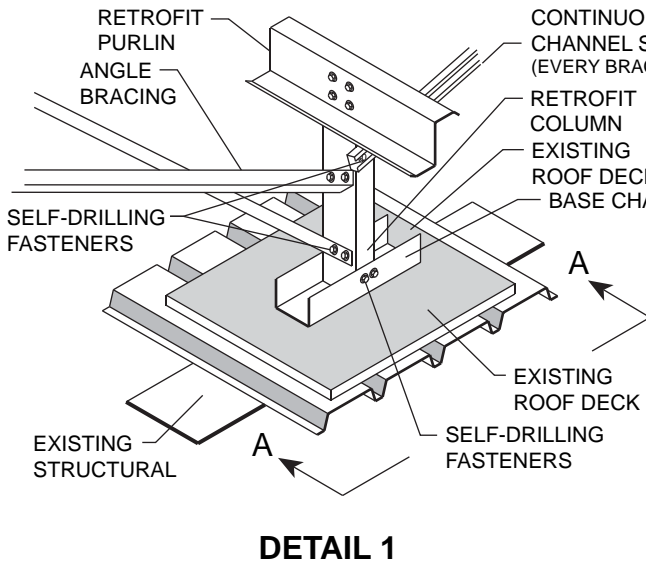
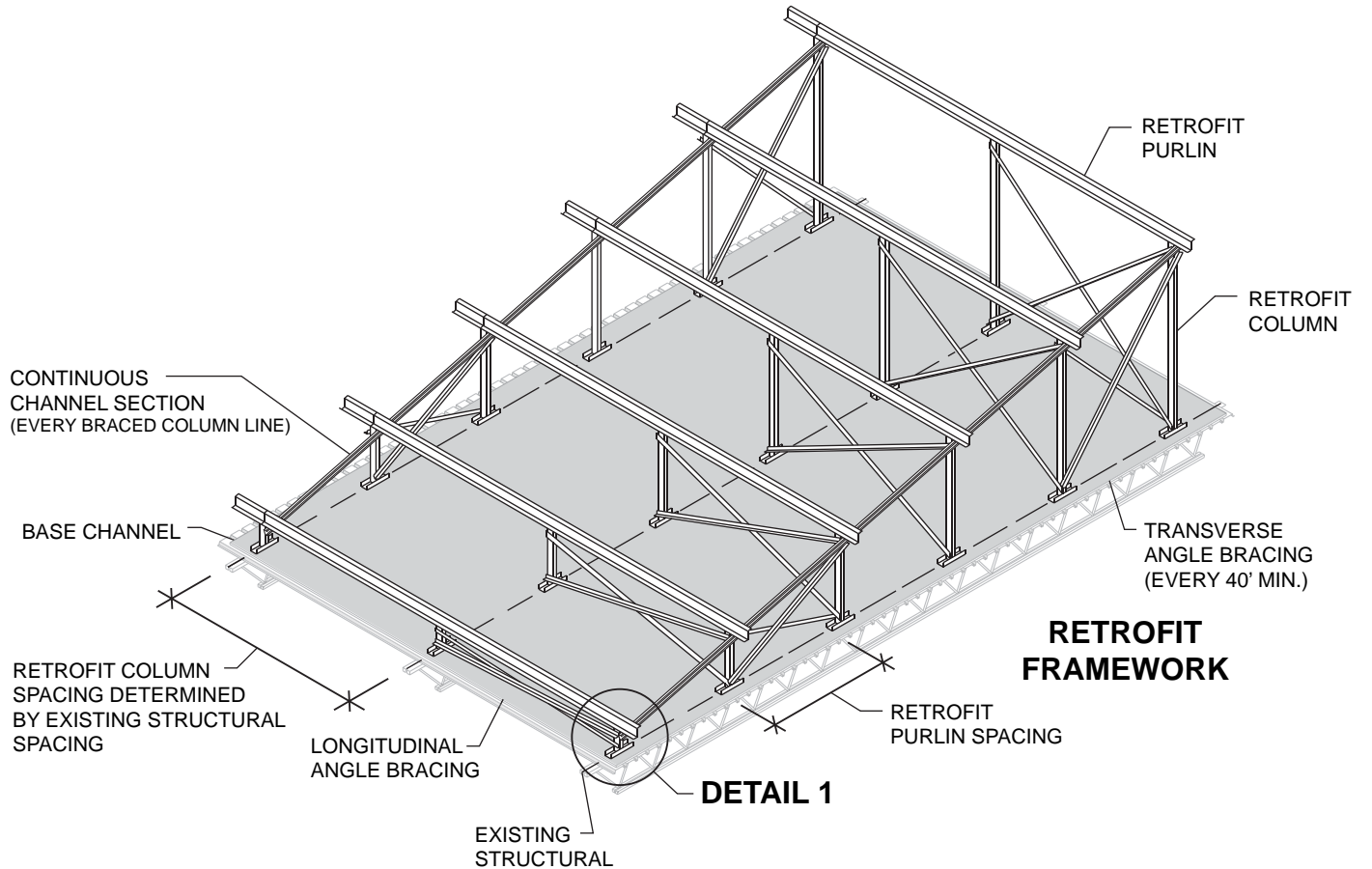
## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PARALLEL TO THE ROOF SLOPE (Purlin Attachment)



# NuRoof®

# DESIGN INFORMATION

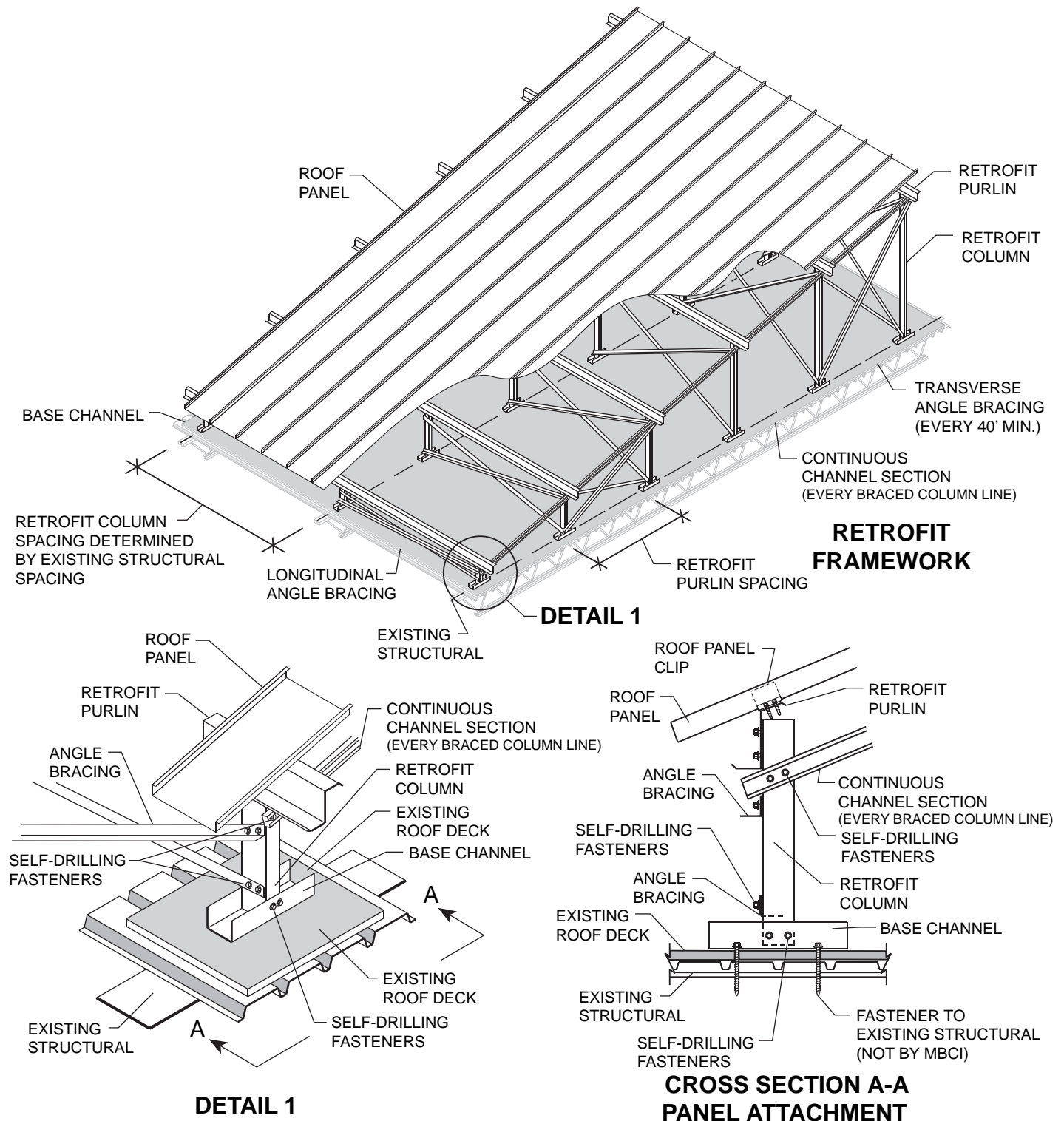
## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PARALLEL TO THE ROOF SLOPE (Strut Attachment)



# DESIGN INFORMATION

# NuRoof<sup>®</sup>

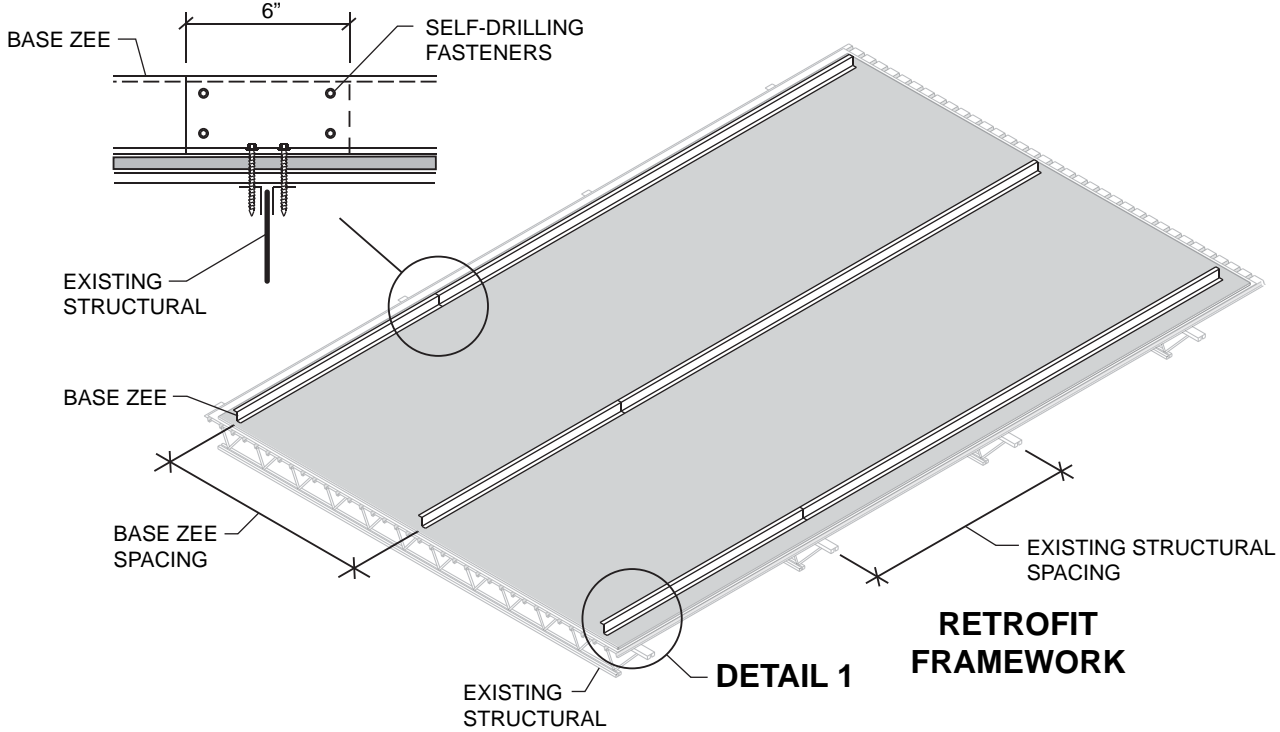
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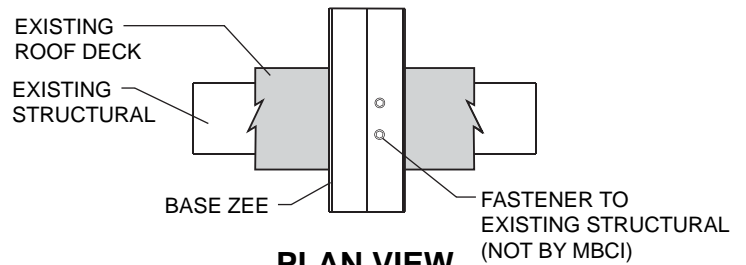
# NuRoof® DESIGN INFORMATION

## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PERPENDICULAR TO THE ROOF SLOPE (Base Zee Attachment)

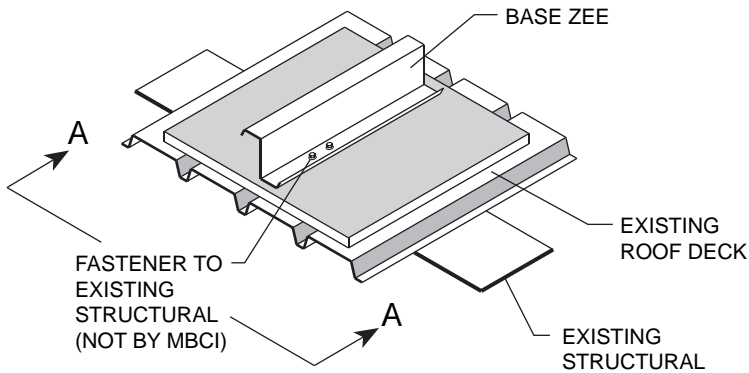
NOTE: BASE ZEE LAPS MUST OCCUR OVER A SUPPORT



