METAL PANELS INC.™

StrongSeam 7/8 Panel

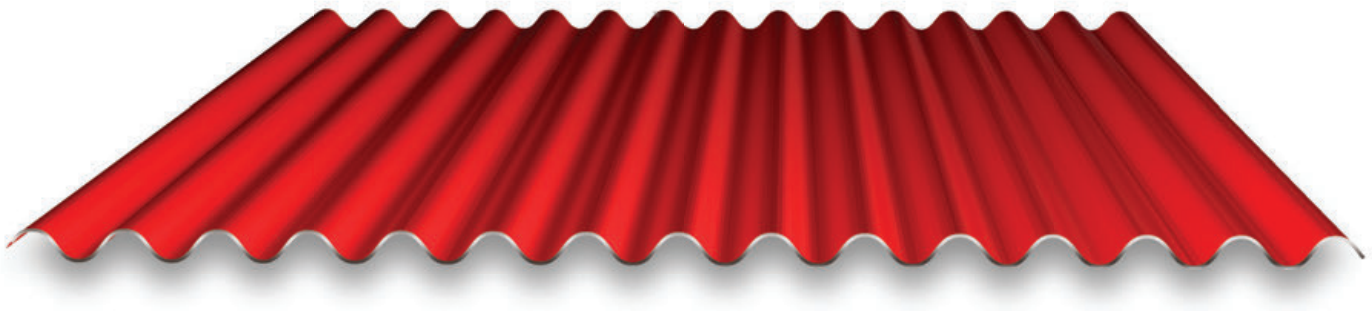
Corrugated, Structural Panel

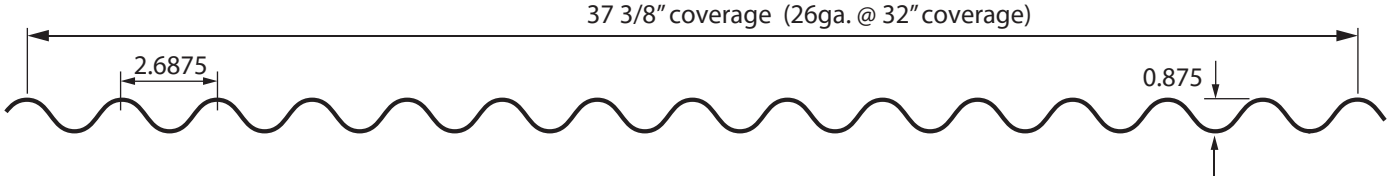
STRONGSEAM™ PANELS

Installation Manual

May 2022







Tulsa, OK • Kansas City, KS • www.metalpanelsinc.com • 866-674-7657

Design

This manual contains guidelines for installing Metal Panels Inc. 7/8 panels and trim. Guidelines presented herein were in effect as of this printing. Metal Panels Inc. reserves the right to change designs or specifications at any time in order to stay current with building code requirements. To ensure that you have the latest information, please contact your sales representative at Metal Panels Inc. Application and design illustrations are for your reference only, and may not be appropriate or specified for all environments, conditions or building designs. It is strongly recommended that all projects should be engineered and installed to conform to applicable building codes, regulations and accepted industry practices.

A roof must be designed to support certain minimum wind and snow loads. Consult local building officials to determine appropriate design load requirements. All roof systems should be designed or verified by a qualified engineer. It is the buyer's responsibility to verify all code requirements, checking all measurements, and determine suitability of the product for the job. The buyer is responsible for supplying and confirming all panel and trim profiles, and actual length and quantities needed. All MPI instructions for this panel assume that a qualified firm or individual has been contracted to install this product. Failure to comply with stated recommendations voids all manufacturer responsibility for any damage or deterioration due to misuse of the product and voids any applicable warranty.

NOTICE

Please read all instructions before beginning installation. All panels should be inspected upon receipt for order accuracy and for any material defects that could contribute to installation failure. Any such defects must be brought to the attention of the manufacturer immediately upon discovery and/or before installation for warranty purposes.

Metal Panels Inc. does not accept responsibility for job failure resulting from or associated with site conditions and installation failure due to improper installation, and shall not be held responsible for installation actions taken or not taken.

METAL PANELS INC.™

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Introduction

7/8” Corrugated Panel - Structurally strong and incredibly impact resistant, MPI’s 7/8” Corrugated Panel is an excellent choice for exterior roofing, siding applications or interior projects. The 7/8” Corrugated Panel is an economical, structural, exposed fastener metal roof and wall panel. Recommended minimum slope, 3:12.

Specifications

The StrongSeam 7/8 Panel is available in 37.375” panel width, with 7/8” ribs on 2.6875” centers.

Maximum panel lengths are constrained only by practical handling and transportation limitations, typically a maximum of 55 ft. StrongSeam 7/8 Panels may be end lapped to accommodate longer runs.

Recommended Tools

- Cordless Screw Gun
- Snips
- Tape Measure
- Electric Metal Shear or Circular Saw
- Caulk Gun
- Pop Rivet Tool
- Chalk Line
- “Duckbill” Locking Pliers
- Electrical Extension Cord

Installer must have experience using the tools listed above for metal roofing installation.

Safety

Use extreme caution when walking on a metal roof. Metal panels may become slippery, so always wear shoes with non-slip soles. Avoid working on metal roofs during wet conditions. Do not walk on a metal roof which does not have a solid deck beneath it. If you must, walk on the purlins only. Always use appropriate safety harnesses. OSHA safety regulations should be complied with at all times.

Caution

Always wear heavy gloves when working with steel panels to avoid cuts from sharp edges. When power cutting or drilling steel panels, always wear safety glasses to prevent eye injury from flying debris.

Production Lead Time

Please consult your MPI sales representative for accurate order production time. Large orders, non-standard colors, special order 24 ga. panels or custom trim fabrication may require longer lead times.



Packaging

For standard orders, panels are bundled for truck shipment. Custom shipping requirements may be accommodated at an additional charge.



STORAGE & HANDLING

Storage

If your metal panel order must be stored before use, store inside in a well-ventilated, dry location. Moisture from condensation can form between the sheets during storage causing water stains or white rust, which can damage the appearance of the panels and shorten the product's useful life. To prevent moisture damage, break the shipping bands on the material and wipe dry any visible moisture on panels. Store the material on end or on a slight incline to promote water runoff. Support panels with a board underneath to prevent sagging. Allow for air circulation by spreading the sheets slightly at the bottom. Use wood blocks to keep the sheets off of the ground.

When metal panels will NOT to be used immediately, store inside in a well-ventilated, dry location. **Outdoor storage is not recommended and may void warranties; to do so is at the customer's own risk.** Inspect the panels for moisture at the time of delivery. If moisture is present, the panels must be uncrated, wiped dry, and allowed to air-dry completely. Failure to remove trapped moisture between the sheets without delay may affect the appearance and longevity of the metal. Extended storage of bundled panels is not recommended. Panels must not be stored near or come in contact with salt water, corrosive chemicals, ash, solvent fumes, or come in contact with wet or green lumber.

If panel bundles must be stored outside, strictly adhere to these requirements:

1. Storage area should be level, and should be located to minimize handling of bundle during construction.
2. For storage on bare ground, place a plastic ground cover as a barrier under the bundle to minimize wicking moisture/condensation onto the panels from the soil.
3. Store bundle above the ground by a minimum of 6" to allow air circulation beneath the crate, and to prevent damage from rising water.
4. Raise one end of the crate slightly to permit runoff of moisture from the top of the bundle or from between nested panels. A water-resistant cover, like canvas should be placed over the bundle, with allowance for air circulation under the cover. Wood blocks should be used to raise the cover and provide air circulation between cover and crate.
5. Inspect stored bundle frequently and repair any tears or punctures in the water-resistant cover with a compatible waterproof tape.
6. Re-cover opened bundle at the end of each day to prevent entry of moisture and exposure to sunlight.

STORAGE & HANDLING

Protective Film Removal

Painted panels may have a protective film layer applied to the outside finish to prevent possible damage to the painted surface. Remove the protective film layer promptly, before exposing to direct sunlight and high temperatures. After exposure to heat or sunlight, the protective film cannot be removed. Never leave the protective film on the panels after installation. Metal Panels Inc. cannot be held liable for damage to metal caused by improper storage and failure to remove protective film.

Some Safety Precautions

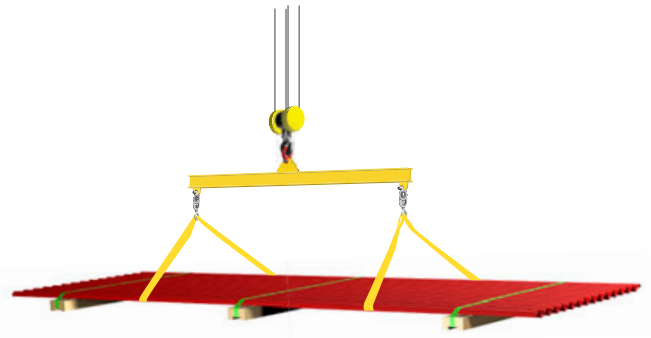
To prevent injury, always wear heavy gloves when working with steel panels. Wear safety glasses when cutting or drilling steel panels, and remove any metal shavings immediately to reduce risk of eye injury from flying debris. Avoid walking on metal panels; If you must walk on a metal roof, use extreme caution. Wear shoes with non-slip soles, for metal panels can become slippery even dry. Avoid working on metal roofs during wet conditions when the panels can become extremely slick. Walking or standing on a metal roof which does not have a solid deck beneath it is not recommended. If unavoidable, always walk on the purlins, never between. Do not for any reason walk on a roof made of material thinner than 29 gauge

Roof Storage

For convenient handling, MPI 7/8panel bundles can be lifted and placed on the roof. When lifting bundled sheets, make sure they are adequately supported. Panels less than 20 ft. in length may be lifted with a forklift. When lifting panels in excess of 20 ft., it is recommended that a spreader bar with slings be used. When lifting, do not leave more than 1/3rd of the panel length unsupported. (See fig. 2)

Determine best location for bundle placement by how much area that bundle of panels will cover. Bundles should be placed on the roof facing the same direction that the panels will be installed. Make certain to keep the area clear for your string line at the eave for setting roof panels.

Fig. 2



STORAGE & HANDLING

Receiving Materials

The installer has the responsibility to unload material from the delivery truck. The installer must provide suitable equipment for safely unloading all materials from the delivery truck. (MPI offers truck-mounted forklift deliveries for an additional charge.)

After receiving your order, verify the condition of the material and compare the shipment against the shipping list to ensure all ordered items have been received. If damages or shortages are discovered, note the discrepency on the shipping copy at time of delivery. If replacement material is required, you must contact Metal Panels Inc. to place the order. Report any damages or shortages to Metal Panels Inc. within 48 hours from the time of shipment.

⚠ Caution ⚠

Improper loading and unloading of bundle may result in bodily harm and/or material damage. Metal Panels Inc. is not responsible for bodily injuries and/or material damages resulting from improper loading or unloading.

General Handling

Each bundle should be handled with care to avoid product damage. Proper handling should be used to prevent bending panels or scratching the finish. To prevent panel damage, follow these steps for unloading and handling bundle:

1. Bundle should remain banded and intact during any handling and remain banded until the panels are ready to be installed. Never lift bundle by their banding.
2. Always lift bundle as close as possible to its center of gravity
3. When lifting by crane, use a spreader bar of appropriate length and nylon band slings. (DO NOT use cable slings; they will damage panels.)
4. A panel bundle of manageable length may be lifted by forklift. Set forklift forks to their maximum spacing apart, and center the load on the forks to prevent panel damage. Never lift a panel by its ends. Carry a panel by its longitudinal edge and in a vertical (not flat) position. For panels over 10 ft., two or more people should lift and carry the panel from the same edge. (see fig. 3)
5. Once a bundle is opened, individual panels must be handled with care to prevent panel buckling or finish damage. Never slide a panel over another panel when removing it from the bundle. A panel should be rocked up from the bundle in order to minimize the possibility of finish damage.
6. Gloves must always be worn when handling panels.



fig. 3

STORAGE & HANDLING

Mechanical Handling

Using a Forklift

A forklift may be used for panels up to 20 ft. Set the forks at their maximum separation and center the load on the forks. When transporting bundle across rough terrain, or over a long distance, use nylon straps or similar means of additional support for the bundle. Never transport an open bundle.

Using a Crane

For lifting panel bundle greater than 20 ft. in length, a crane is recommended. Utilize an appropriate spreader bar to ensure even distribution of the weight to the lift points. No more than 1/3rd of the length of the panel should be left unsupported when lifting panel bundle. Canvas or nylon slings should be used to lift panels. DO NOT use cable or chains; they will damage the panels.

Foot Traffic

Walking on a metal roof can cause distortion of panels and damage to the finish. Foot traffic on an installed roof system must be kept to an absolute minimum. If continuous foot traffic is necessary for maintenance over the roof, then a permanent walkway should be installed.

For foot traffic during installation, provide walking platforms to avoid any panel damage.

If walking on the roof panels is unavoidable, walk only in the flats of the panel; walking on the ribs can damage the panels.

Caution

Metal roof installers must be in full compliance with all applicable safety regulations including OSHA regulations.

Field Cutting

Tin snips, a portable shear or a “nibbler” type electric tool are recommended for field cutting 7/8Panels. If a skill saw is used, the blade will generate shavings of metal chips. Some of the shavings may be hot enough to burn the paint down to the metal substrate. Any metal shavings must be immediately removed from the panel because they will damage the finish and induce rust staining or panel failure.

One approach to addressing this problem is to flip the panels over when cutting. The metal shavings can be brushed away from the back side, preventing finish damage to the top side of the panels.

Caution

All roof or panel surfaces must be free of debris at all times. Installed surfaces should be wiped clean at the end of each work day. Never cut panels over other metal surfaces. Metal shavings will rust on the surface which will void the warranty.

Always wear goggles for eye protection when cutting metal panels.

STORAGE & HANDLING

Touch-up Paint

All painted panels, trim and flashings have a factory-applied heat-cured finish. During handling and installation, a panel may become slightly scratched or nicked. Paint pens are available in matching colors. It is recommended to use the sharp edge of the chisel tip to apply touch-up paint only to those areas that are in need of repair (apply touch-up paint to the scratch itself. Do not paint over panel finish). Be aware that touch-up paint does not have the superior chalk and fade resistance of the factory-applied finish and will likely discolor at an accelerated rate. Periodic touch-up may be required to maintain color match. Due to the limitations and formulation of field-applied touch-up paint, there is no warranty offered for color match or durability of the product.

When touching up scratches in panels or flashing, it is VERY IMPORTANT not to over paint the area to be touched up. Because of the curing solvent which must be added, air-dry formula touch-up paint WEATHERS DIFFERENTLY than the thermoset formula paint which is applied on the coil coating line. For this reason, excessive strokes will create an unsightly appearance and will worsen over time, becoming aesthetically unacceptable.

Please see **MPI's Touchup Paint Flyer** for complete instructions.

Select a paint pen that matches your panel color. Shake for 1 to 2 minutes.



Prime the pen by gently pressing down on cardboard or scrap material. Stop when you see paint appear on tip.



Test for color match on a small area out of line of sight. Allow to dry completely.



Apply a fine line of paint to scratch area only. Do NOT over-paint or blend.



DESIGN & INSTALLATION

Design & Installation Considerations

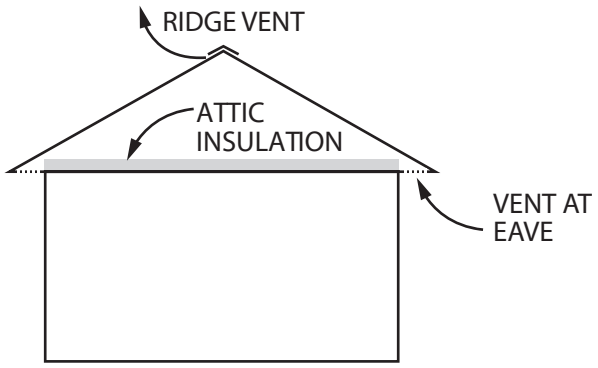
Insulation & Ventilation

Properly designed and installed vapor barriers and ventilation systems prevent condensation and the resulting moisture damage and loss of insulation efficiency.

When highly-humid air contacts building surfaces that are below the dew point temperature of the air, condensation will occur.

Proper insulation can provide resistance to heat transfer and protection against condensation forming on cooler surfaces within the building or the roof system.

The building designer is responsible to specify an appropriate vapor retarder and insulation system for the project.



Basic guidelines for control of condensation are as follows:

1. Faced insulation (insulation with vapor retarder) should be installed with the facing toward the warm side of the insulated area, typically, the interior of a building.

2. Insulation R-value must be high enough to maintain the temperatures of the vapor retarder above the interior dew point, using “worst-case” outside temperatures for a reference.

3. Seal all seams and penetrations of the vapor barrier in order to provide a continuous membrane to resist the passage of water vapor.

4. Structure ventilation contributes significantly to reducing condensation. Whether by passive or active (powered) venting, air movement to the outside of the building reduces interior vapor pressure.

Buildings with attic space or retrofitted metal roofing system require vents at the eaves and peak of the roof in order to prevent a buildup of moisture under the roof.

Check local building codes for proper ventilation practices for your area.

DESIGN & INSTALLATION

Roofing Substrates

In warm weather climates, synthetic underlayment should be used over the existing decking. The high temperature resistance prevents it from sticking to the panels and tearing, which can occur with asphalt-based felt paper.

In colder climates, ice and water shield should be used at the valley and eave. Apply over the decking before installation of the synthetic underlayment.

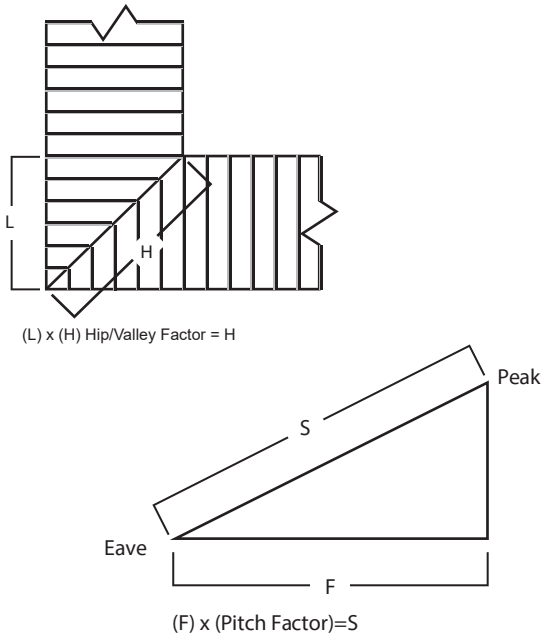
Caution

Use appropriate safety precautions when applying synthetic substrates because they can be slippery.