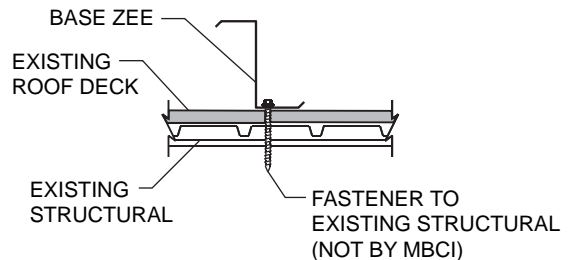
**RETROFIT FRAMEWORK**



**PLAN VIEW  
 BASE ZEE ATTACHMENT**



**DETAIL 1**

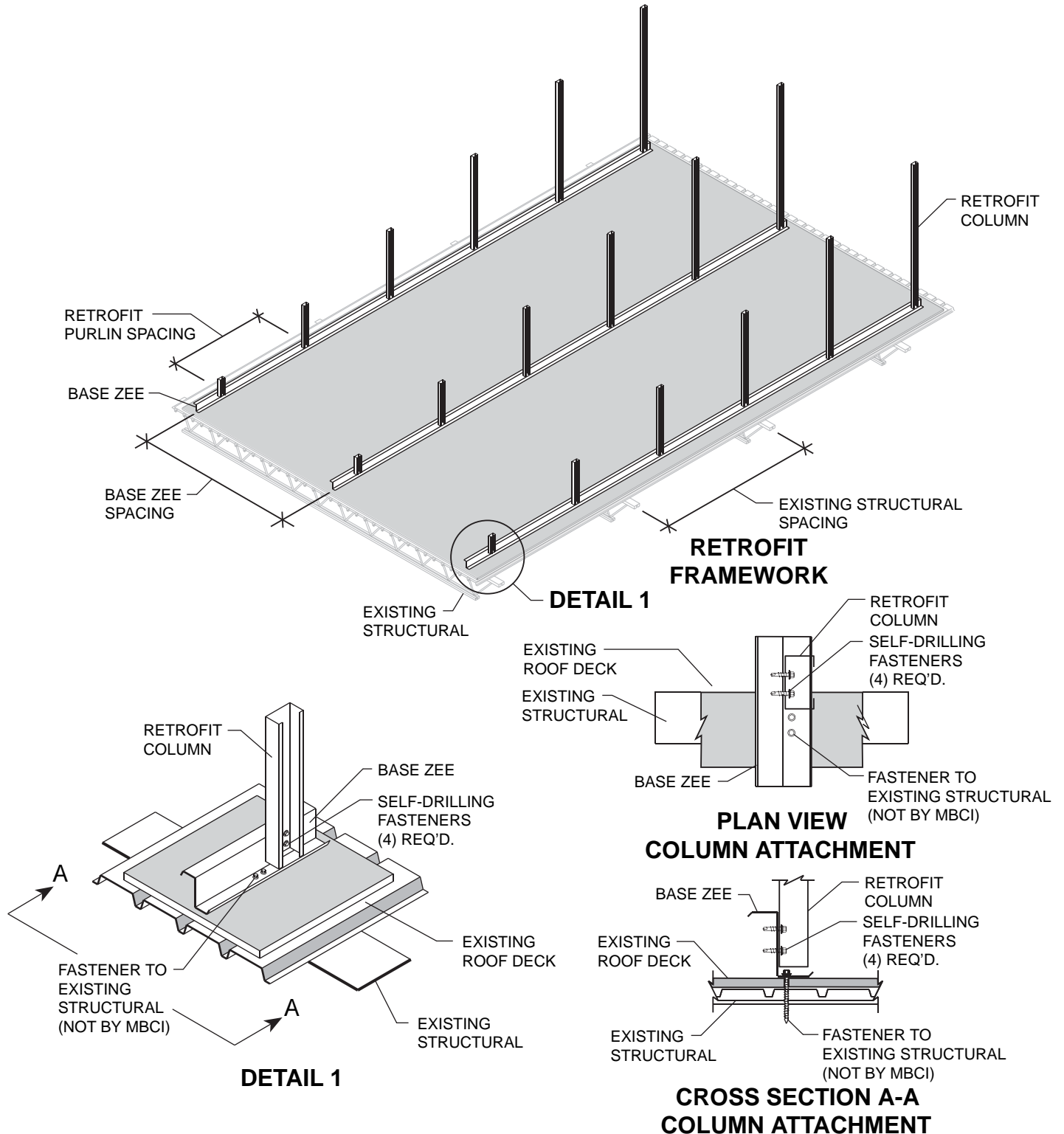


**CROSS SECTION A-A  
 BASE ZEE ATTACHMENT**

# DESIGN INFORMATION

# NuRoof®

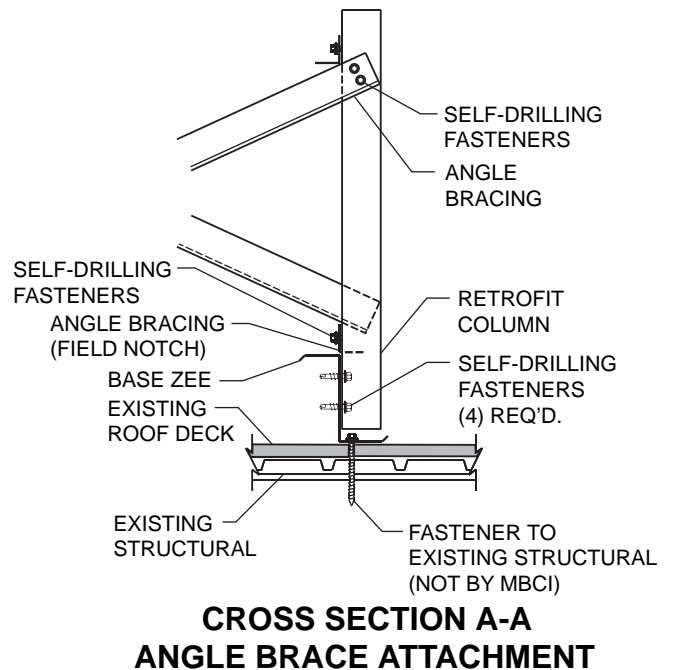
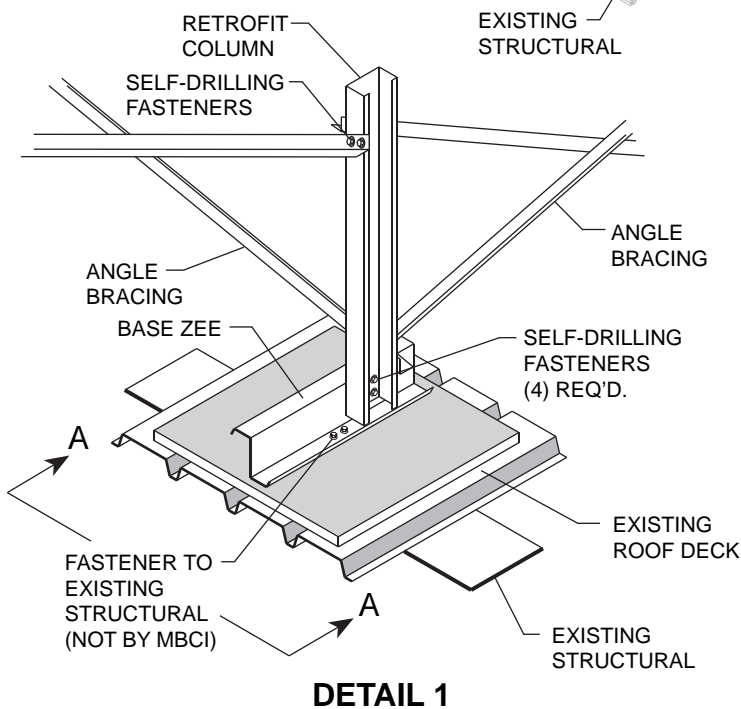
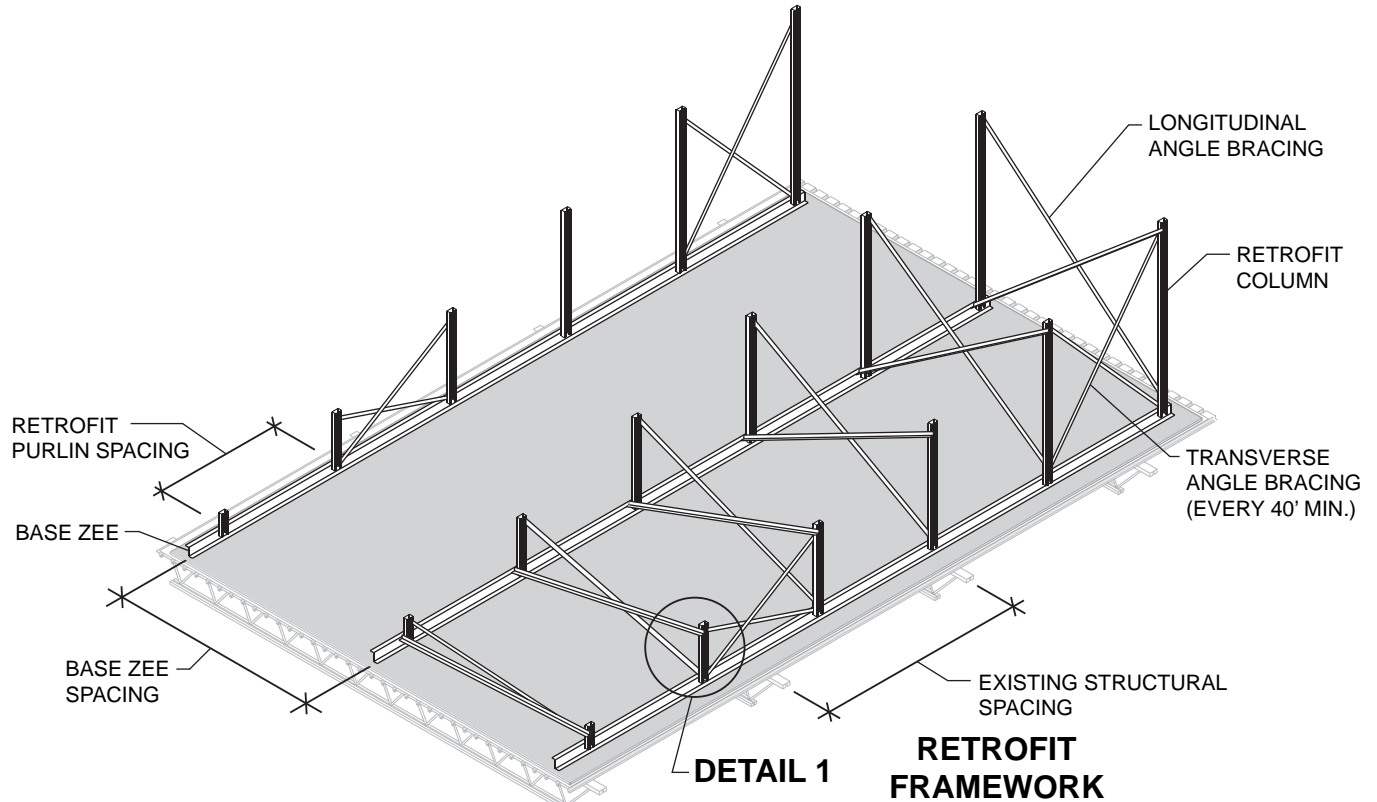
## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PERPENDICULAR TO THE ROOF SLOPE (Column Attachment)





# NuRoof® DESIGN INFORMATION

## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PERPENDICULAR TO THE ROOF SLOPE ("X" Bracing Attachment)

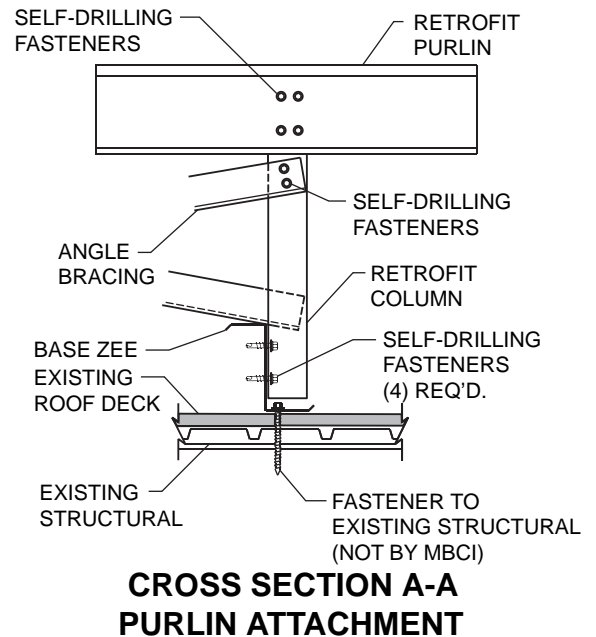
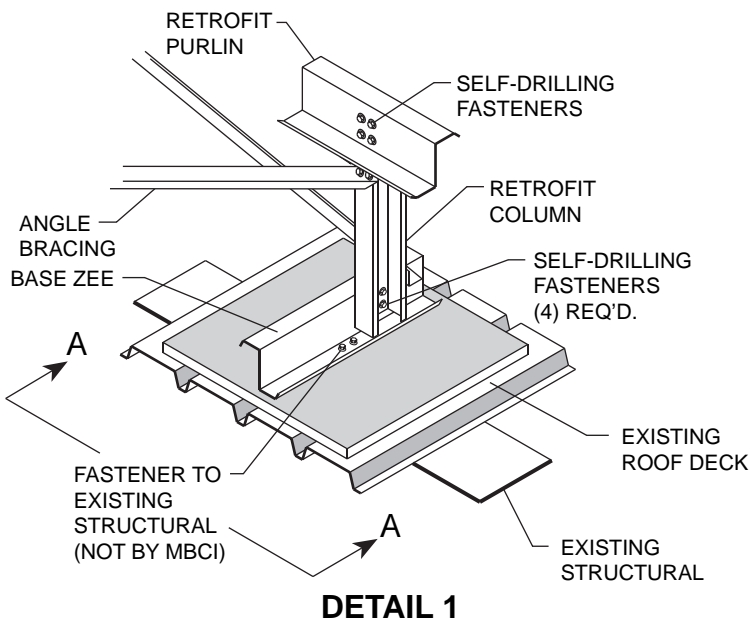
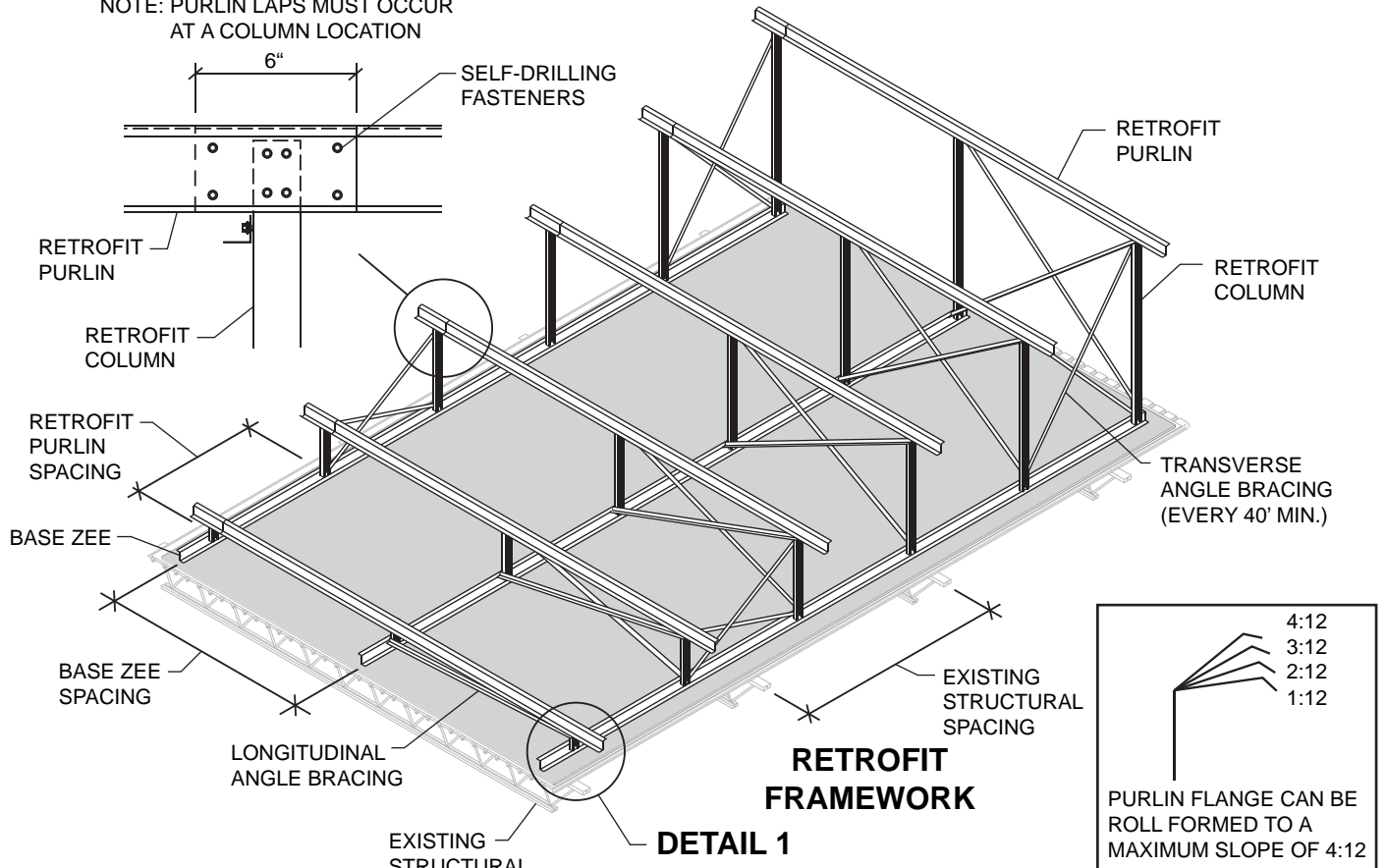


# DESIGN INFORMATION

# NuRoof<sup>®</sup>

## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PERPENDICULAR TO THE ROOF SLOPE (Purlin Attachment)

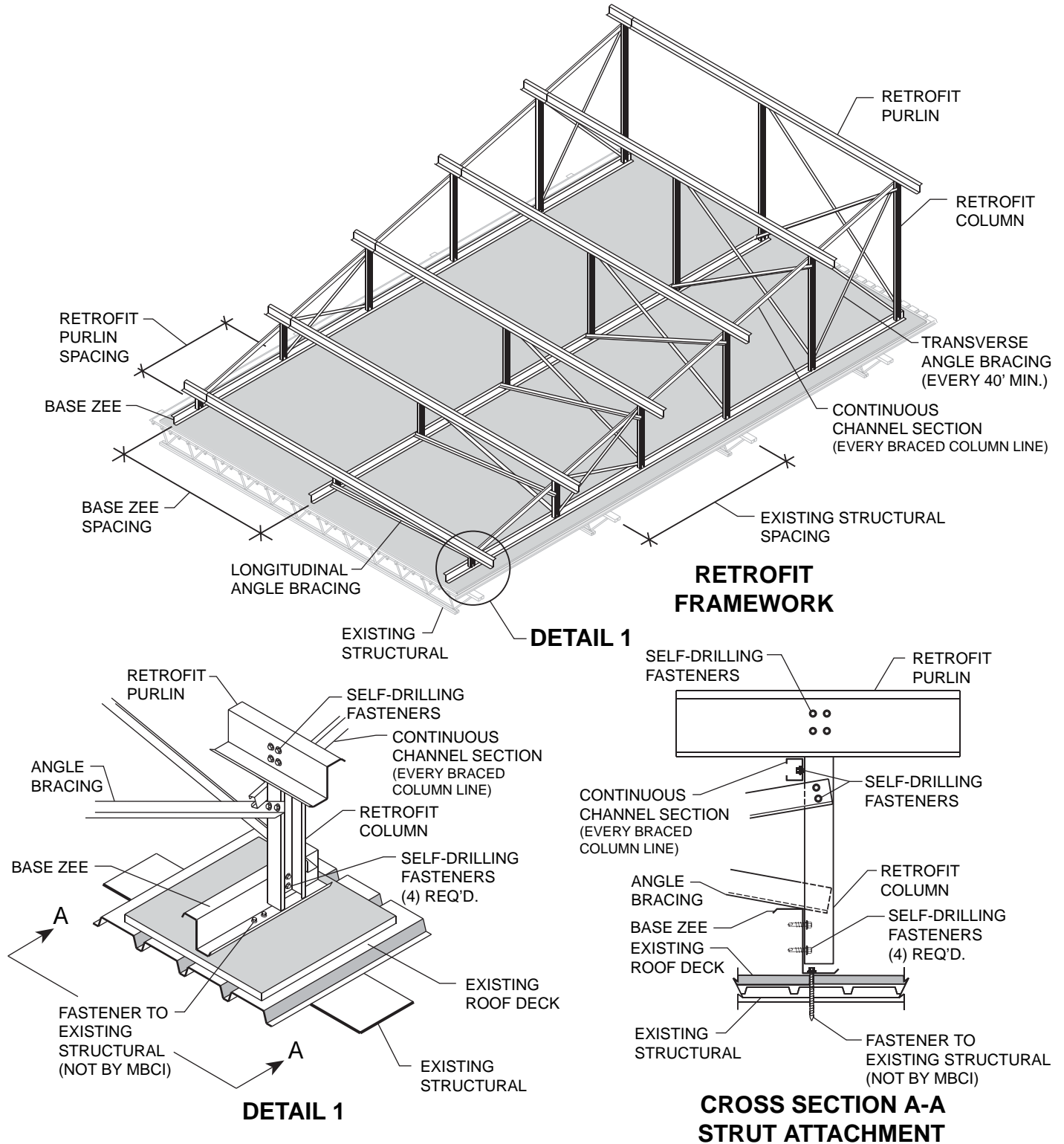
NOTE: PURLIN LAPS MUST OCCUR AT A COLUMN LOCATION



# NuRoof®

# DESIGN INFORMATION

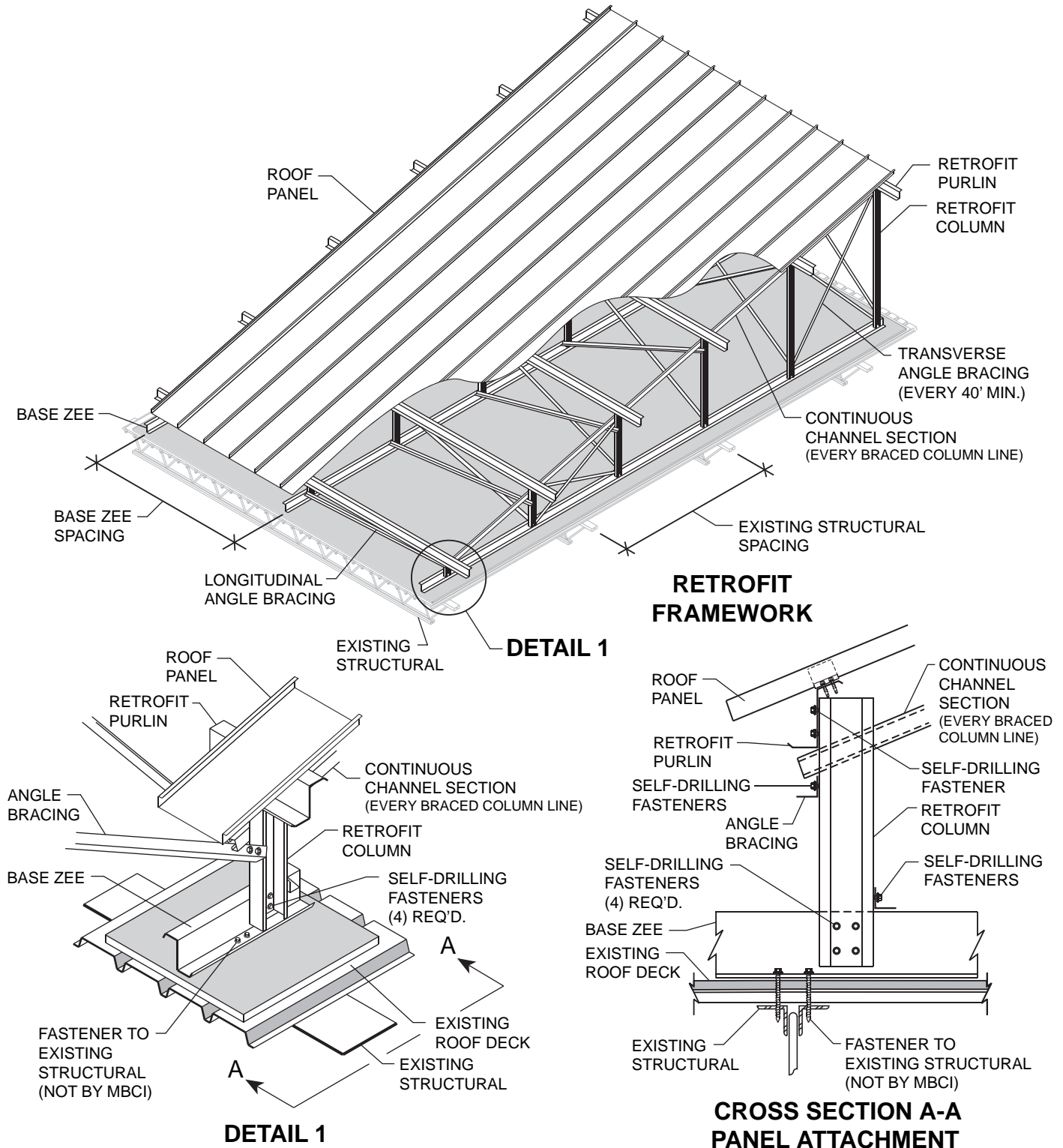
## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PERPENDICULAR TO THE ROOF SLOPE (Strut Attachment)



# DESIGN INFORMATION

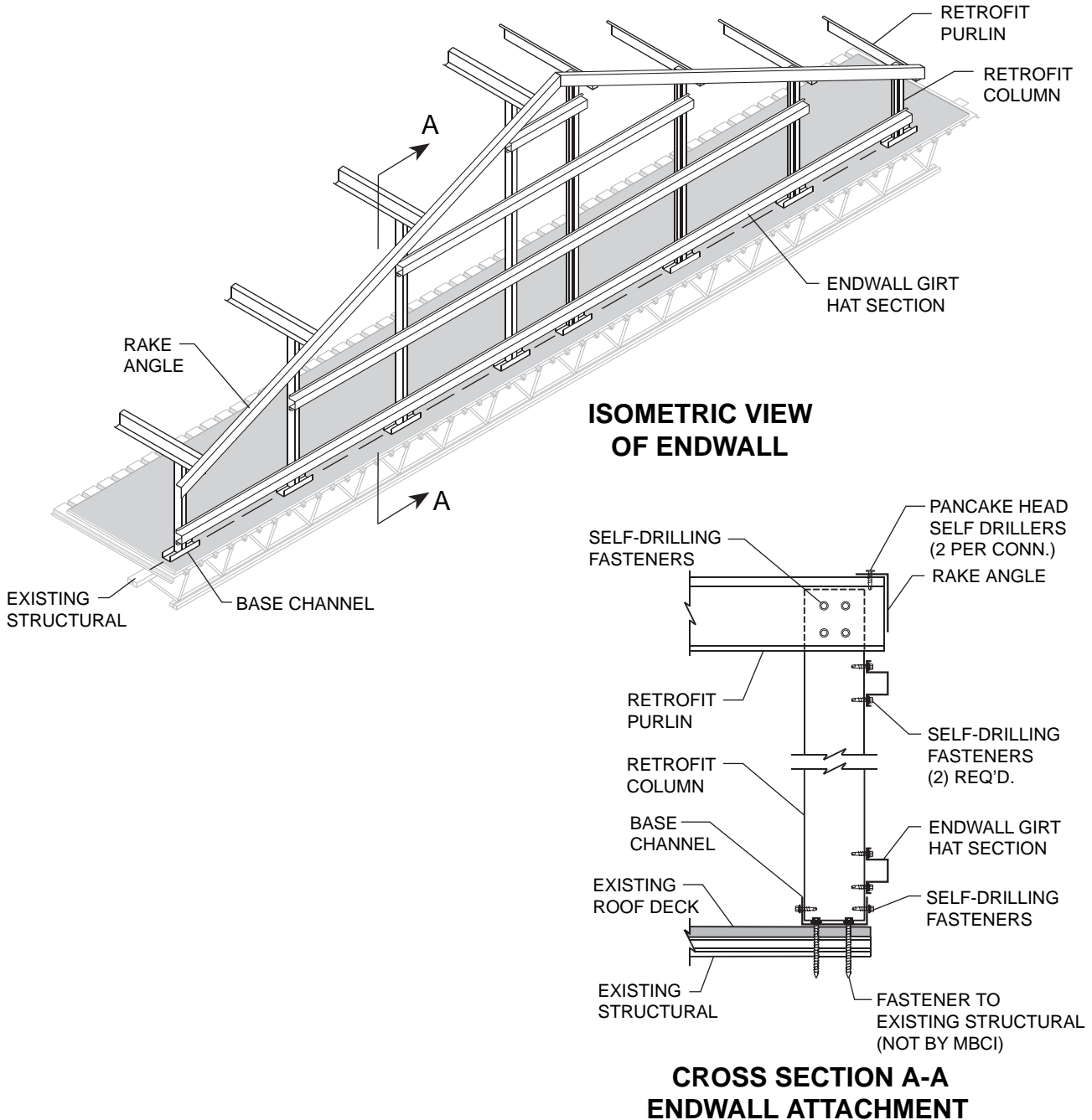
# NuRoof<sup>®</sup>

## RETROFIT FRAMING OVER STRUCTURAL MEMBERS PERPENDICULAR TO THE ROOF SLOPE (Panel Attachment)



# NuRoof® DESIGN INFORMATION

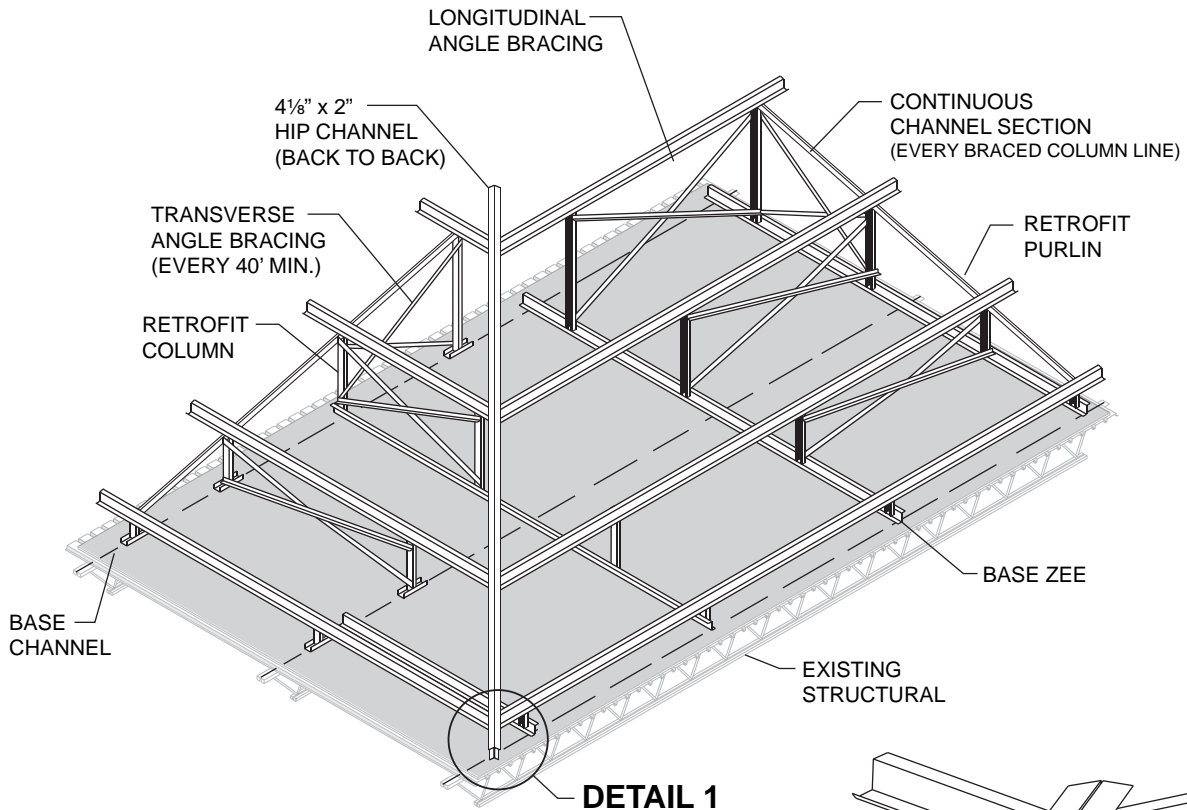
## RETROFIT FRAMING OVER STRUCTURAL MEMBERS (Gable Endwall Girt Attachment)



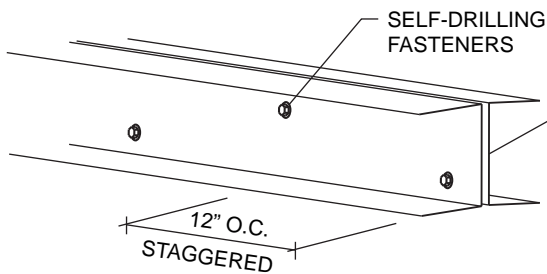
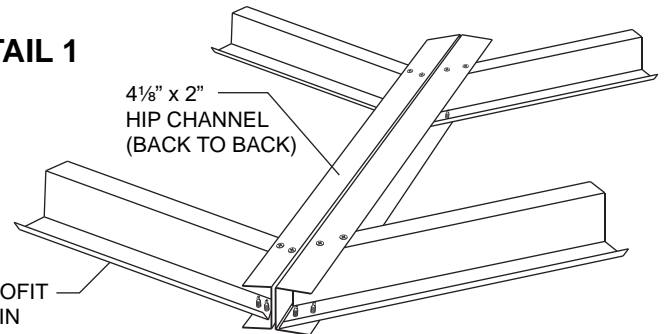
# DESIGN INFORMATION

# NuRoof<sup>®</sup>

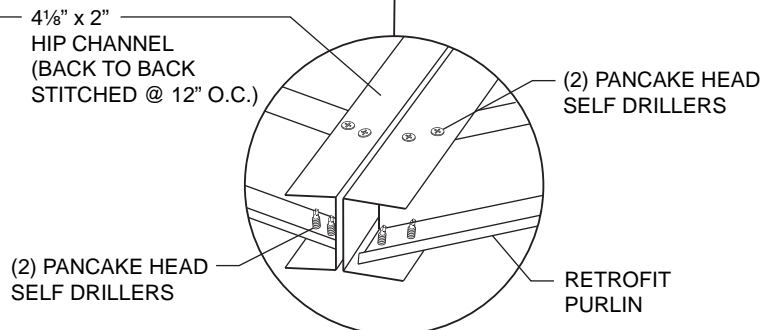
## RETROFIT FRAMING FOR ROOF HIP (Back-to-Back Hip Channel Attachment)