Roof Pitch Chart

Reference the chart below for specifying StrongSeam 7/8panels and trims.

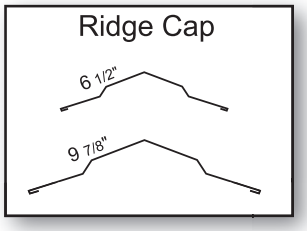
fig. 4

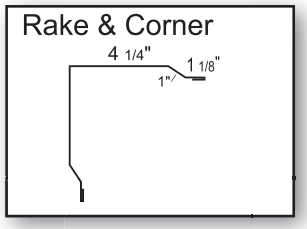


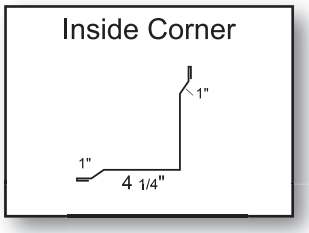
PITCH	PITCH FACTOR	HIP/VALLEY FACTOR	PITCH	PITCH FACTOR	HIP/VALLEY FACTOR
3:12	1.0308	1.4362	8:12	1.2019	1.5635
4:12	1.0541	1.4530	9:12	1.2500	1.6008
5:12	1.0833	1.4743	10:12	1.3017	1.6415
6:12	1.1180	1.5000	11:12	1.3566	1.6853
7:12	1.1577	1.5298	12:12	1.4142	1.7320

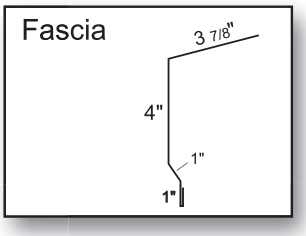
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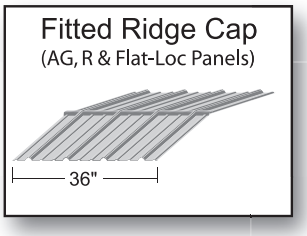
STANDARD TRIM

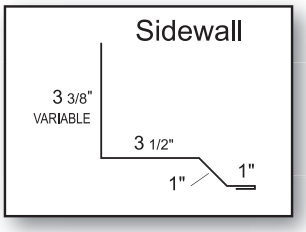


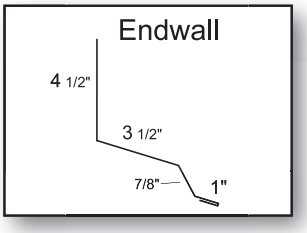


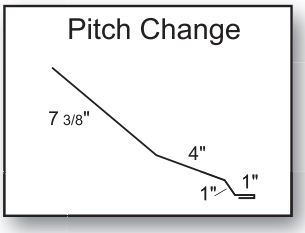


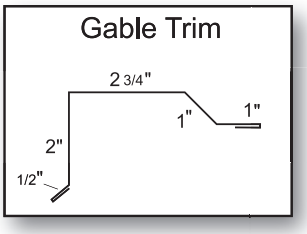


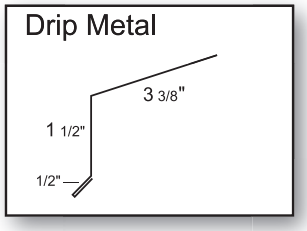


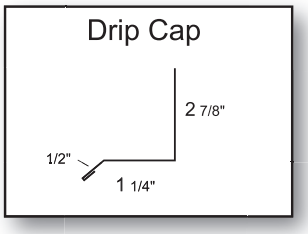


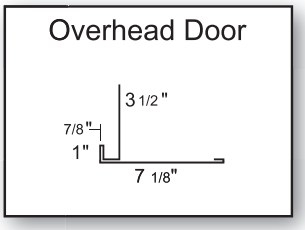


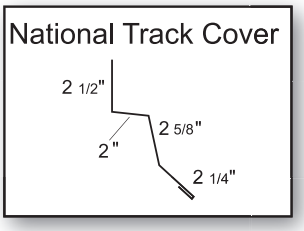


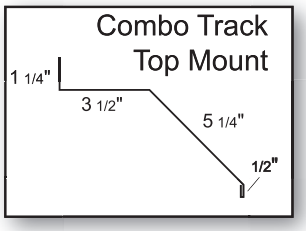


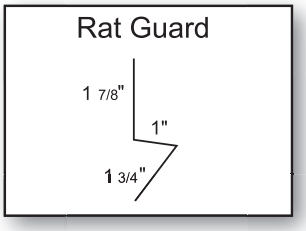


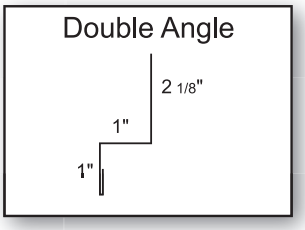


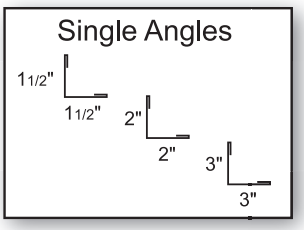


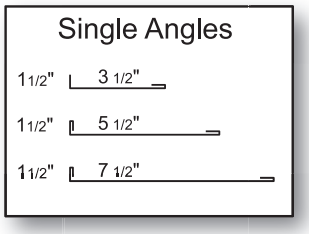


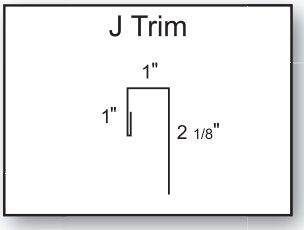


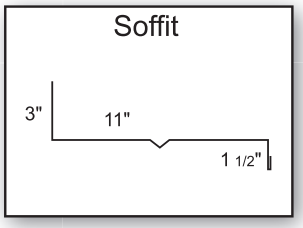


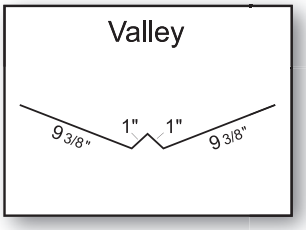


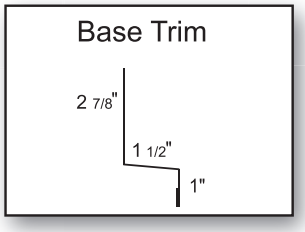












All trim is available in up to 21 ft. lengths in all standard colors. Contact your sales representative to specify requirements for custom trim orders.

METAL PANELS INC.™

ACCESSORIES

Fasteners/Rivets



1/4-14 x 7/8" Lap
available in 19 colors



12-14 x 1 1/4" SD
For Sheet-to-Structure,
available in 19 colors



12-24 x 1 1/4" DP5
Drives up to 1/2" Thick Steel
5",6", 8" stocked



#12-14 x 3/4" Stitch Screw
available in 18 Colors



Woodgrips,
1", 1 1/2", 2", 2 1/2", 3"
stocked in 19 colors
Lengths up to 4" available



ULP Clip screw,
10-9 x 1 1/8"
wood applications



Pancake, 12 x 3/4" SD
metal applications



Clip screw,
#14 x 1 1/2", 2", 3", 4.5", 6", 7", 8", 9"
for wood or up to 16ga. metal



Rivets
#43, Stocked in 36 Colors

Skylights



AG profiles stocked in 8' & 12' lengths
R profile stocked in 12' length
M profile stocked in 12' white
Both AG & R stocked in clear and soft-white
Flat Loc stocked in 8' white

Pipe Flashing

Gray, Retro-fit & Silicone (high temp.)

#1: 1/4" - 2"
#3: 1/4" - 5"
#5: 4" - 7"
#8: 8" - 13"
#9: 10" - 18"



Sealants

Butyl Tape

Single-bead, double-bead & triple-bead available
3/32" x 3/8" x 45', 1/8" x 1" x 50', 3/16" x 2 1/2" x 20'

Caulking

Metal Roof Sealant (stocked in 30 colors)



Accessories



Touch-up Paint Pen,
Stocked in 18 colors



Cee Purlins 3", 4", 6", 8"
Zee Purlins 4", 8"
2" x 2" Base Angle



Sno-Gem Snow guards



Retro-Ease
shingle spacer



Self-adhering underlayment,
2' sq. rolls

Synthetic underlayment,
10' sq rolls



Doors for
Metal & Post Frame



#30 bit for
rivet installation



concrete bits stocked in 1/4", 3/8" & 1/2"



Nut Setters:
Sizes: 1/4", 5/16" & 3/8"



Power Cutter Snips,
Left & Right Hand



Metal Saw Blade:
Size: 7" for steel,
9" for thick steel



Sliding Door
Products

Insulation

Solar Guard 4' x 125'
6' x 125'

Sizes: 3', 4' & 6' wide stocked
in 53' & 103' long rolls



3" vinyl-faced insulation,
cut to size by lineal foot available

R+ Heatshield Radiant Barrier

Bubble Insulation, 4' & 6' x 125' w/ tape & tabs
in reflective/reflective, reflective/white,
single & double bubble, meets ASTM E84-08



Insulation Tape

Patch Tape - 3" x 150'
For reinforced vinyl applications



Double-sided Tape - 1 1/2" x 180'



Foil Tape - 3" x 150',
White Tape - 3" x 180'
For bubble insulation



Closure -- Die-Cut Foam & Expandable A10 Universal

Stocked in Profiles: AG, M, R, Flat-Loc,
7.2, & 7/8" Corrugated



A-10 expandable closure
Fits profiles up to 1 1/2" deep
Available sizes:
1" x 1 1/2" x 20' for AG, M & Flat Loc panels,
1 1/2" x 1 1/2" x 15' for R panels



Flex-Pro
Weather-tite Ridge Vent Closures
stocked in 3' joints



Concrete Anchors

Wedge anchors — Multiple sizes available



Nail-in anchors — Sizes: 1/4" x 1 1/4" stocked
up to 2" available



Flat Sheets

41 9/16" x 10' 1"- 26 ga. 22 colors
4' x 10' - 16,18,20,22,24,26 ga. galvanized
4' x 10' - 24, 26 ga. paintgrip galvanized
4' x 10' - 24ga. PVDF
3' x 10' - 16oz Copper



PRELIMINARY INSTALLATION GUIDE

Please familiarize yourself with all installation instructions before starting work.