### RETROFIT FRAMEWORK



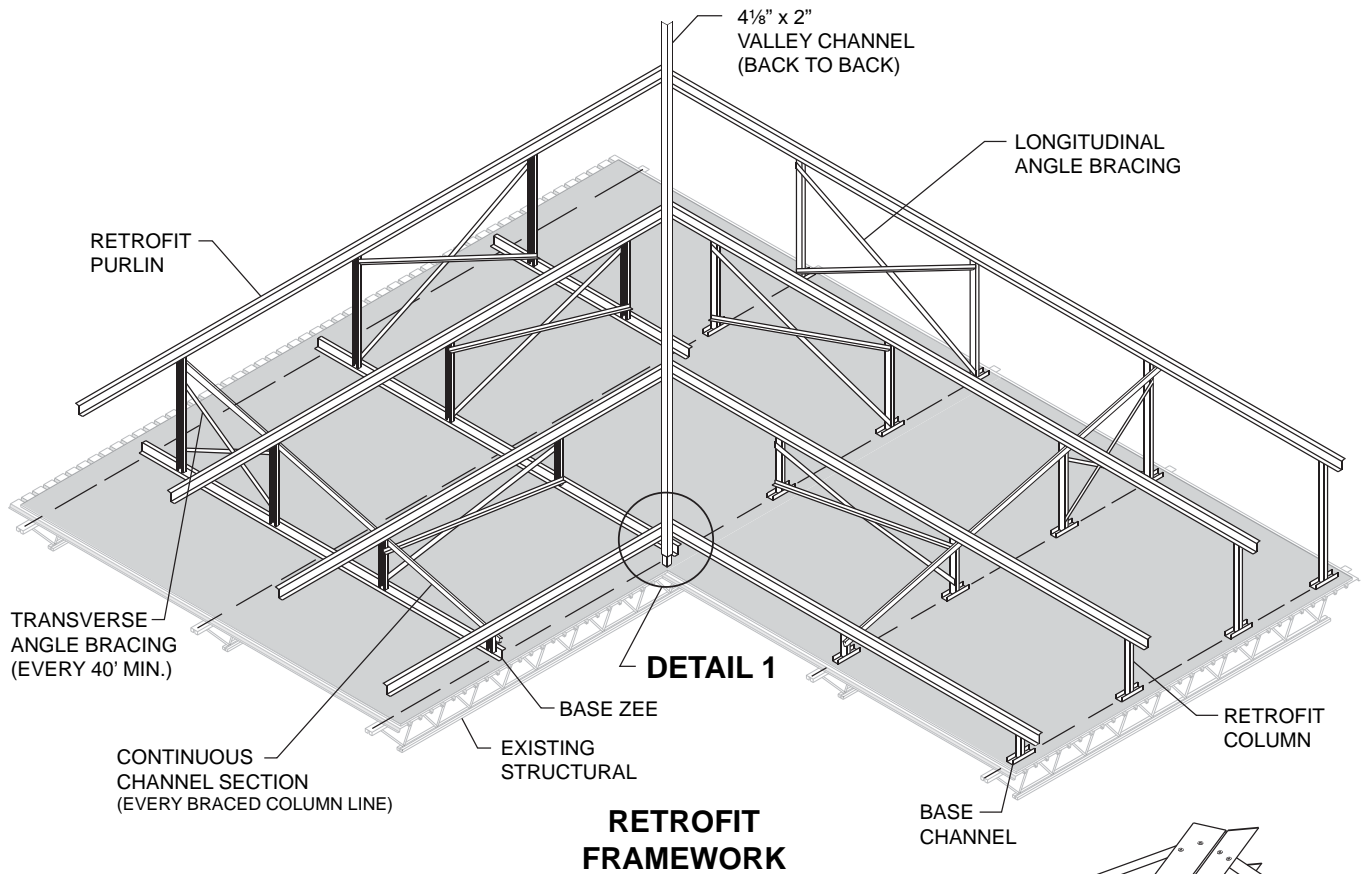
### HIP CHANNEL BACK TO BACK



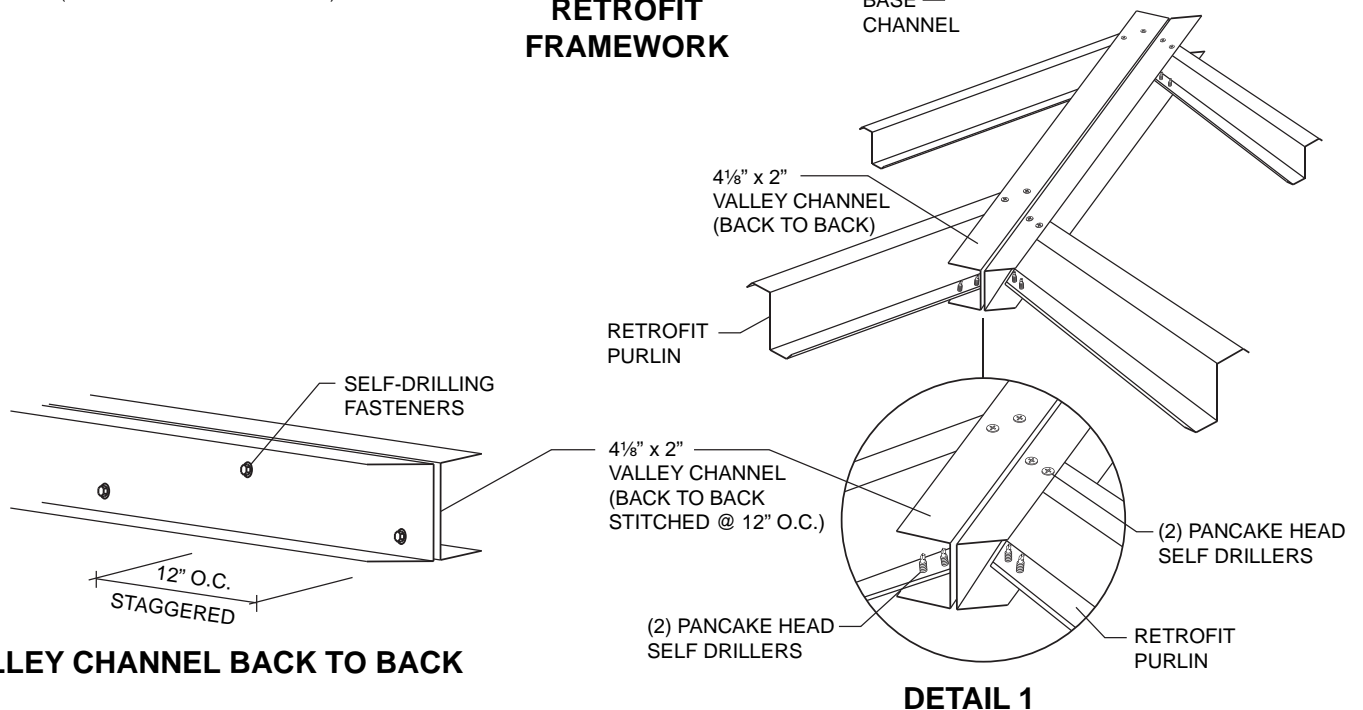
### DETAIL 1

# NuRoof® DESIGN INFORMATION

## RETROFIT FRAMING FOR ROOF VALLEY (Back-to-Back Valley Channel Attachment)



### RETROFIT FRAMEWORK

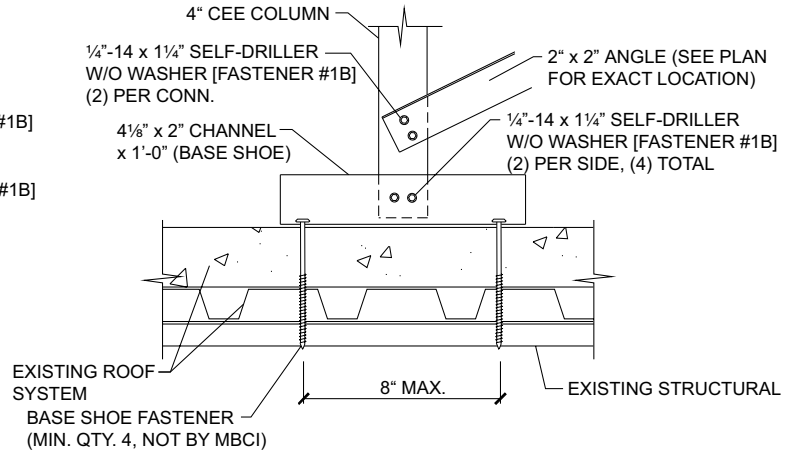
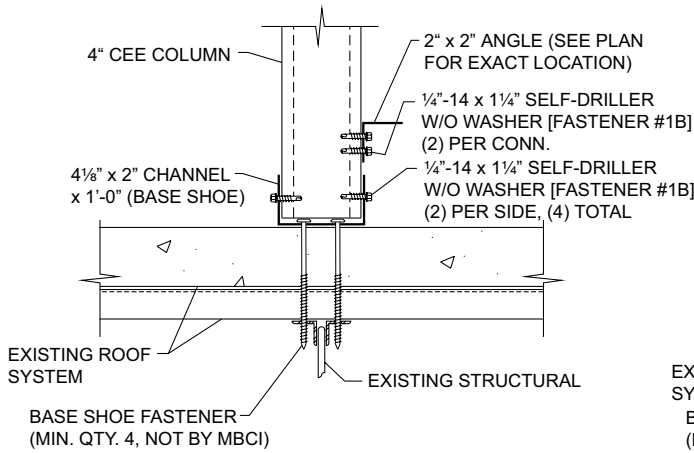


### VALLEY CHANNEL BACK TO BACK

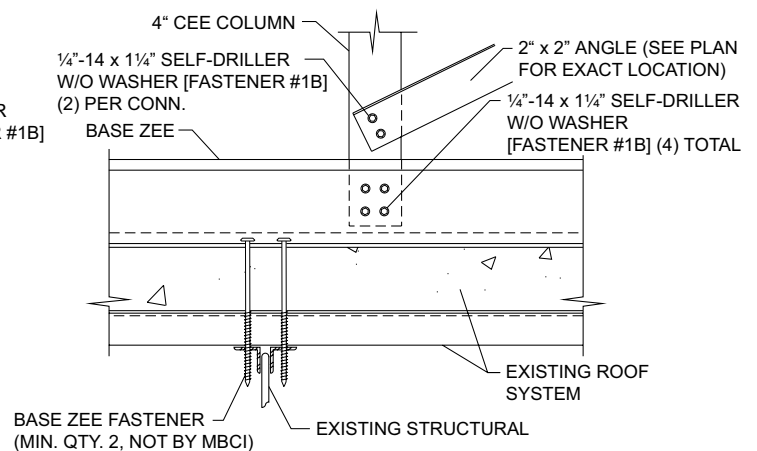
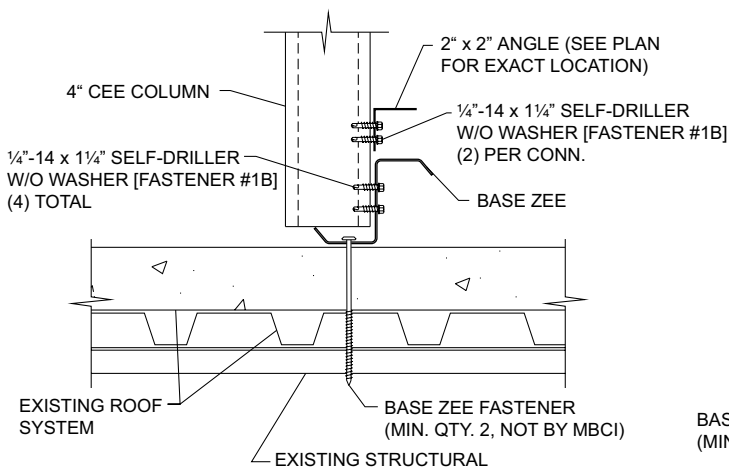




**BASE CHANNEL CONNECTION  
 WITH COLUMN ATTACHMENT  
 (Flange Connection)**



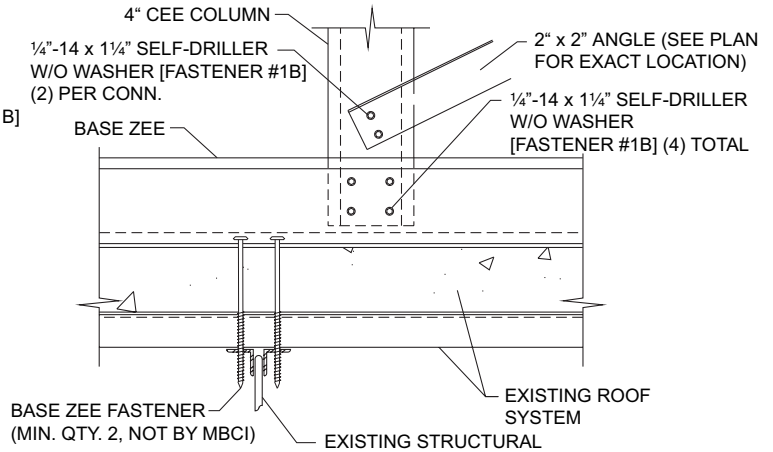
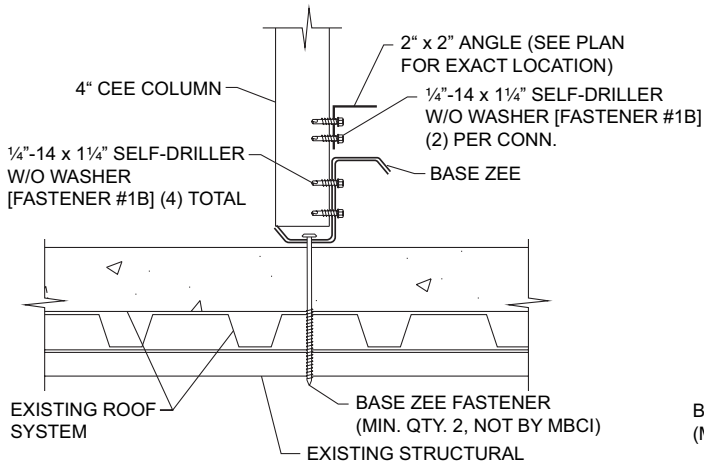
**BASE ZEE CONNECTION  
 WITH COLUMN ATTACHMENT  
 (Flange Connection)**



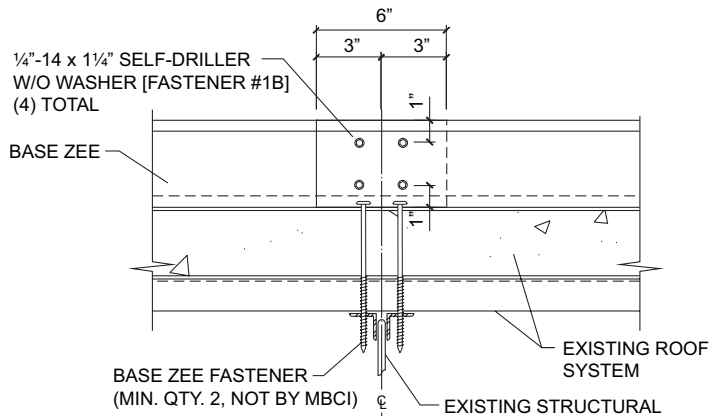
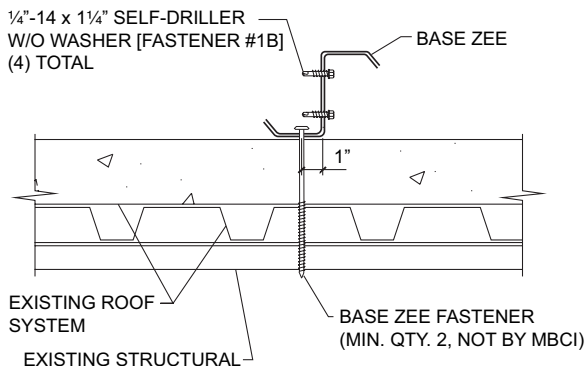
# DETAILS

# NuRoof<sup>®</sup>

## BASE ZEE CONNECTION WITH COLUMN ATTACHMENT (Web Connection)



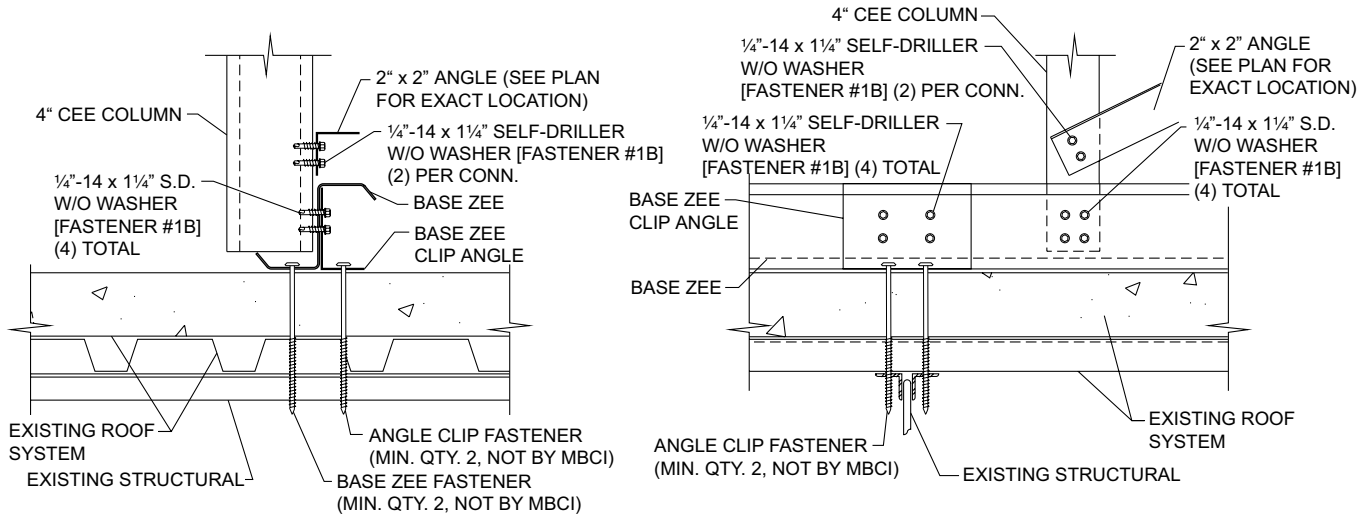
## BASE ZEE CONNECTION (Lap Connection)



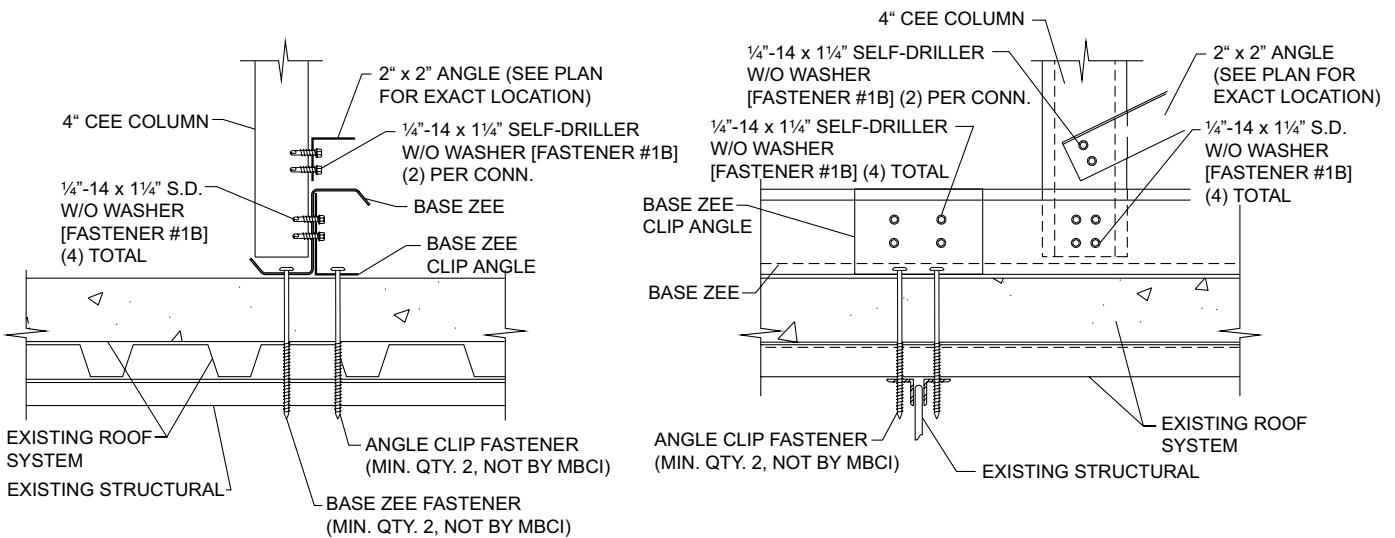
**NuRoof®**

**DETAILS**

## HIGH STRENGTH BASE ZEE-CLIP ANGLE CONNECTION WITH COLUMN ATTACHMENT (Flange Connection)



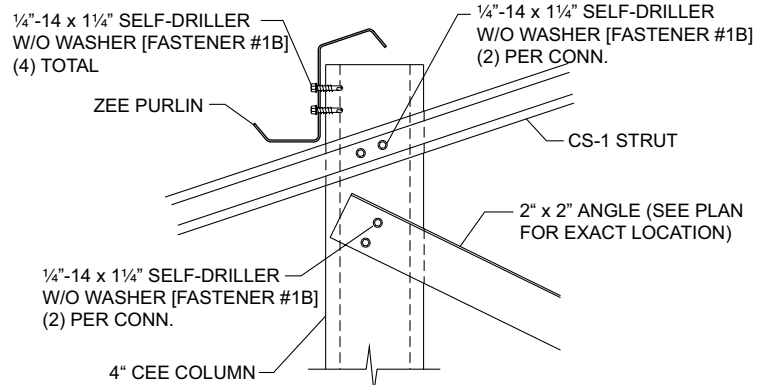
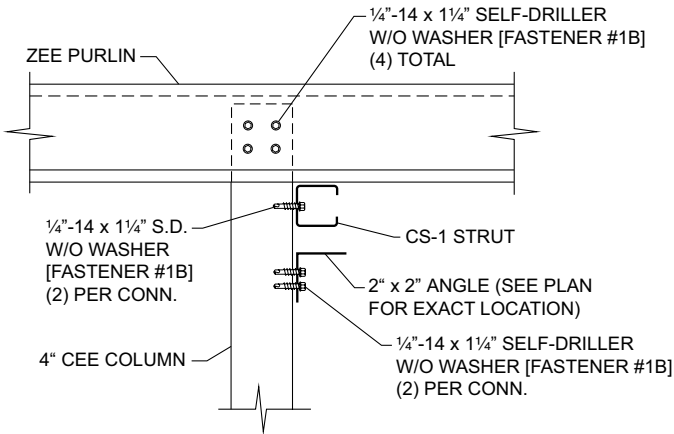
## HIGH STRENGTH BASE ZEE-CLIP ANGLE CONNECTION WITH COLUMN ATTACHMENT (Web Connection)



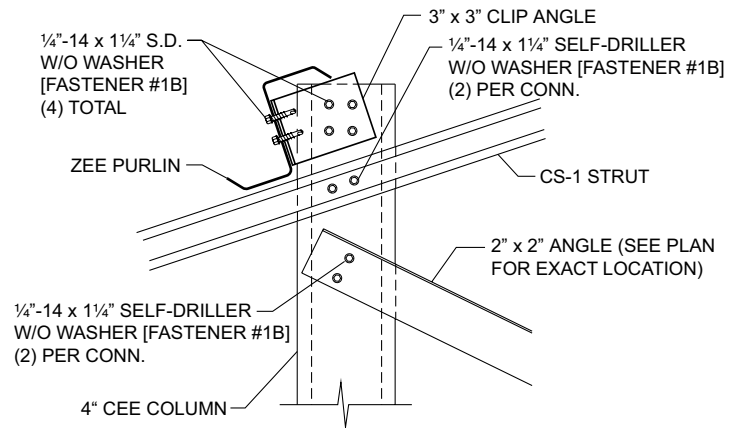
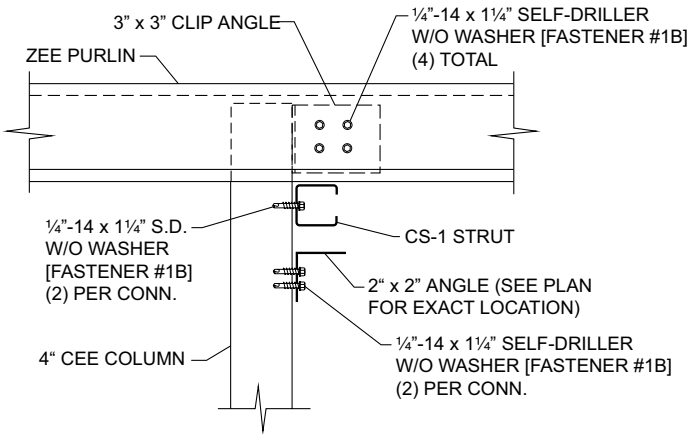
# DETAILS