Prior to panel installation, the installer should examine the decking or framing to ensure that all supporting members are straight, level and plumb to prevent any panel distortion. Substructures should be designed to meet all applicable code requirements.

Panels must be installed straight, plumb and square to the eave. Some field cutting and fitting of panels and trims, as well as minor field corrections are a part of normal installation work.

Follow the manufacturer's installation procedures, including fastener methods and creation of penetrations. Trim should be installed in proper alignment with the panels.

Sealants must be field-applied according to manufacturer's instructions on dry, clean surfaces.

All trims, closures and accessories shown on the installation drawings are available from Metal Panels Inc. unless otherwise noted.

Oil-canning in the flat area of the panel is common to the industry and does not affect the integrity of the panel. Oil-canning is not a reason for rejection.

The installer is responsible to insure suitable decking or purlin structure prior to the application of StrongSeam 7/8 panels. Panel distortions caused by handling, uneven decking, ripples or laps in the underlayment, construction debris or extreme temperature changes are not cause for rejection of material.

Substructure Precautions

Panel distortion may occur if applied over misaligned or non-uniform substructure.

Check the roof deck for squareness before installing StrongSeam 7/8 panels. Below are two methods for verifying squareness of the structure for proper panel installation.

Method 1:

Measure diagonally across one slope of the roof from similar points at the ridge and eave and obtain the same dimension. Note that it is possible that a roof is out of square even with identical measurements. To verify, additionally measure the two longest sides.

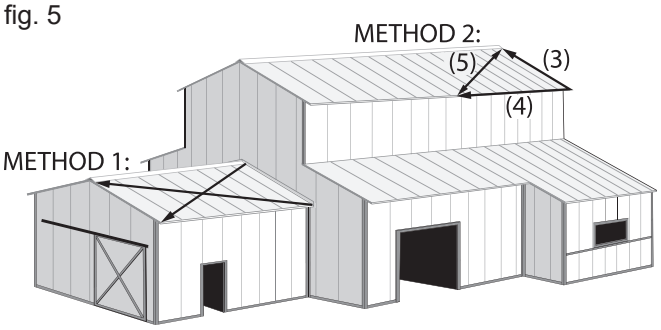
Method 2:

A 3-4-5 triangulation system may be used. Measure a point from the corner to the edge of the roof at a multiple of three (3). Measure another point from the same corner along the other edge at a multiple of four (4).

PRELIMINARY INSTALLATION GUIDE

Then, measure diagonally between the two points established; the dimension should be exactly a multiple of five (5) to have a square corner. Use this approach on more than one corner of a slope to verify building squareness. If the endwall cannot be made square, the roof system cannot be correctly installed.

fig. 5



Fastening

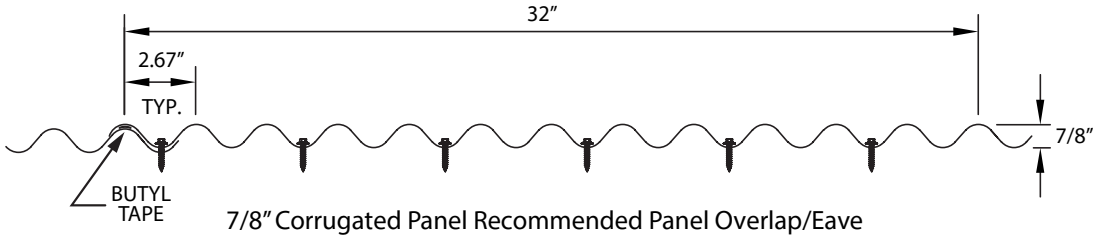
If pre-drilling fastener holes, use a cover sheet to prevent hot shavings from sticking to panels.

Recommended Screws

For best results, use a 1-1/2" bonded washered wood screw in the flat of the panel as shown in the illustration below. Fasteners should be applied at every purlin. Drive the fastener so that the washer is compressed securely against the metal. Do not over drive the fastener as this will form a dimple that can collect water and cause leakage. Do not leave any loose fasteners that have missed the purlins. Use a #14 stitch screw or caulk to fill the hole.

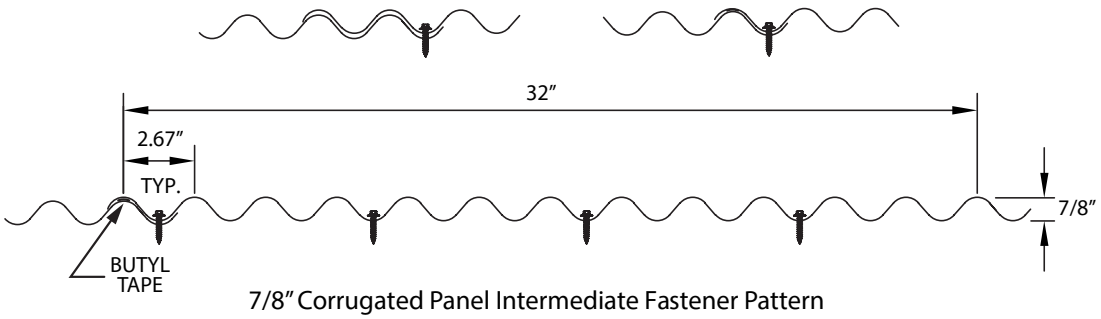
fig. 6

Recommended Fastener Locations



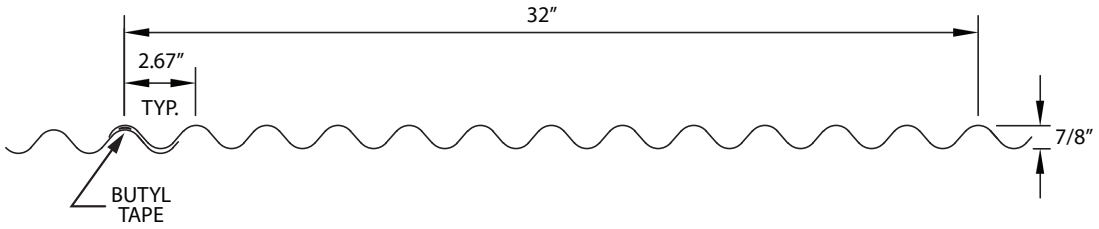
7/8" Corrugated Panel Recommended Panel Overlap/Eave

When used as a roof panel, an overlap of one corrugation with butyl tape can be used if slope is greater than 3:12 pitch. Below 3:12, two corrugation overlap is required.



7/8" Corrugated Panel Intermediate Fastener Pattern

LOAD TABLE



24 Gauge (0.0223"), Fy = 50 ksi, Fu = 60 ksi								
SPAN TYPE	LOAD TYPE	SPAN IN FEET						
		3.0	4.0	5.0	6.0	7.0	8.0	9.0
1-span	NEGATIVE WIND LOAD	161.82	91.03	58.26	40.46	29.72	22.76	16.82
	LIVE LOAD/DEFLECTION	105.98	44.71	22.89	13.25	8.34	5.59	3.93
2-span	NEGATIVE WIND LOAD	159.03	90.13	57.89	40.28	29.63	22.70	17.95
	LIVE LOAD/DEFLECTION	159.03	90.13	55.14	31.91	20.10	13.46	9.45
3-span	NEGATIVE WIND LOAD	197.31	112.18	72.16	50.25	36.98	28.34	22.41
	LIVE LOAD/DEFLECTION	197.31	84.37	43.20	25.00	15.74	10.55	7.41
4-span	NEGATIVE WIND LOAD	184.64	104.86	67.42	46.93	34.53	26.46	20.92
	LIVE LOAD/DEFLECTION	184.64	89.56	45.86	26.54	16.71	11.20	7.86

22 Gauge (0.0286"), Fy = 50 ksi, Fu = 60 ksi								
SPAN TYPE	LOAD TYPE	SPAN IN FEET						
		3.0	4.0	5.0	6.0	7.0	8.0	9.0
1-span	NEGATIVE WIND LOAD	206.48	116.15	74.33	51.62	37.93	29.04	21.62
	LIVE LOAD/DEFLECTION	136.17	57.45	29.41	17.02	10.72	7.18	5.04
2-span	NEGATIVE WIND LOAD	202.85	114.99	73.86	51.39	37.80	28.96	22.90
	LIVE LOAD/DEFLECTION	202.85	114.99	70.85	41.00	25.82	17.30	12.15
3-span	NEGATIVE WIND LOAD	251.65	143.11	92.06	64.11	47.18	36.16	28.60
	LIVE LOAD/DEFLECTION	251.65	108.41	55.51	32.12	20.23	13.55	9.52
4-span	NEGATIVE WIND LOAD	235.50	133.77	86.01	59.88	44.06	33.77	26.70
	LIVE LOAD/DEFLECTION	235.50	115.08	58.92	34.10	21.47	14.39	10.10

Notes:

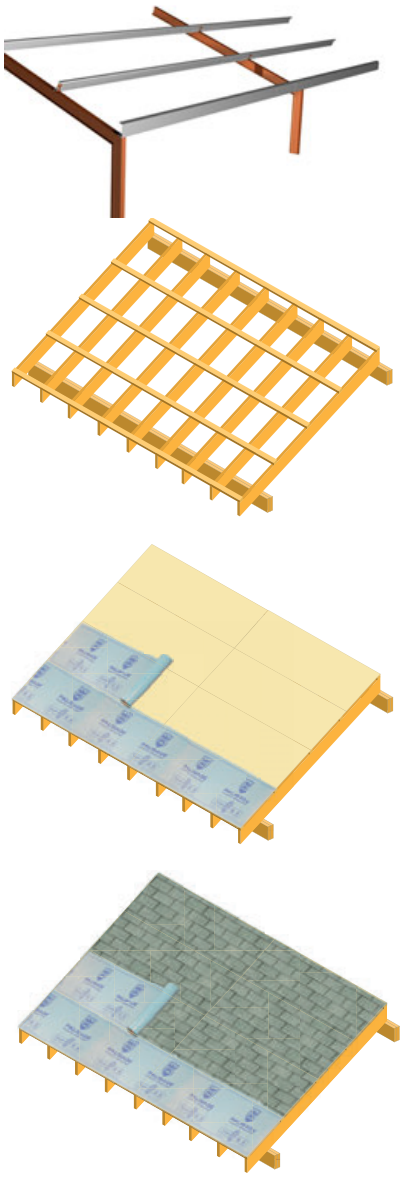
1. Strength calculations based on the 2012 AISI Standard "North American Specification for the Design of Cold-formed Steel Structural Members."
2. Allowable loads are applicable for uniform loading and spans without overhangs.
3. LIVE LOAD/DEFLECTION load capacities are for those loads that push the panel against its supports. The applicable limit states are flexure, shear, combined shear and flexure, web crippling at end and interior supports, and a deflection limit of L/180 under strength-level loads.
4. NEGATIVE WIND LOAD capacities are for those loads that pull the panel away from its supports. The applicable limit states are flexure, shear, combined shear and flexure, and a deflection limit of L/60 under 10-year wind loading.
5. Panel pullover and Screw pullout capacity must be checked separately using the screws employed for each particular application when utilizing this load chart.
6. Effective yield strength has been determined in accordance with section A2.3.2 of the 2012 NAS specification.
7. The use of any accessories other than those provided by the manufacturer may damage panels, void all warranties and will void all engineering data.
8. This material is subject to change without notice. Please contact MPI for most current data.

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.

PRELIMINARY INSTALLATION GUIDE

Options for Roof Installation

fig. 7



* Regardless of option used, heated spaces require insulation and moisture barrier such as Palisade Synthetic Underlayment.

Option 1:

Install Metal Directly to Metal Framing

* Install over open purlins
* Max. 5’ 0” purlin spacing over fiberglass insulation

Option 2:

Install Metal Directly to Wood Frame

* Use maximum 2’ purlin spacing
* Install metal
* Heated spaces require insulation and moisture barrier

Option 3:

Install Metal Over Solid Deck

* Secure plywood deck
* Apply Palisade Underlayment for moisture barrier
* Install metal

Option 4:

Install Metal Over Existing Shingles

* Consider applying wood purlins over exiting roof, or Retro-Ease shingle spacer
* Apply Palisade Underlayment for moisture barrier
* Install metal

PRELIMINARY INSTALLATION GUIDE

Options for Roof Installation

To provide for an adequate drip edge, allow a minimum of 1” overhang. Using inside closure at the eave will prevent water infiltration as well as prevent insect or animal entry at the openings. Rake and gable trim will add a finished appearance and protect against wind uplift. Slopes of less than 3:12 are not recommended.

For low slopes, apply tape sealant along the top of all lap ribs, see figure 8. Be sure not to block the siphon channel with the tape sealant. Use a 7/8” lap-tek screw into the top of the rib to secure the side lap.

End-lapped panels are not recommended, but if necessary, end-lap panels a minimum of 6” for slopes greater than 3:12 pitch. Apply 1” butyl tape between endlaps at screw line. Screw through the butyl tape. Install panels in the sequence shown in Figure #9.

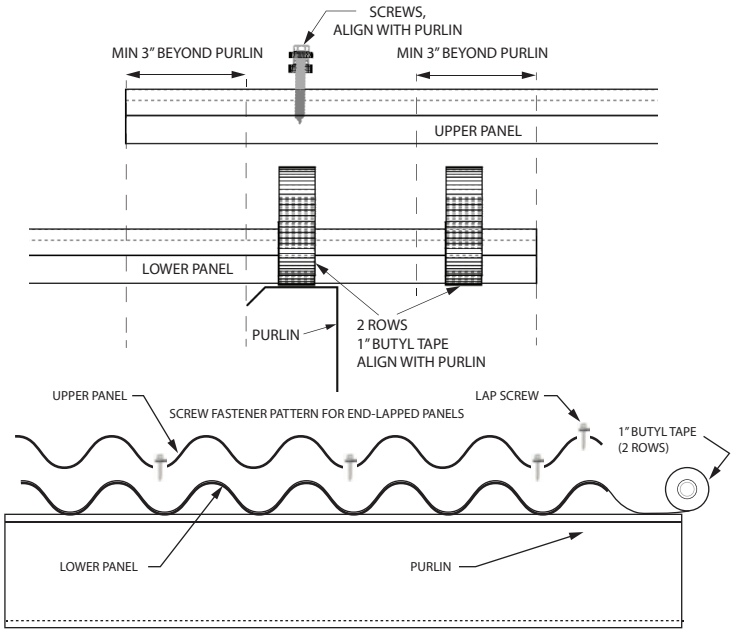
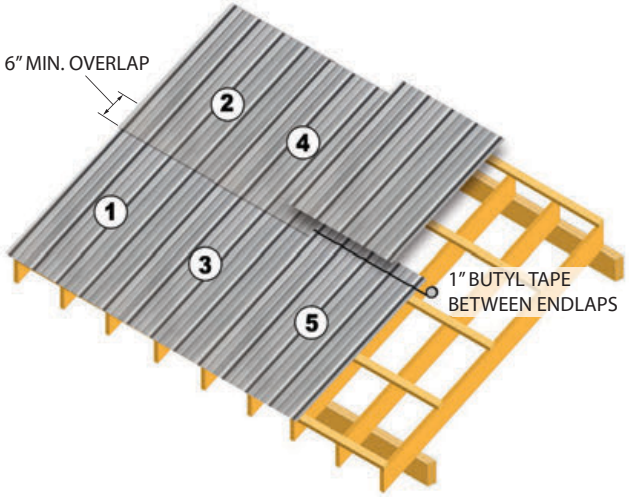
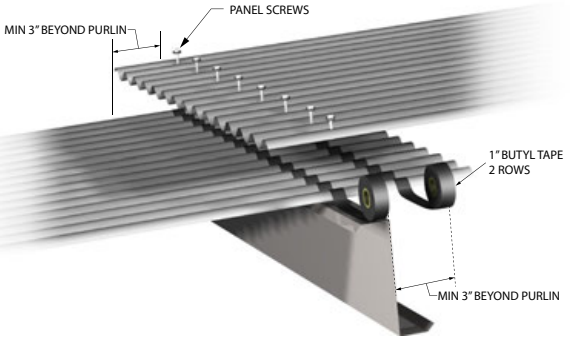