# NuRoof<sup>®</sup>

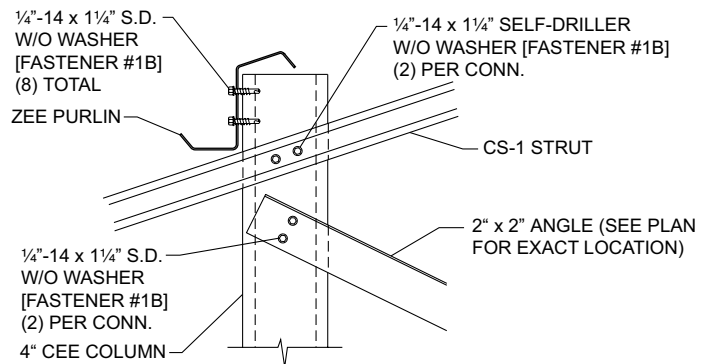
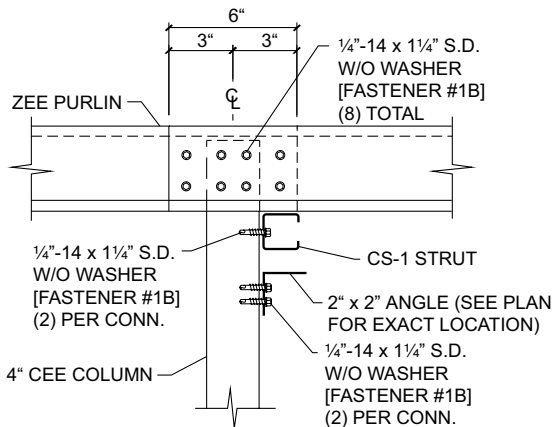
## PURLIN TO COLUMN ATTACHMENT (Flange Connection)



## PURLIN TO COLUMN ATTACHMENT (Flange Connection With Purlin Clip)



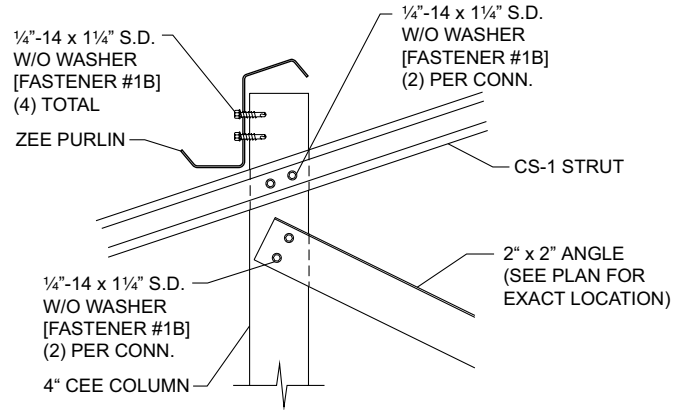
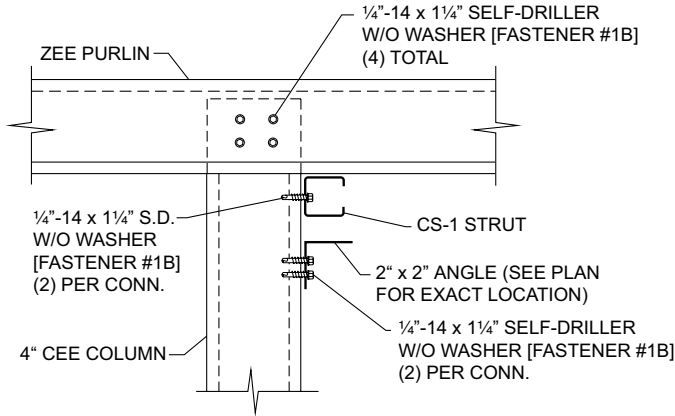
## PURLIN TO COLUMN ATTACHMENT (Flange Connection at Purlin Lap)



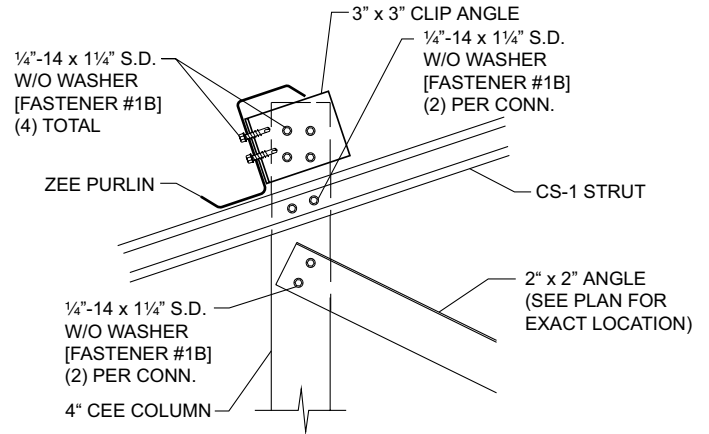
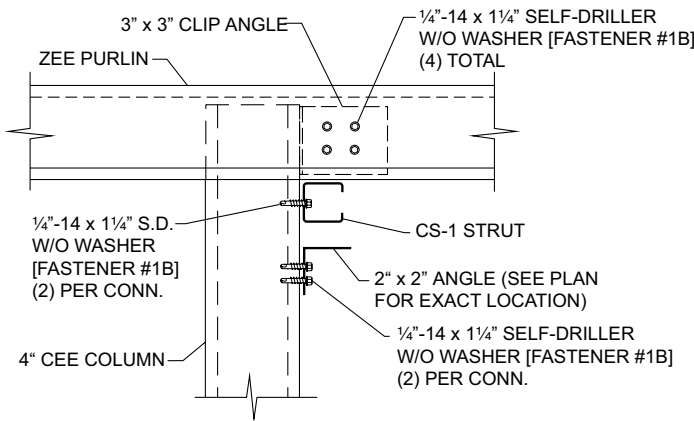
# NuRoof®

# DETAILS

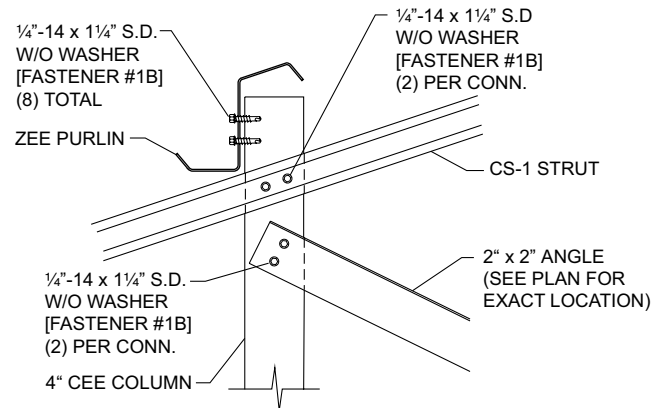
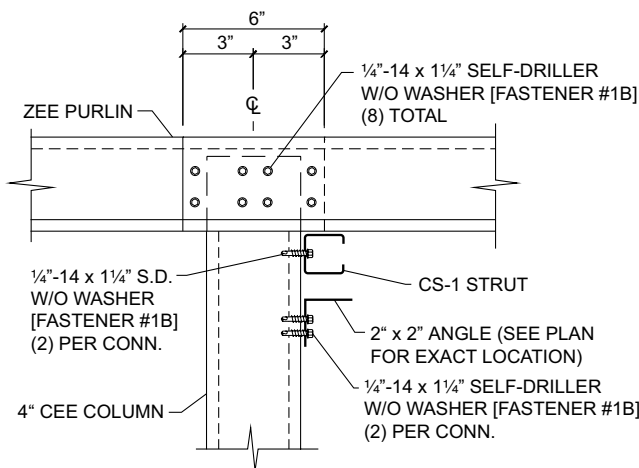
## PURLIN TO COLUMN ATTACHMENT (Web Connection)



## PURLIN TO COLUMN ATTACHMENT (Web Connection With Purlin Clip)



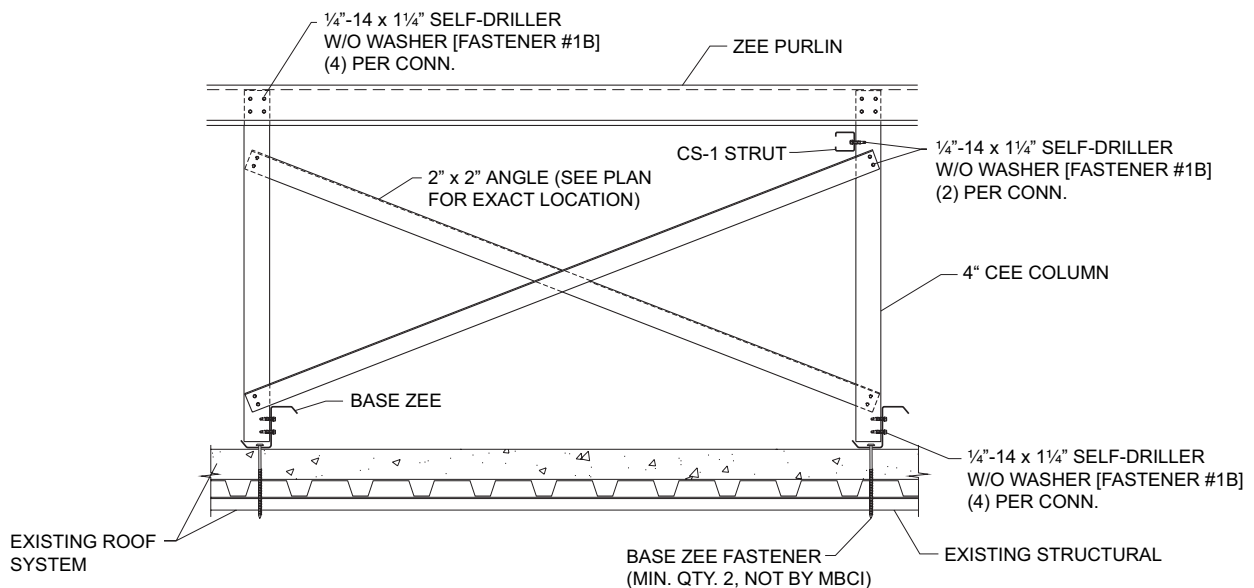
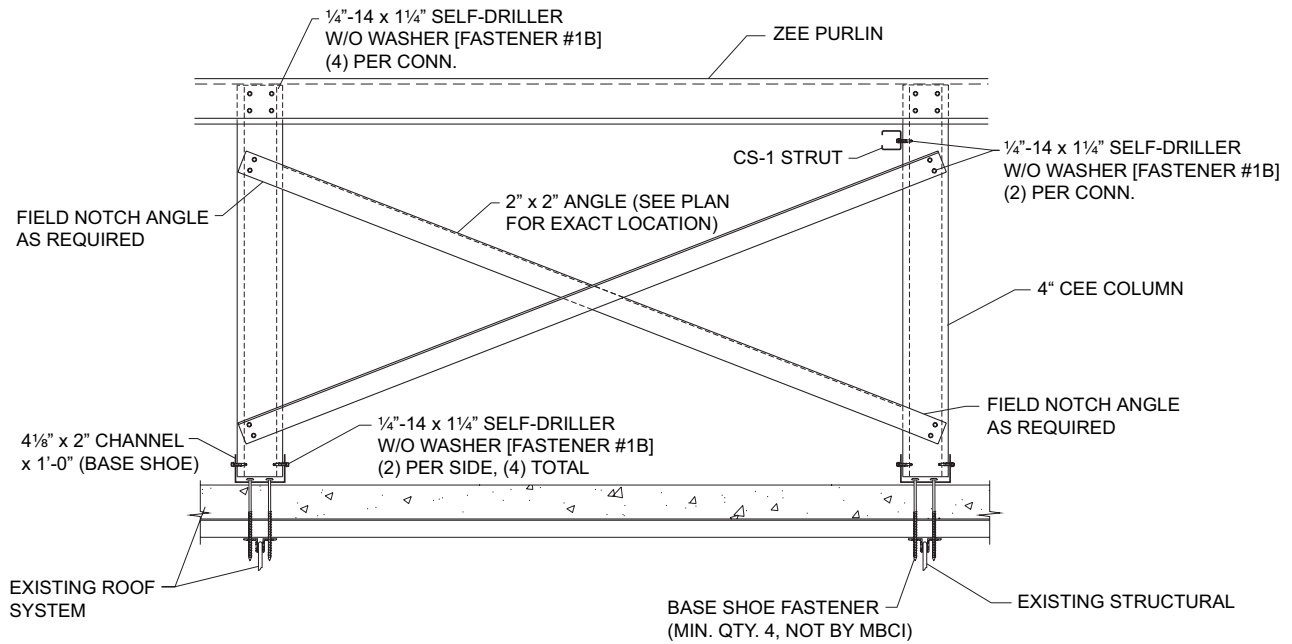
## PURLIN TO COLUMN ATTACHMENT (Web Connection at Purlin Lap)



# DETAILS

# NuRoof<sup>®</sup>

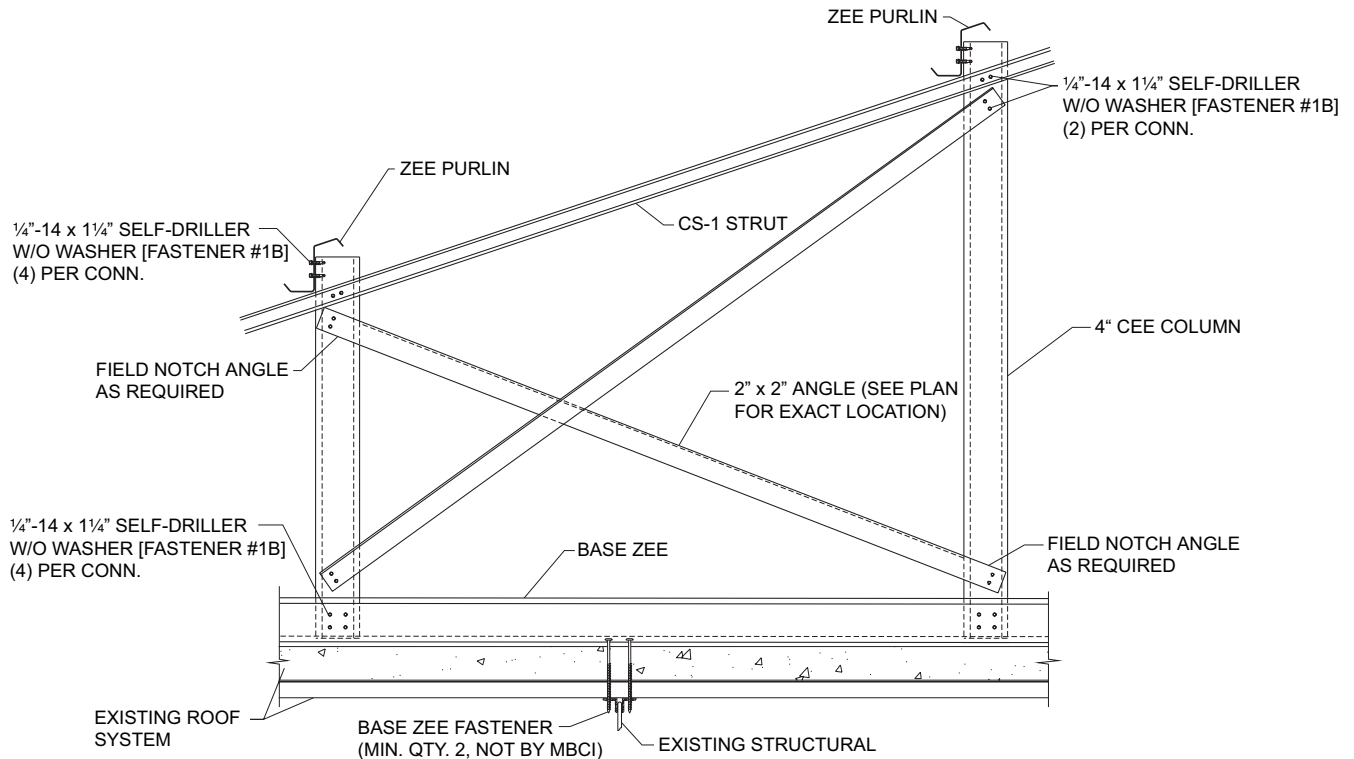
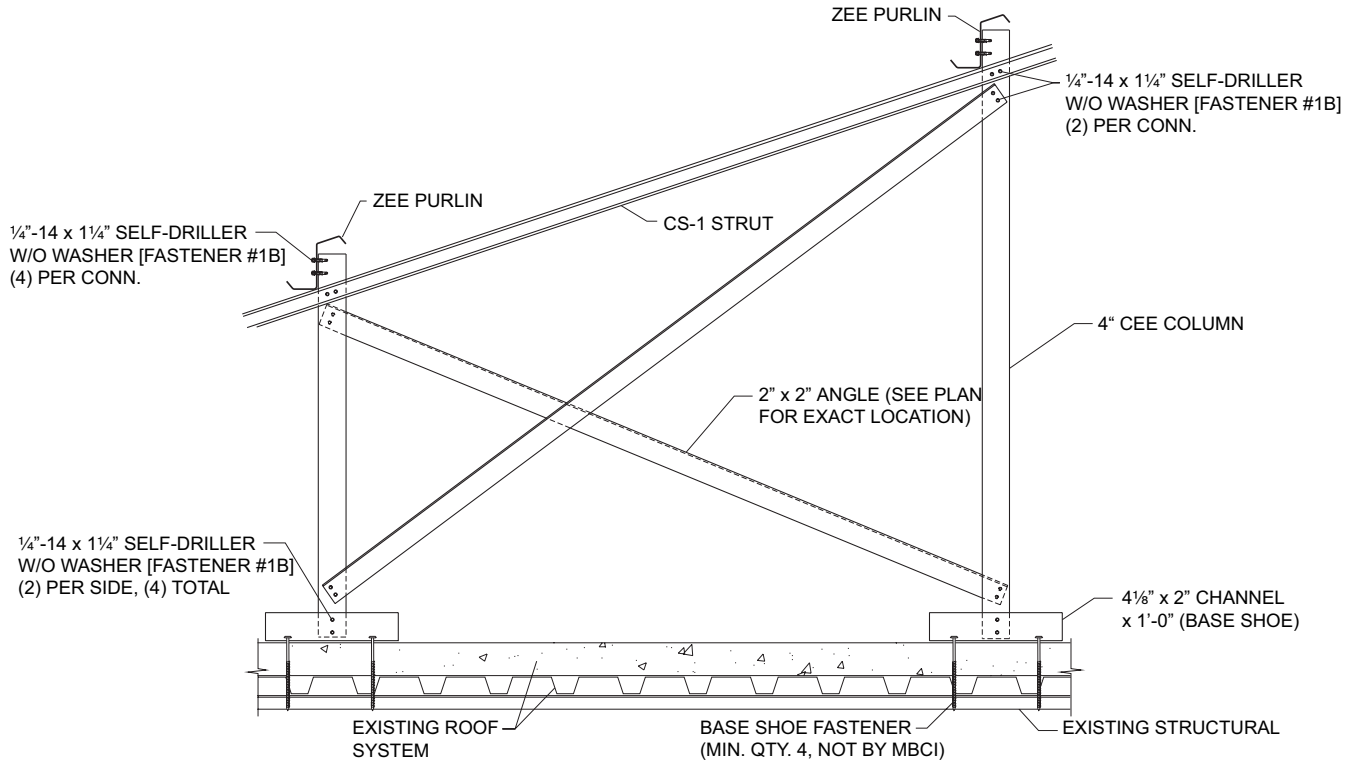
## LONGITUDINAL ANGLE BRACING (Parallel to Purlins)