fig. 8

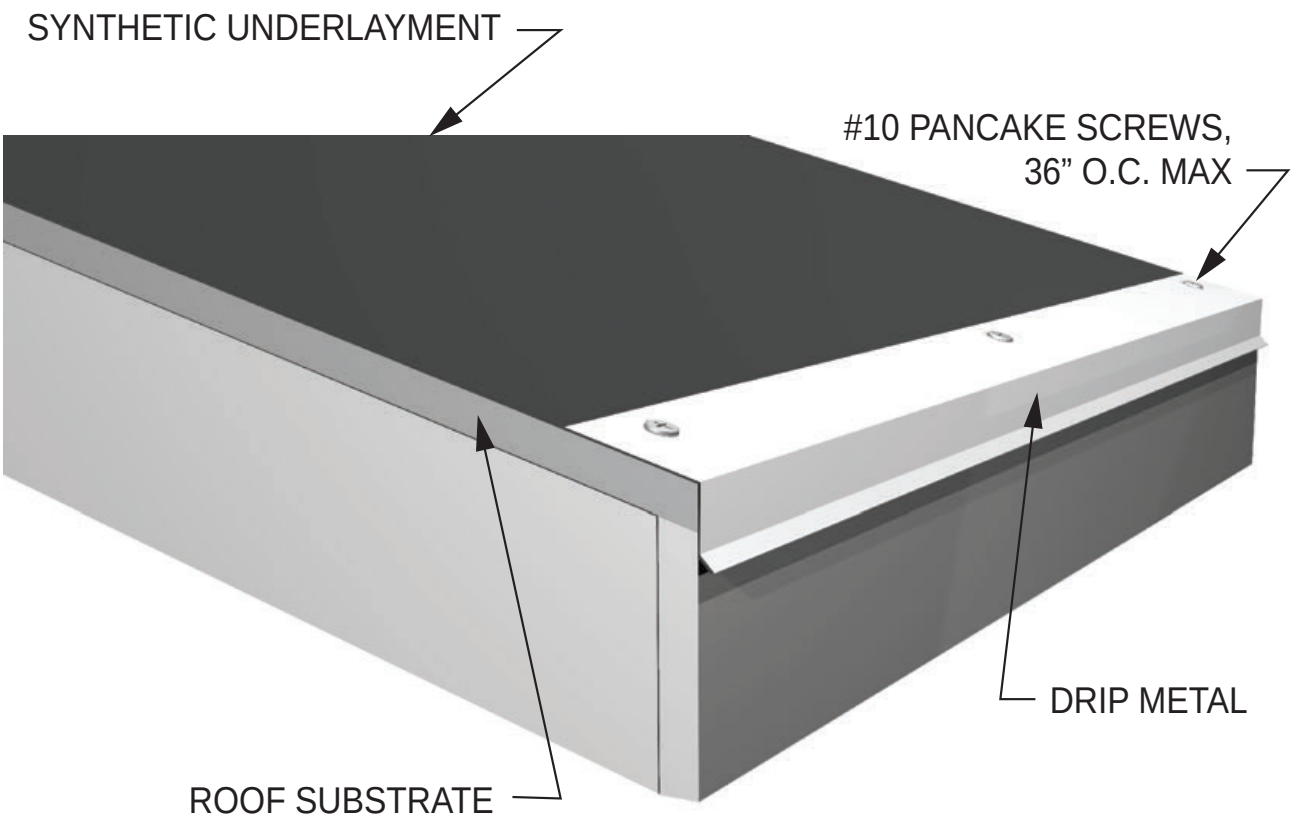


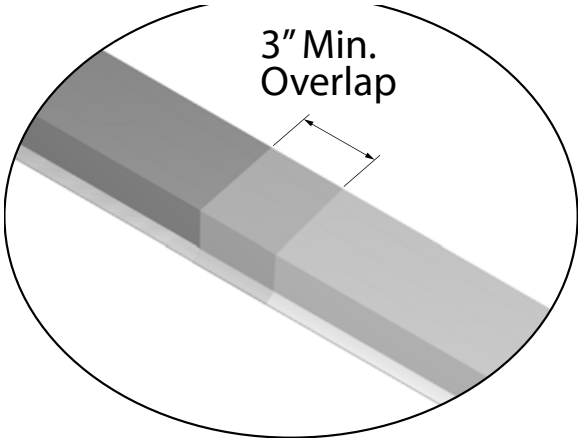
fig. 9



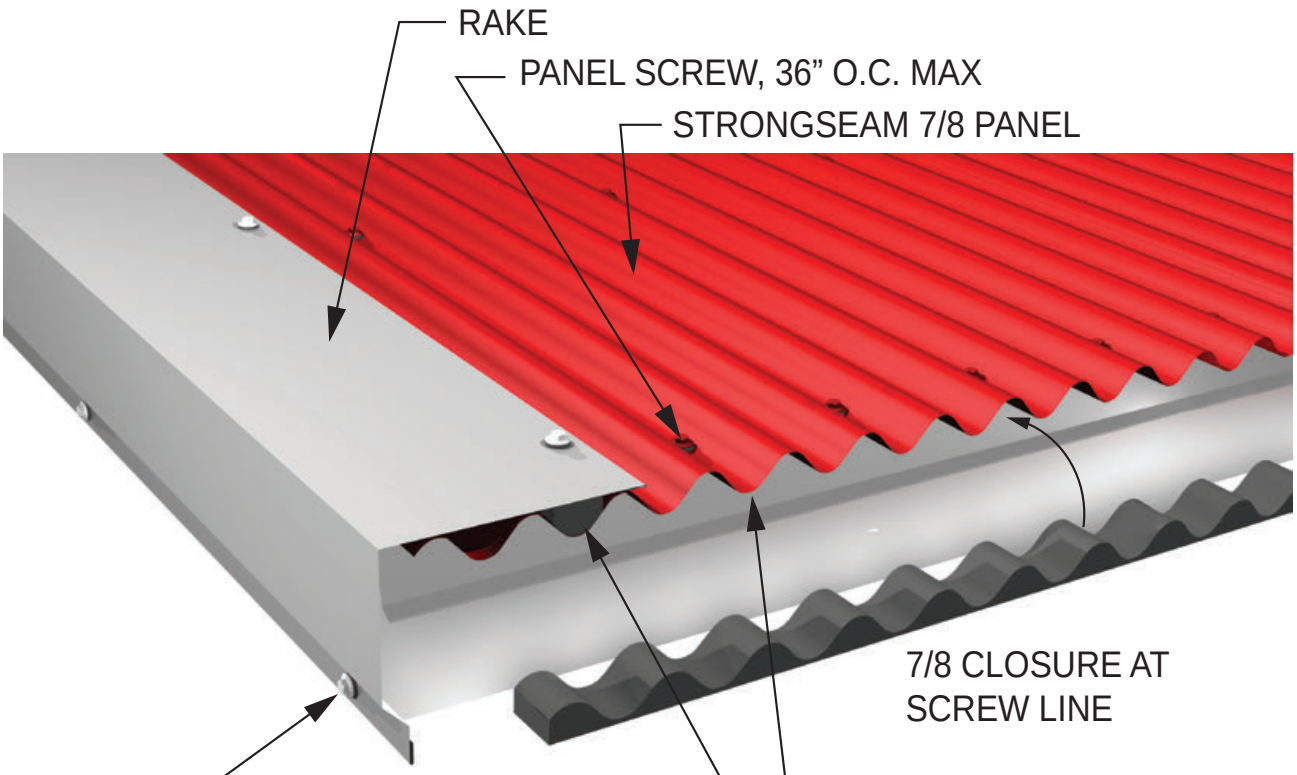


PRELIMINARY INSTALLATION GUIDE: DRIP METAL



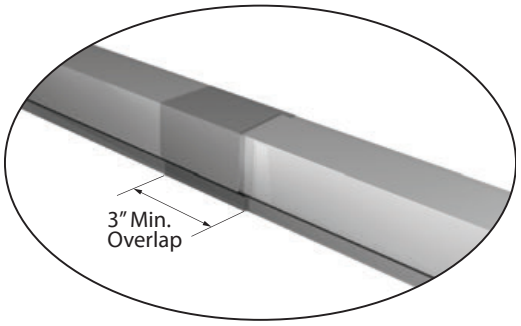


PRELIMINARY INSTALLATION GUIDE: RAKE

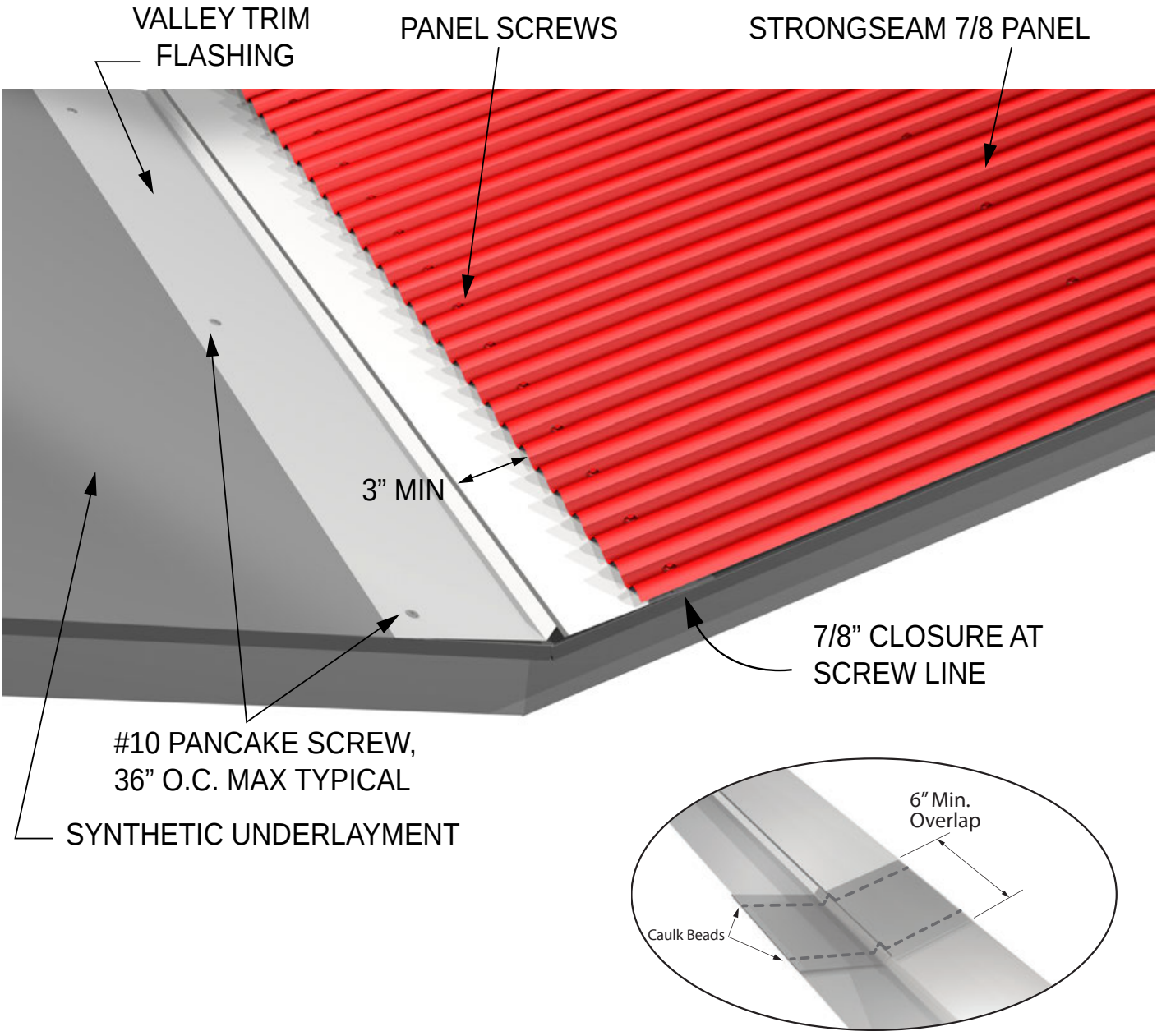


ALLOW MIN. 1” OVERHANG OF PANELS BEYOND FACIA OR TRIM METAL

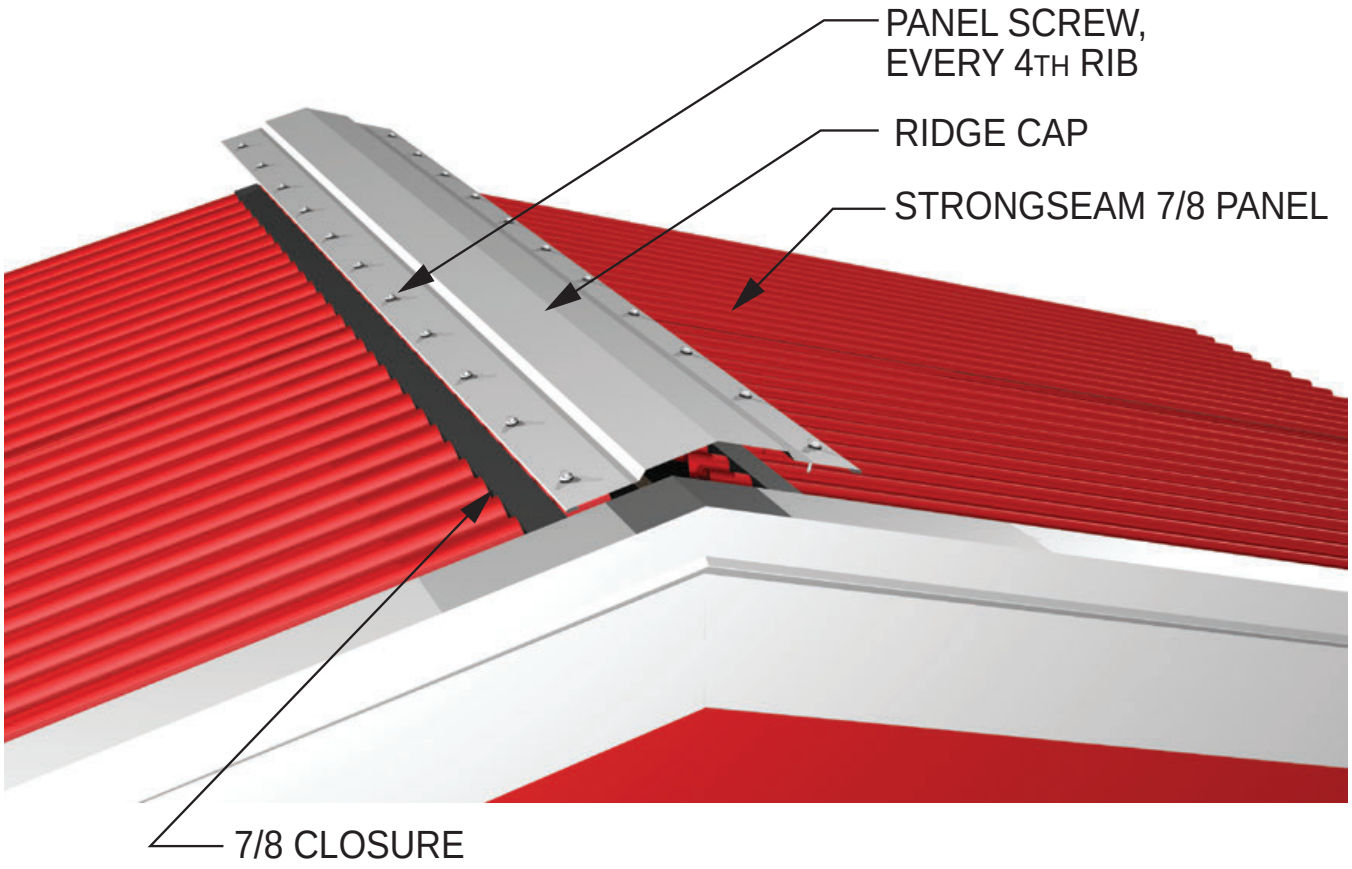
SYNTHETIC UNDERLAYMENT REQUIRED ON ROOF SUBSTRATE

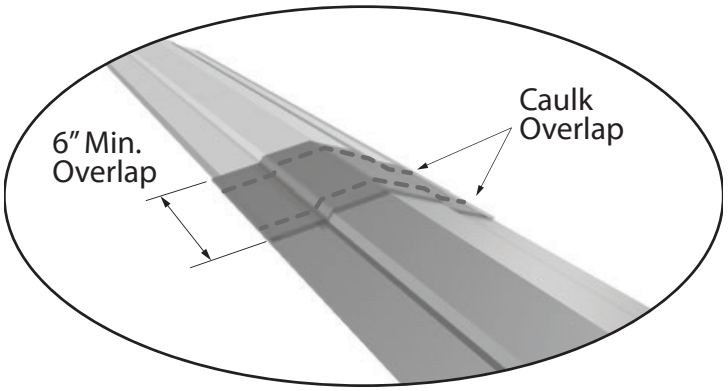


PRELIMINARY INSTALLATION GUIDE: VALLEY