# NuRoof®

# DETAILS

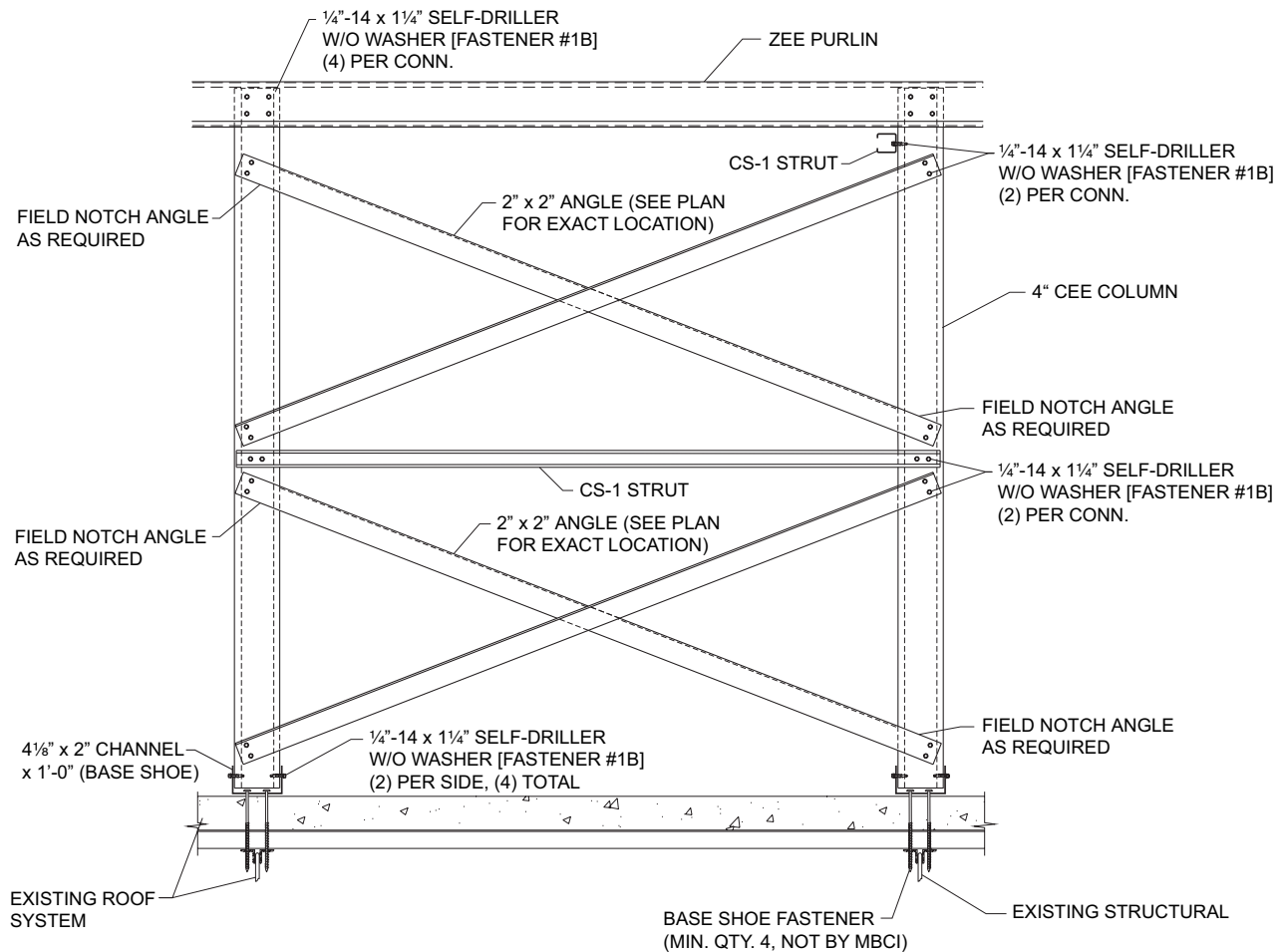
## TRANSVERSE ANGLE BRACING (Perpendicular to Purlins)



# DETAILS

# NuRoof<sup>®</sup>

## DOUBLE LONGITUDINAL ANGLE BRACING (Parallel to Purlins With Base Shoe)





Houston, TX 877/713-6224  
Adel, GA 888/446-6224  
Atlanta, GA 877/512-6224  
Atwater, CA 800/829-9324  
Dallas, TX 800/653-6224  
Indianapolis, IN 800/735-6224

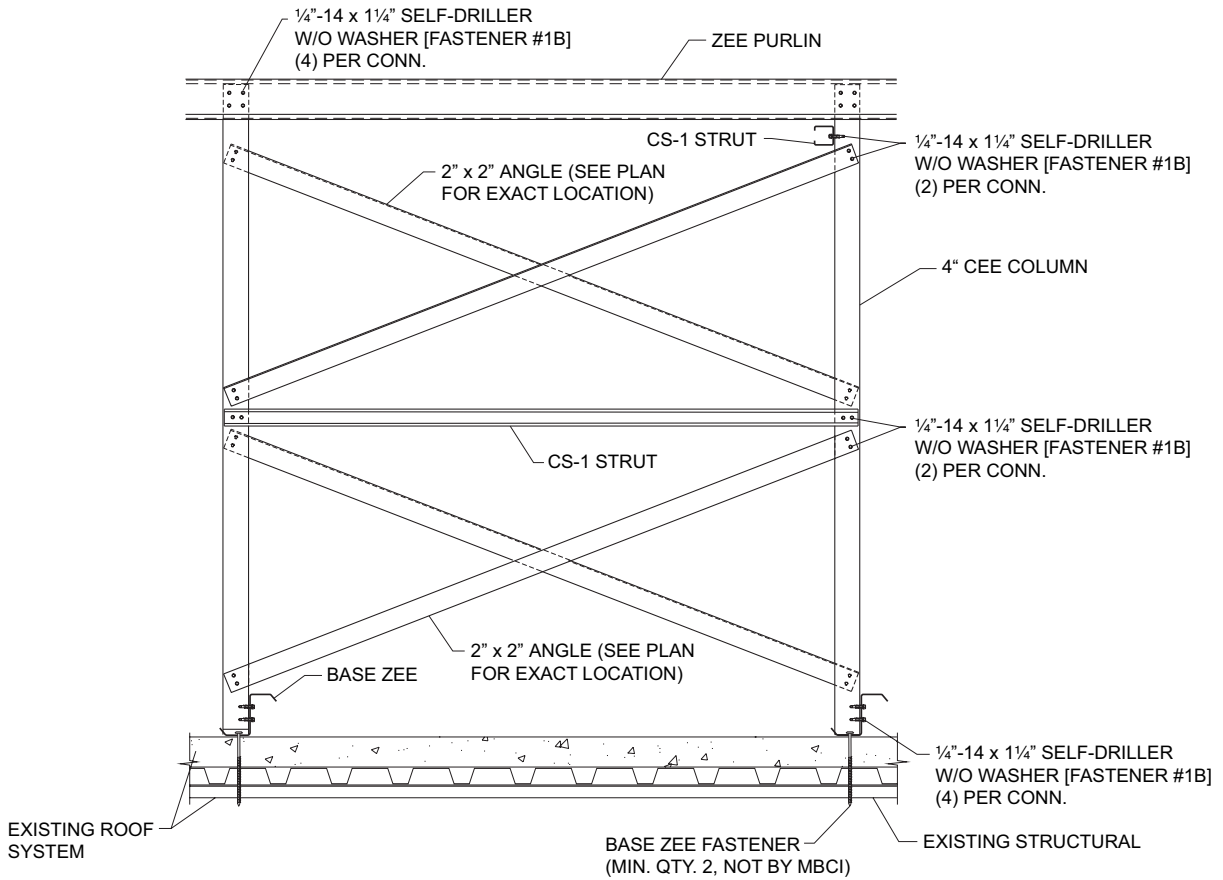
Lubbock, TX 800/758-6224  
Memphis, TN 800/206-6224  
Oklahoma City, OK 800/597-6224  
Omaha, NE 800/458-6224  
Phoenix, AZ 888/533-6224  
Richmond, VA 800/729-6224

Rome, NY 800/559-6224  
Salt Lake City, UT 800/874-2404  
San Antonio, TX 800/598-6224  
Tampa, FL Sales Office 800/359-6224



# NuRoof® DETAILS

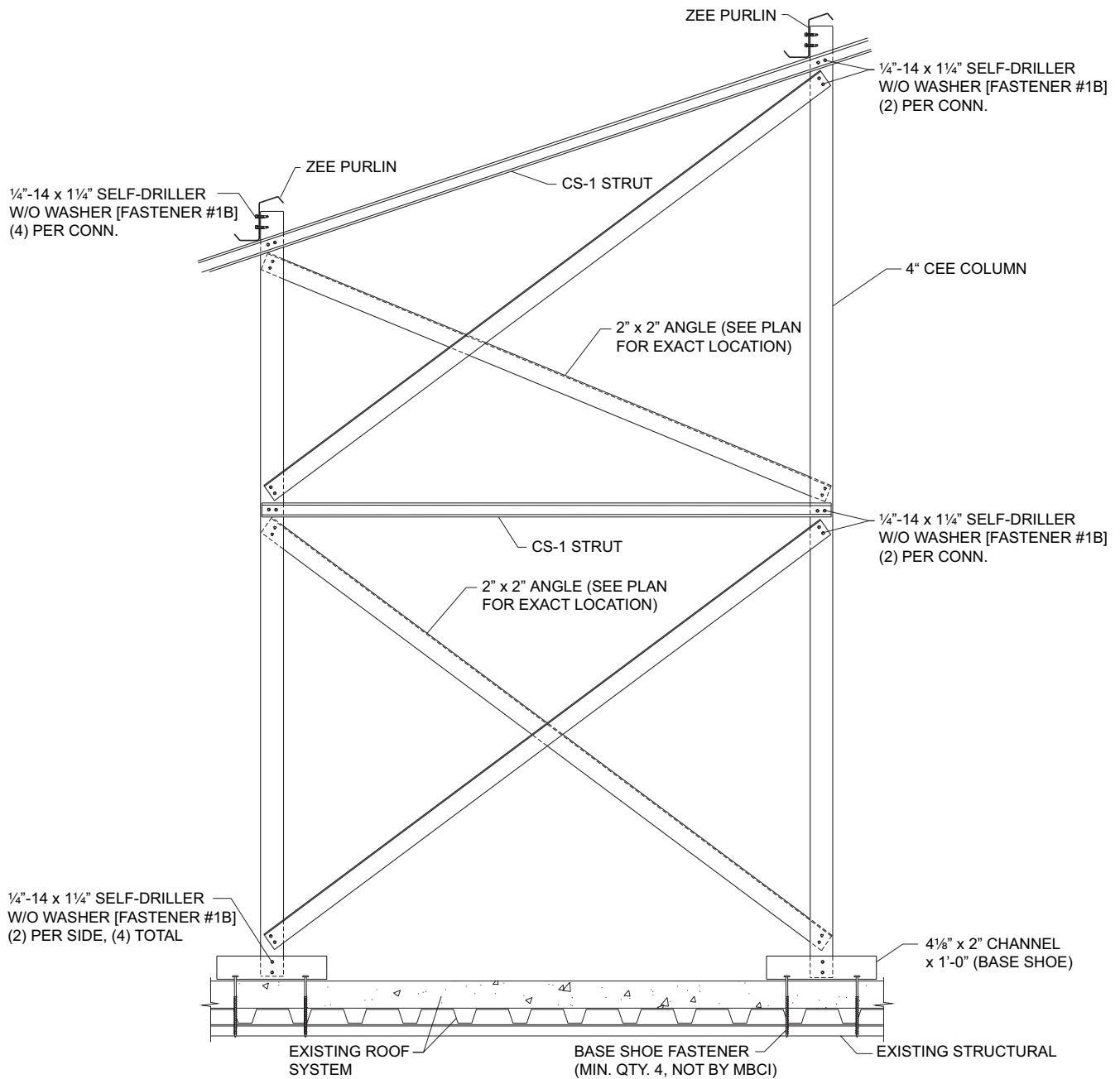
## DOUBLE LONGITUDINAL ANGLE BRACING (Parallel to Purlins With Base Zee)



# DETAILS

# NuRoof<sup>®</sup>

## DOUBLE TRANSVERSE ANGLE BRACING (Perpendicular to Purlins With Base Shoe)



Houston, TX 877/713-6224  
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Atlanta, GA 877/512-6224  
Atwater, CA 800/829-9324  
Dallas, TX 800/653-6224  
Indianapolis, IN 800/735-6224

Lubbock, TX 800/758-6224  
Memphis, TN 800/206-6224  
Oklahoma City, OK 800/597-6224  
Omaha, NE 800/458-6224  
Phoenix, AZ 888/533-6224  
Richmond, VA 800/729-6224

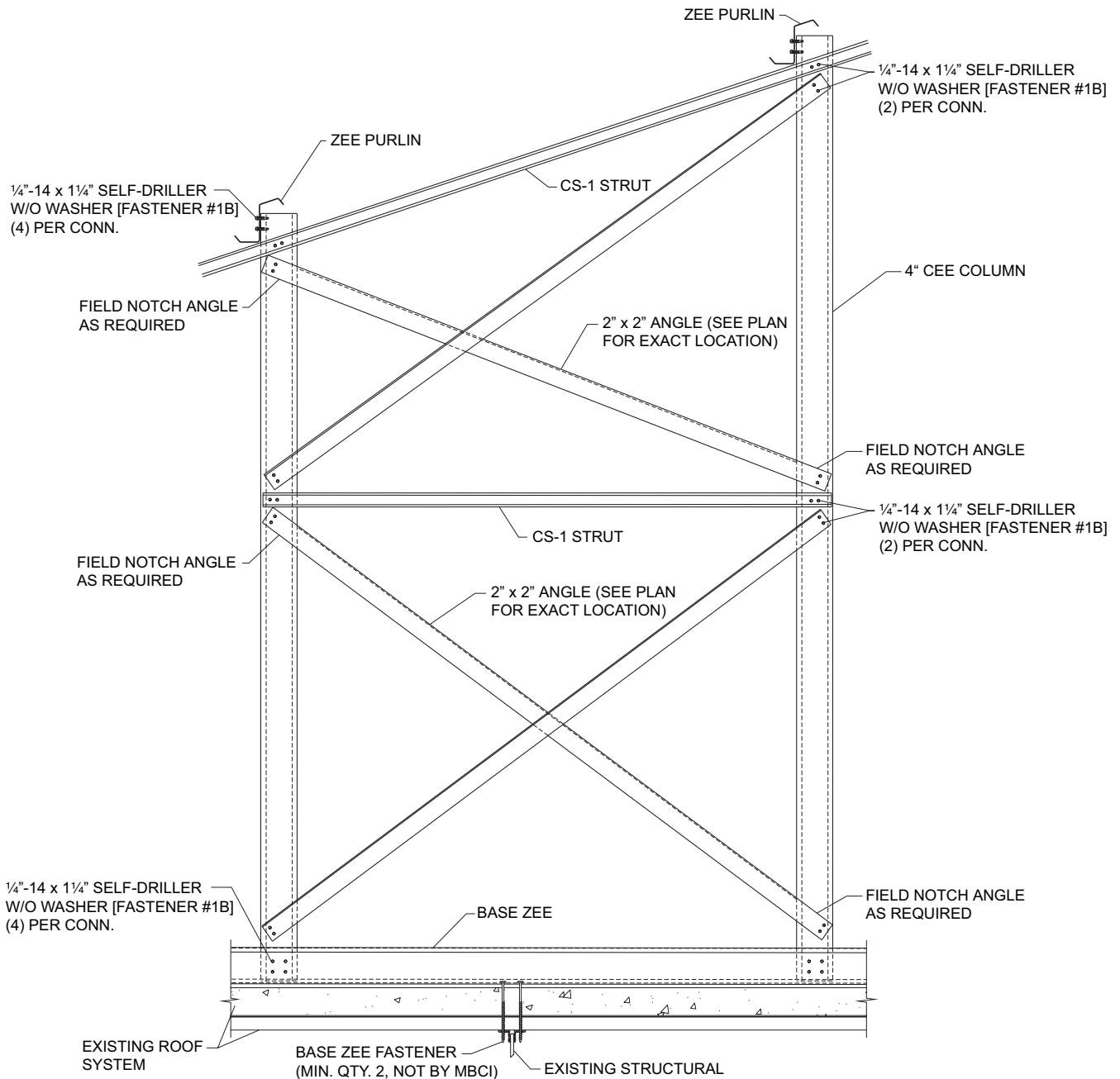
Rome, NY 800/559-6224  
Salt Lake City, UT 800/874-2404  
San Antonio, TX 800/598-6224  
Tampa, FL Sales Office 800/359-6224



NuRoof®

DETAILS

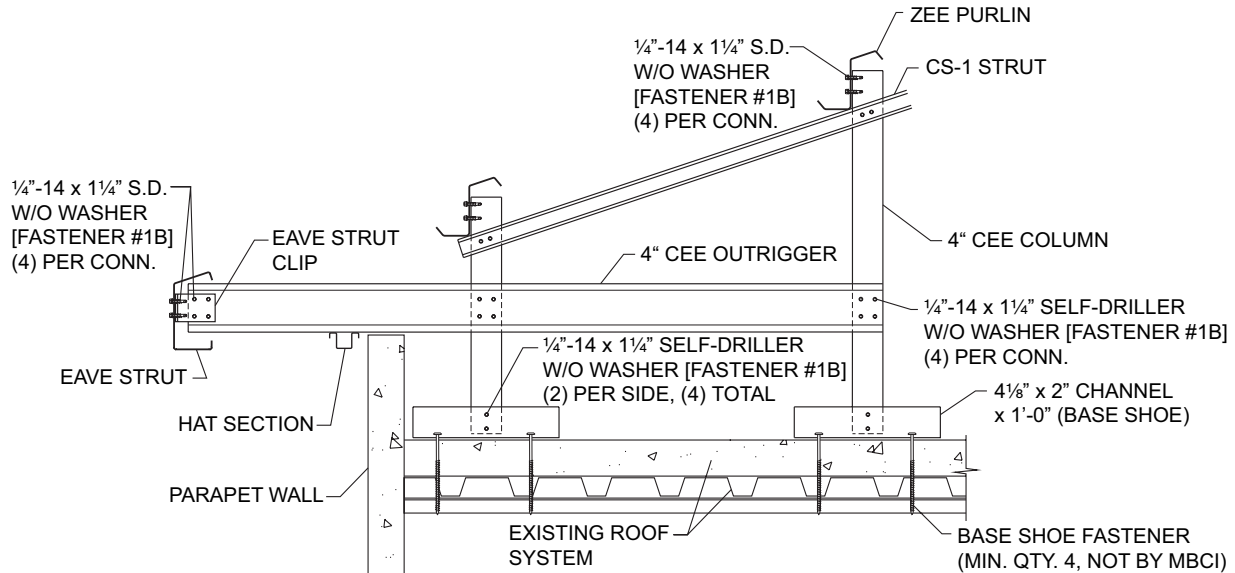
### DOUBLE TRANSVERSE ANGLE BRACING (Perpendicular to Purlins With Base Zee)



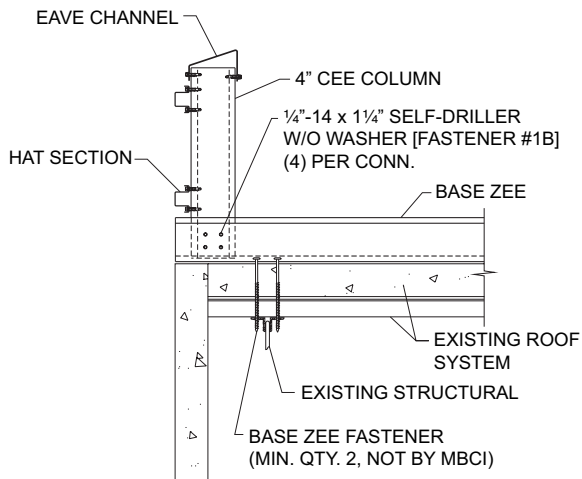
# DETAILS

# NuRoof<sup>®</sup>

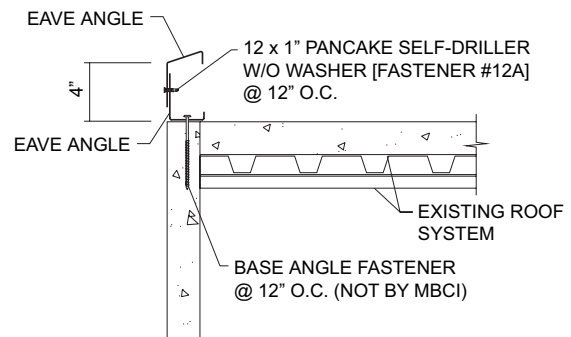
## EAVE OVERHANG (With Parapet Wall)



## EAVE DETAILS



**EAVE WITH FASCIA WALL**



**EAVE WITH ANGLES**

Houston, TX 877/713-6224  
Adel, GA 888/446-6224  
Atlanta, GA 877/512-6224  
Atwater, CA 800/829-9324  
Dallas, TX 800/653-6224  
Indianapolis, IN 800/735-6224

Lubbock, TX 800/758-6224  
Memphis, TN 800/206-6224  
Oklahoma City, OK 800/597-6224  
Omaha, NE 800/458-6224  
Phoenix, AZ 888/533-6224  
Richmond, VA 800/729-6224

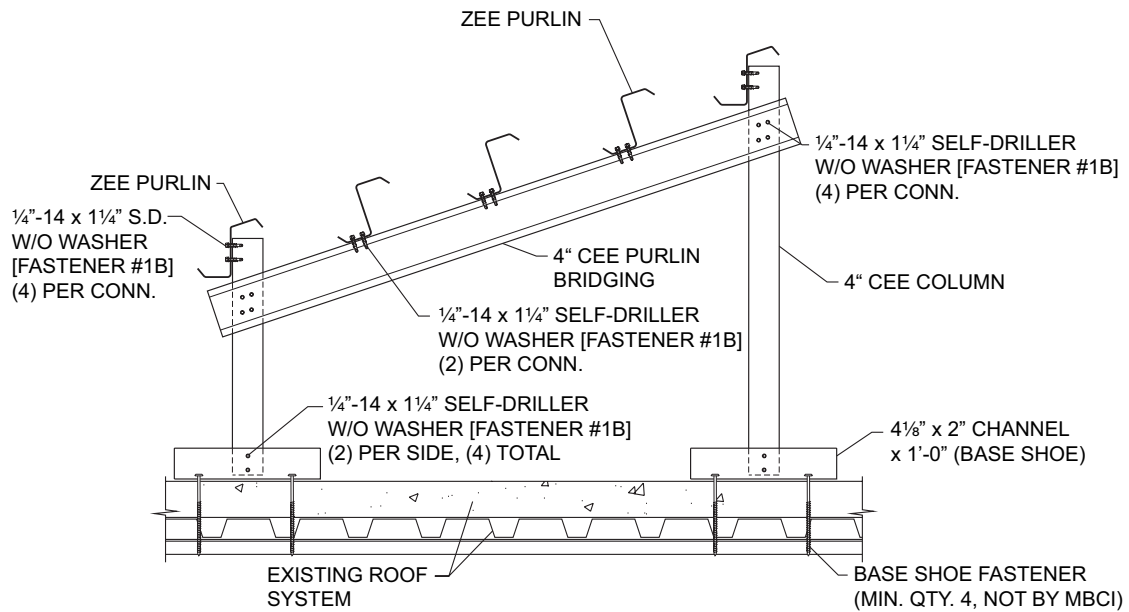
Rome, NY 800/559-6224  
Salt Lake City, UT 800/874-2404  
San Antonio, TX 800/598-6224  
Tampa, FL Sales Office 800/359-6224



NuRoof®

DETAILS

### EDGE/CORNER ZONE (For Use in High Wind Condition)



# DESIGN INFORMATION

# NuRoof<sup>®</sup>

## ARCHITECT/ENGINEER INFORMATION (Optional Method)

1. The optional NuRoof<sup>®</sup> Retrofit Systems are designed to go directly over existing sloped roof systems.
2. The optional NuRoof<sup>®</sup> Grid System allows for additional purlins to be installed when the existing purlin spacing does not meet the current code requirements.
3. The optional NuRoof<sup>®</sup> Retrofit System over existing PBR requires the use of the MBCI Ultra-Dek<sup>®</sup> or Double-Lok<sup>®</sup> roof systems. The high clips used with these systems elevate the roof system 1 $\frac{3}{8}$ " over the existing structure, allowing the panels to pass over a standard 1 $\frac{1}{4}$ " PBR panel. If the existing roof system has a rib height of 1 $\frac{1}{2}$ " a non-compressible  $\frac{1}{4}$ " shim can be used.
4. Care must be taken when cutting back the eave of the existing roof system to make sure no shavings land on adjacent or stored new roofing materials. Hot shavings landing on new material can cause premature rusting of the material surface.
5. When installing the optional NuRoof<sup>®</sup> Retrofit System over a PBR system the module of the existing roof system must be checked. The MBCI Ultra-Dek<sup>®</sup>/Double-Lok<sup>®</sup> roof systems hold a 24" module and if the existing roof was stretched ahead or shrunk back the clips will eventually foul into an existing major rib. An 18" panel can be installed in lieu of a 24" panel to allow the new roof system to stay on the module created by the existing roof panels.

## INSTALLATION GUIDELINES

1. Pre-Order
  - a. Prior to ordering panels, all dimensions should be confirmed by field measurements.
2. Jobsite Storage and Handling
  - a. Check the shipment against the shipping list.
  - b. Damaged material must be noted on Bill of Lading.
  - c. Materials should be handled carefully. A spreader bar of appropriate length is recommended for hoisting.
3. Application Checklist
  - a. Check substrate for proper alignment and uniformity.
  - b. Periodic check of panel alignment is crucial to proper panel installation.
  - c. Material should be cut on the ground to minimize cut fillings on new materials.

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Indianapolis, IN 800/735-6224

Lubbock, TX 800/758-6224  
Memphis, TN 800/206-6224  
Oklahoma City, OK 800/597-6224  
Omaha, NE 800/458-6224  
Phoenix, AZ 888/533-6224  
Richmond, VA 800/729-6224

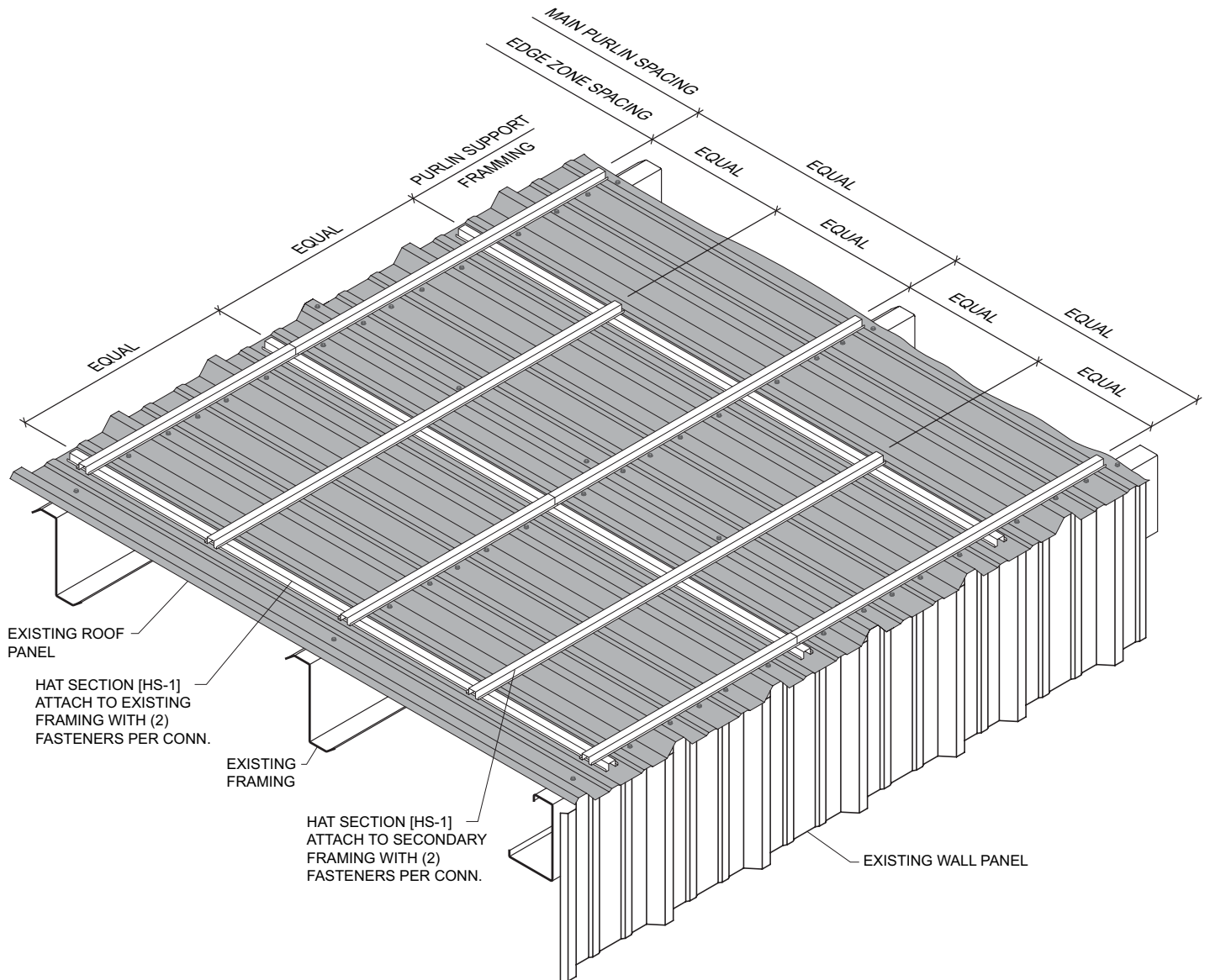
Rome, NY 800/559-6224  
Salt Lake City, UT 800/874-2404  
San Antonio, TX 800/598-6224  
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# NuRoof®

# DETAILS

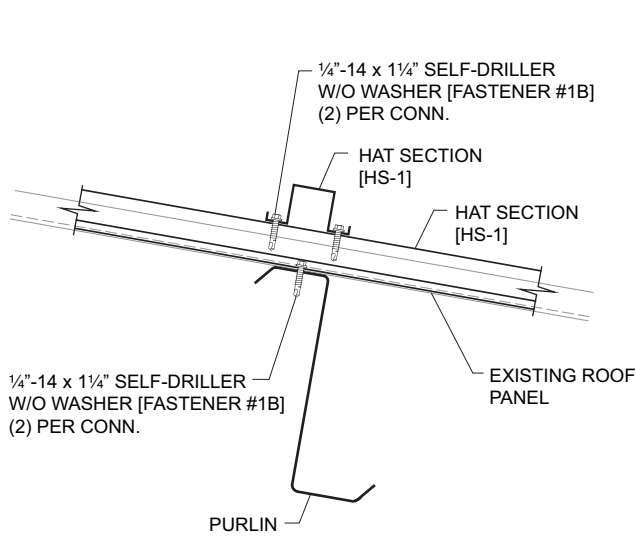
## NuRoof® GRID SYSTEM (Optional Method)



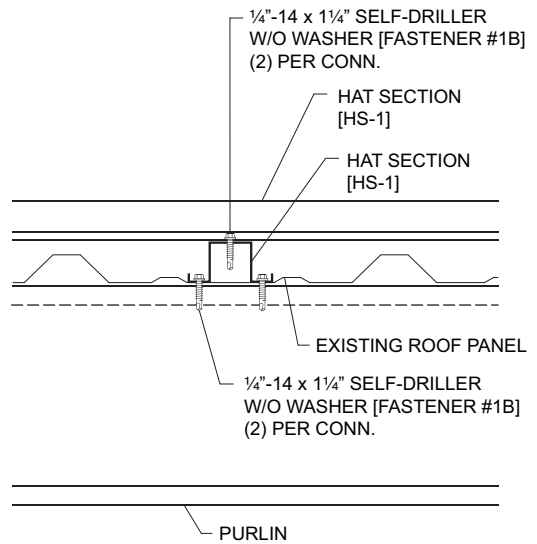
# DETAILS

# NuRoof<sup>®</sup>

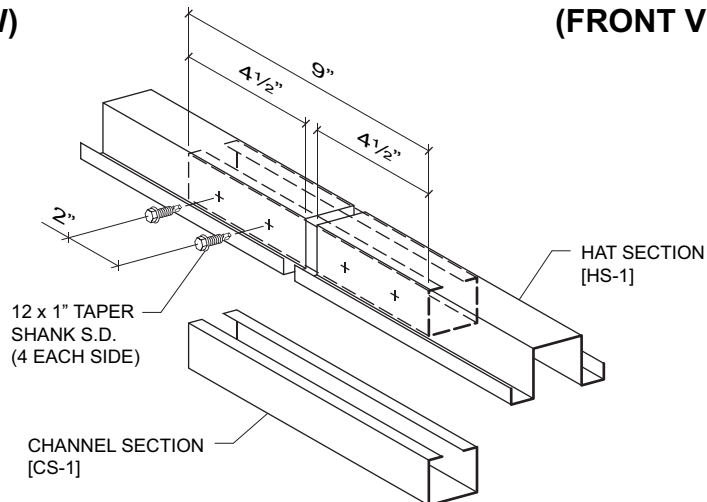
## NuRoof<sup>®</sup> GRID SYSTEM (Optional Method Details)



**CONNECTION OF HAT SECTIONS TO PURLIN (SIDE VIEW)**



**CONNECTION OF HAT SECTIONS TO PURLIN (FRONT VIEW)**



### SPLICE DETAIL

NOTE: MUST OCCUR OVER A SUPPORT MEMBER.



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 Indianapolis, IN 800/735-6224

Lubbock, TX 800/758-6224  
 Memphis, TN 800/206-6224  
 Oklahoma City, OK 800/597-6224  
 Omaha, NE 800/458-6224  
 Phoenix, AZ 888/533-6224  
 Richmond, VA 800/729-6224

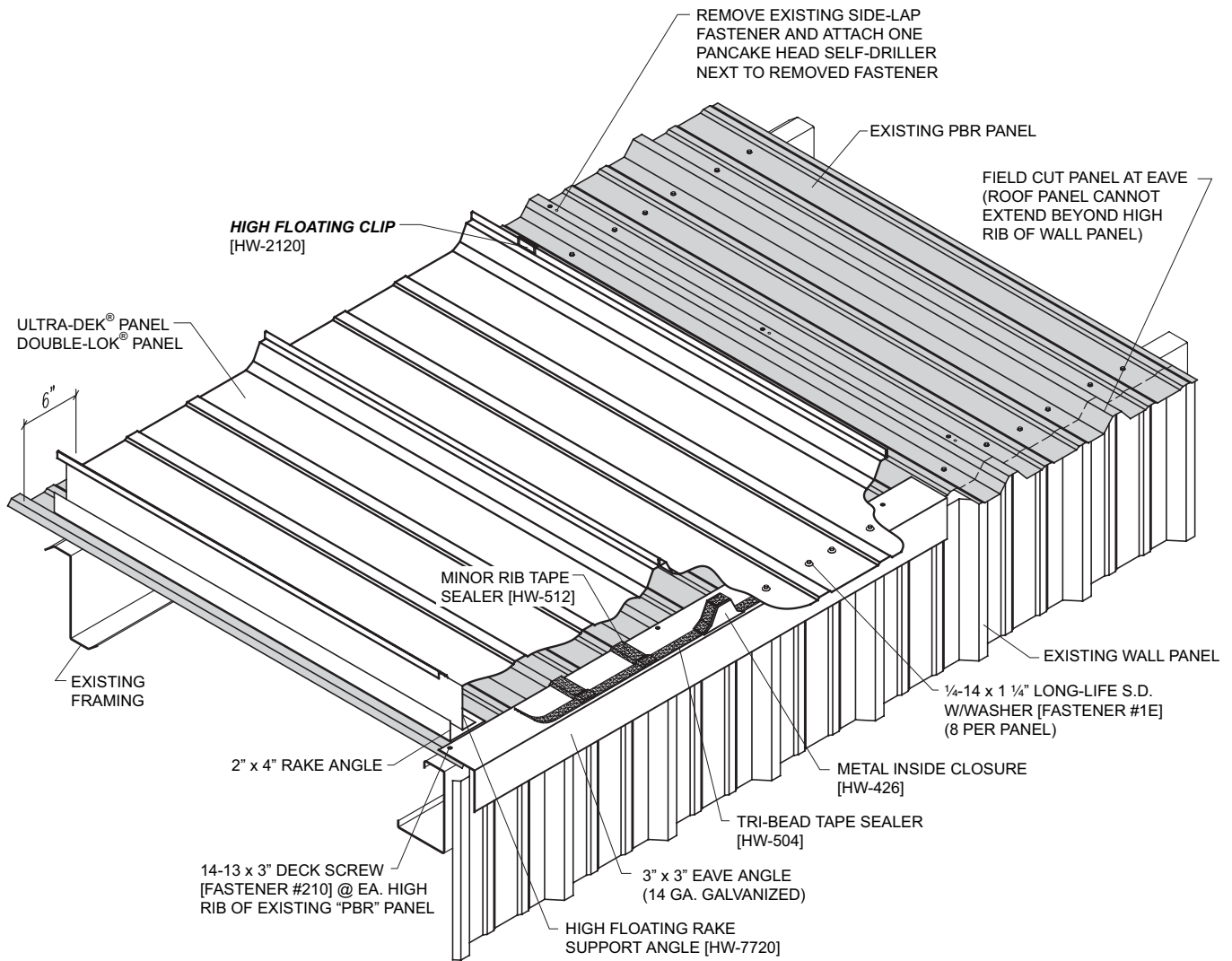
Rome, NY 800/559-6224  
 Salt Lake City, UT 800/874-2404  
 San Antonio, TX 800/598-6224  
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**NuRoof®**

**DETAILS**

**SSR SYSTEM OVER EXISTING PBR PANEL  
 (Optional Method)**



**NOTE: MAJOR RIB OF EXISTING ROOF PANEL CANNOT EXCEED 1 1/4" IN HEIGHT.**

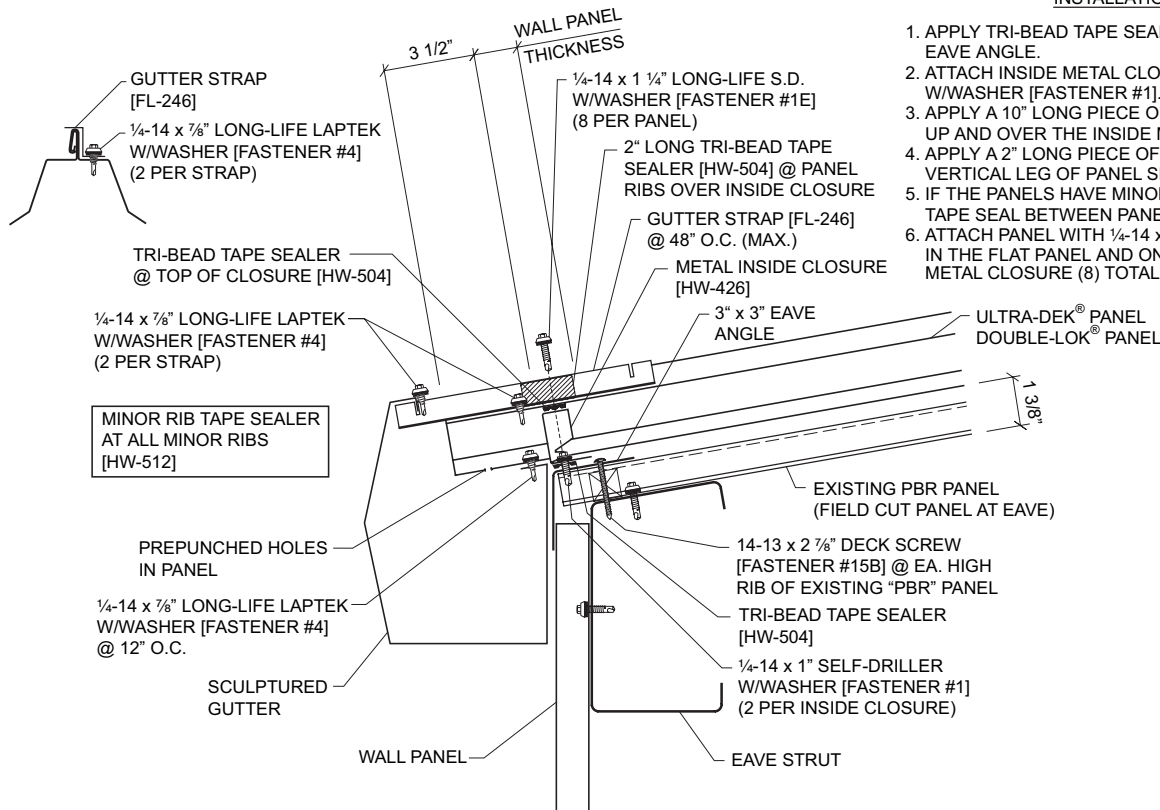
# DETAILS

# NuRoof®

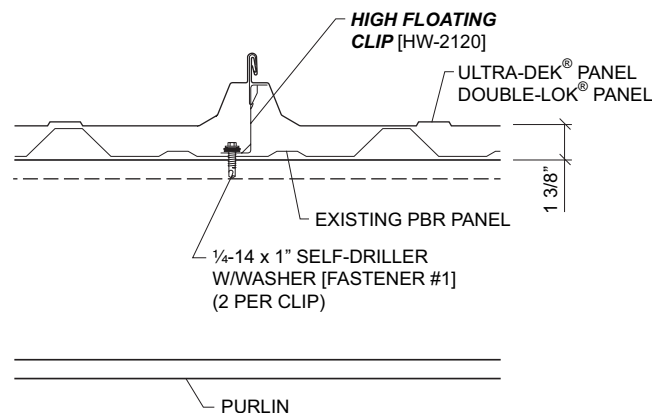
## SSR SYSTEM OVER EXISTING PBR PANEL (Eave Detail)

### INSTALLATION NOTE:

1. APPLY TRI-BEAD TAPE SEALER CONTINUOUS ALONG EAVE ANGLE.
2. ATTACH INSIDE METAL CLOSURE WITH 1/4-14 x 1" S.D.S. W/WASHER [FASTENER #1].
3. APPLY A 10" LONG PIECE OF TRI-BEAD TAPE SEALER UP AND OVER THE INSIDE METAL CLOSURE.
4. APPLY A 2" LONG PIECE OF TRI-BEAD TAPE SEALER IN VERTICAL LEG OF PANEL SEAM.
5. IF THE PANELS HAVE MINOR RIBS, APPLY MINOR RIB TAPE SEAL BETWEEN PANEL AND EAVE TRIM OR GUTTER.
6. ATTACH PANEL WITH 1/4-14 x 1 1/4" LONG-LIFE W/WASHER IN THE FLAT PANEL AND ONE EACH SIDE OF THE INSIDE METAL CLOSURE (8) TOTAL [FASTENER #1E].



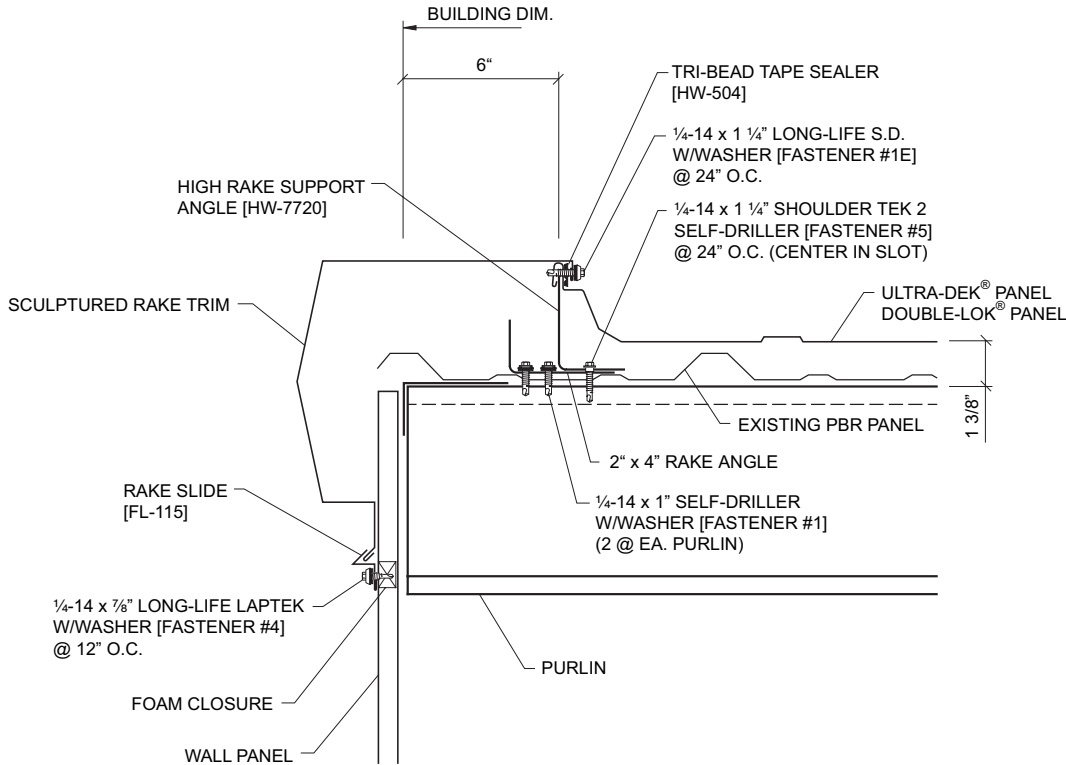
## SSR SYSTEM OVER EXISTING PBR PANEL (Clip Attachment Detail)



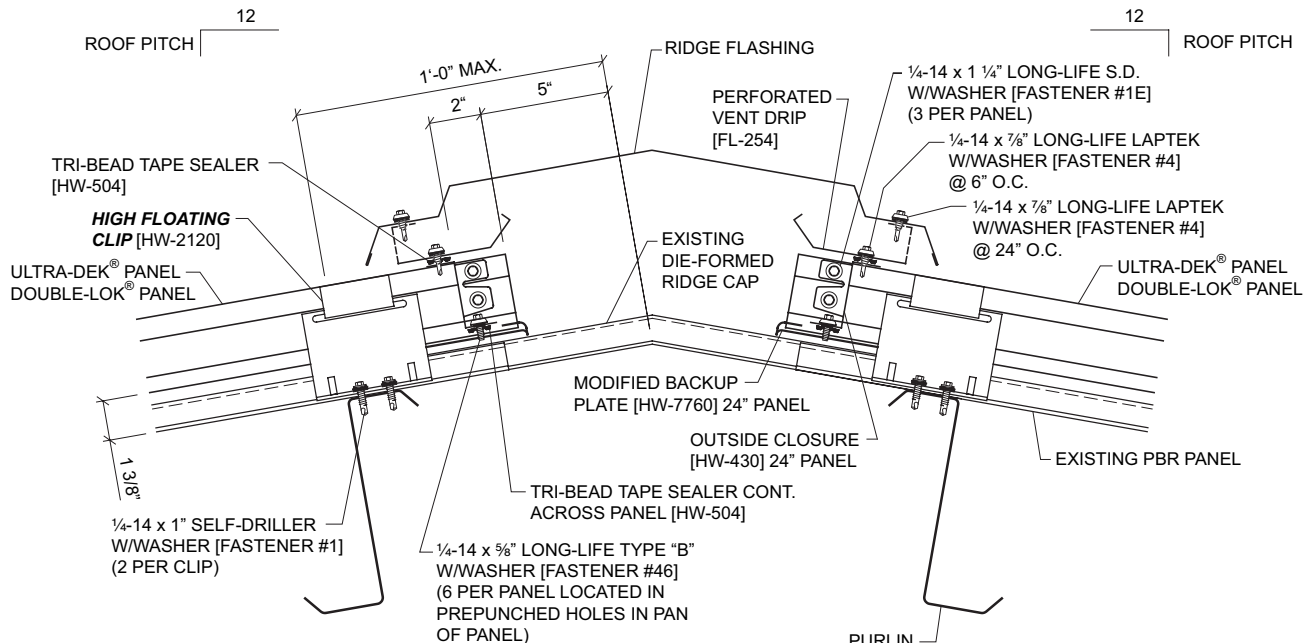
# NuRoof®

# DETAILS

## SSR SYSTEM OVER EXISTING PBR PANEL (Rake Detail)



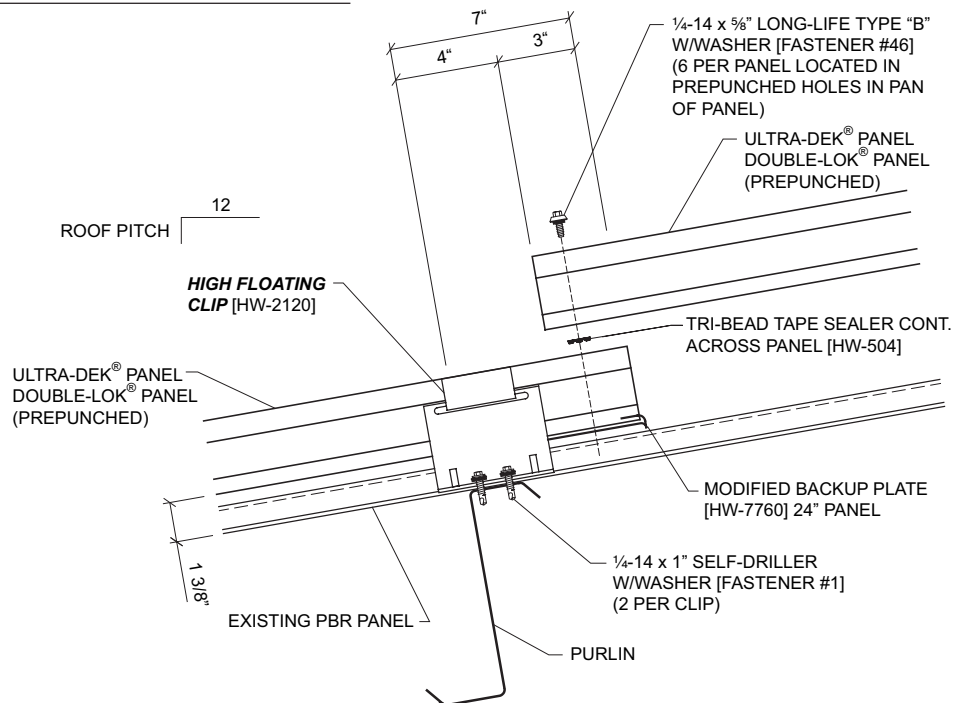
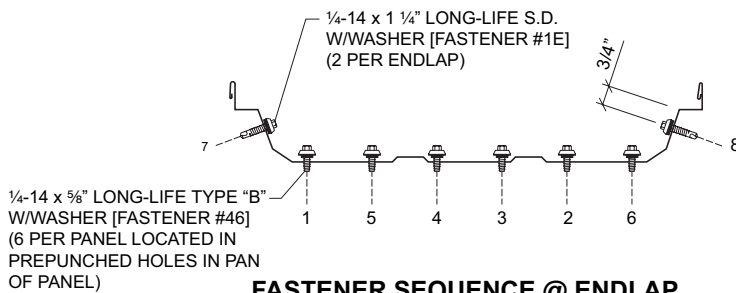
## SSR SYSTEM OVER EXISTING PBR PANEL (Vented Ridge Detail)



# DETAILS

# NuRoof<sup>®</sup>

## SSR SYSTEM OVER EXISTING PBR PANEL (EndLap Detail)



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Indianapolis, IN 800/735-6224

Lubbock, TX 800/758-6224  
Memphis, TN 800/206-6224  
Oklahoma City, OK 800/597-6224  
Omaha, NE 800/458-6224  
Phoenix, AZ 888/533-6224  
Richmond, VA 800/729-6224

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San Antonio, TX 800/598-6224  
Tampa, FL Sales Office 800/359-6224



# NOTES



*Metal Roof and Wall Systems*

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Atlanta, GA 877/512-6224  
Atwater, CA 800/829-9324  
Dallas, TX 800/653-6224  
Indianapolis, IN 800/735-6224

Lubbock, TX 800/758-6224  
Memphis, TN 800/206-6224  
Oklahoma City, OK 800/597-6224  
Omaha, NE 800/458-6224  
Phoenix, AZ 888/533-6224  
Richmond, VA 800/729-6224

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Salt Lake City, UT 800/874-2404  
San Antonio, TX 800/598-6224  
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# NOTES

Houston, TX 877/713-6224  
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