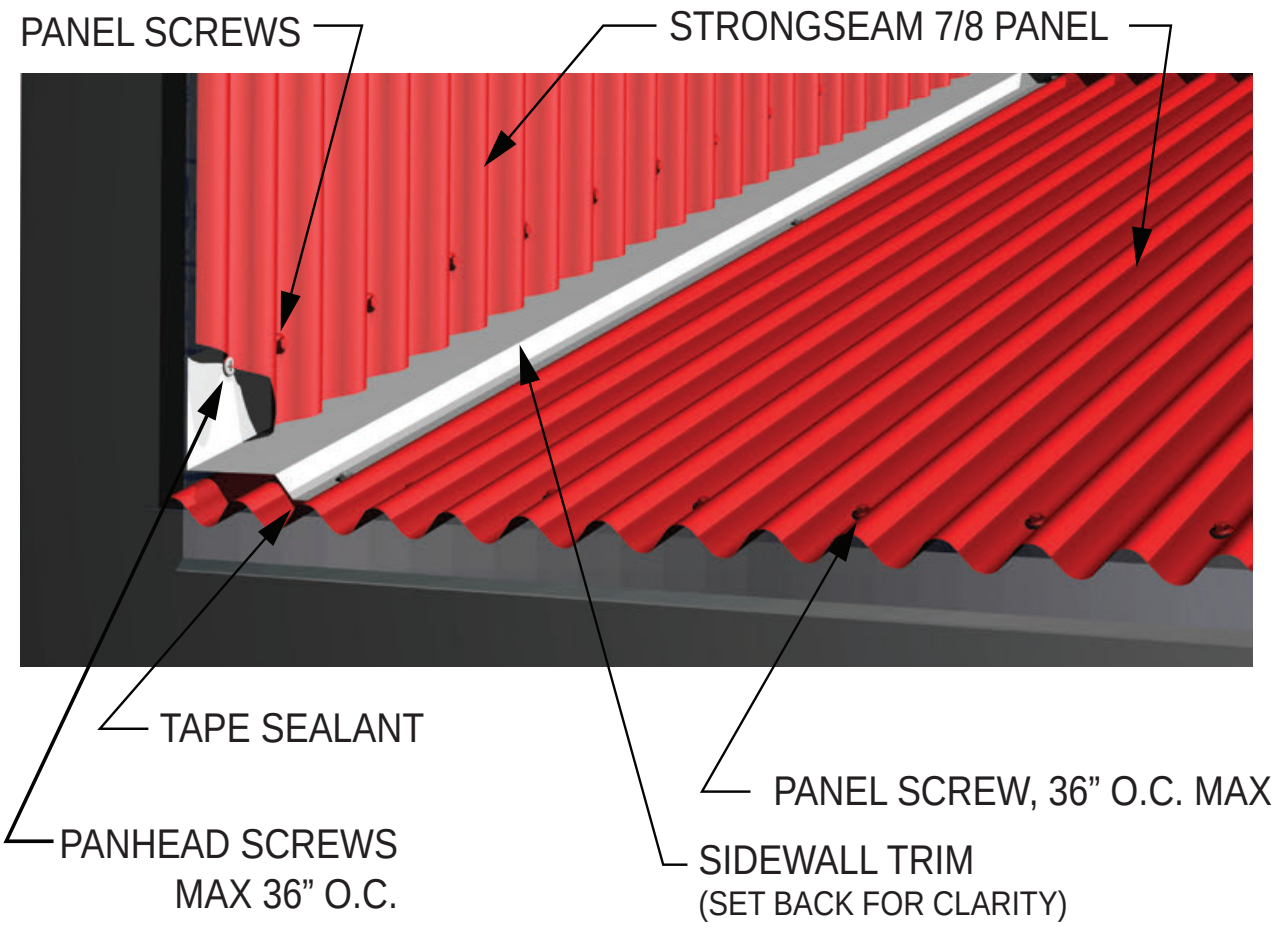


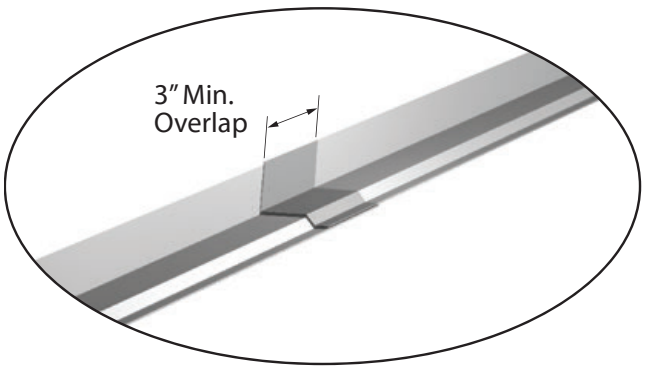
PRELIMINARY INSTALLATION GUIDE: RIDGE CAP



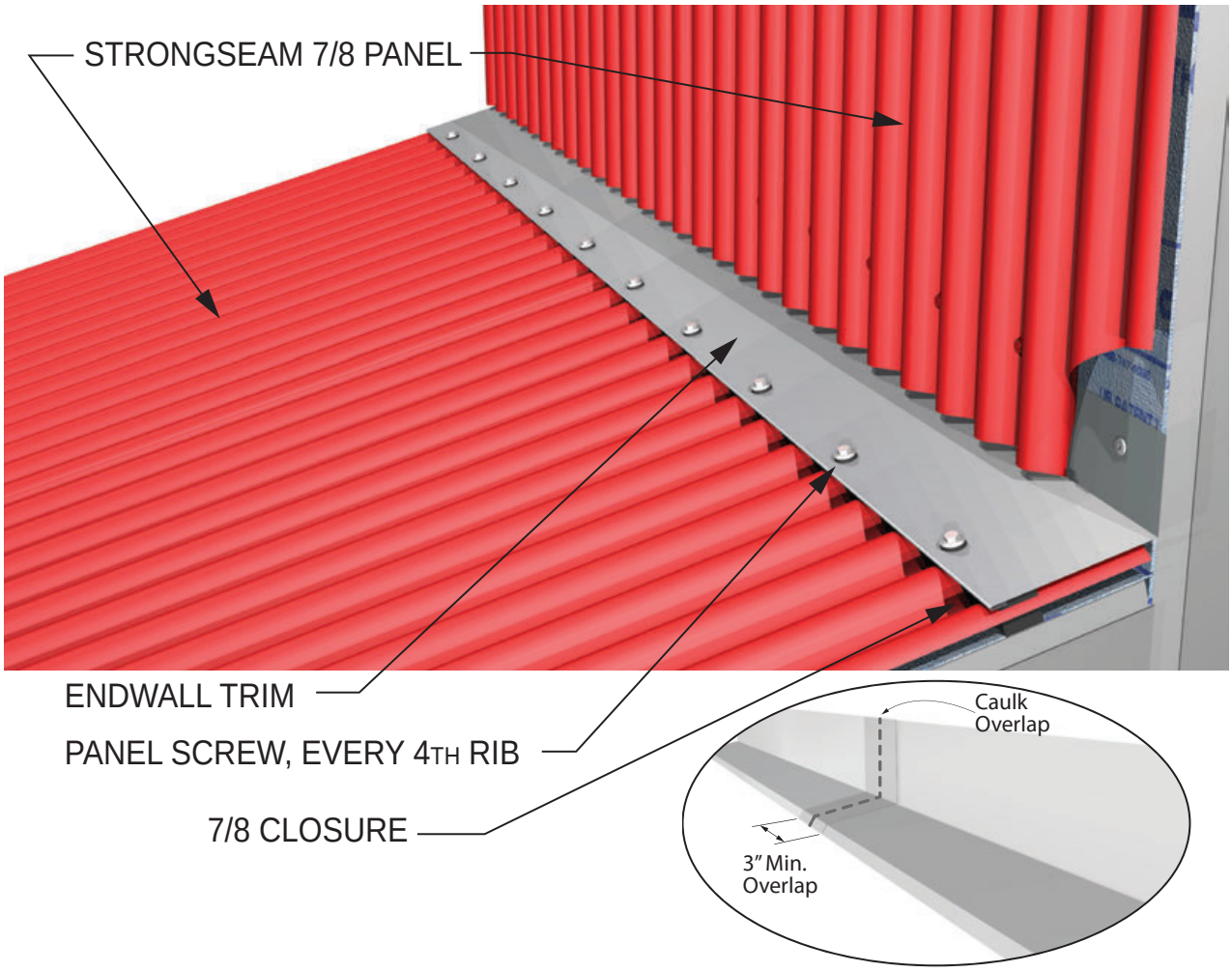


PRELIMINARY INSTALLATION GUIDE: SIDEWALL

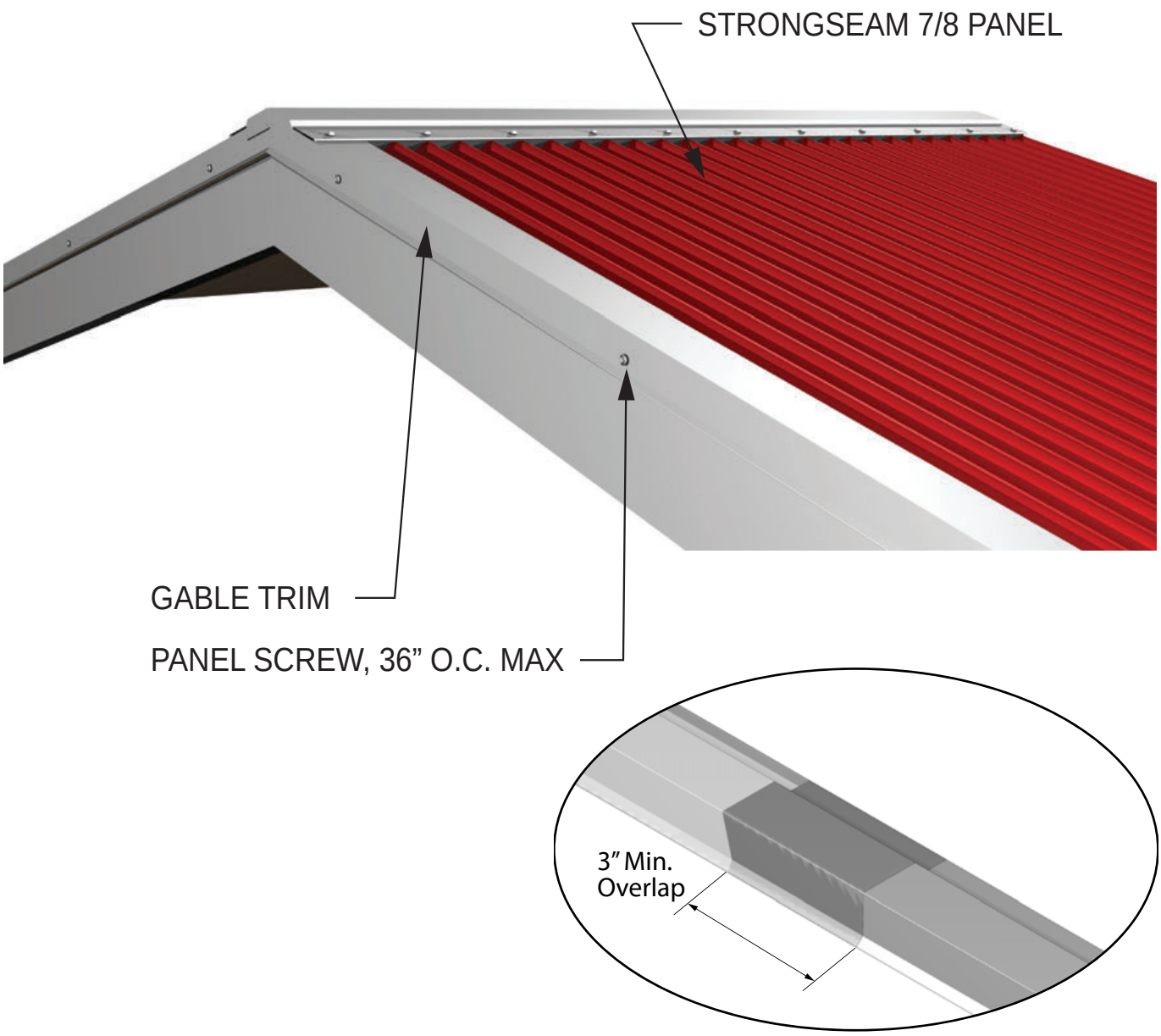




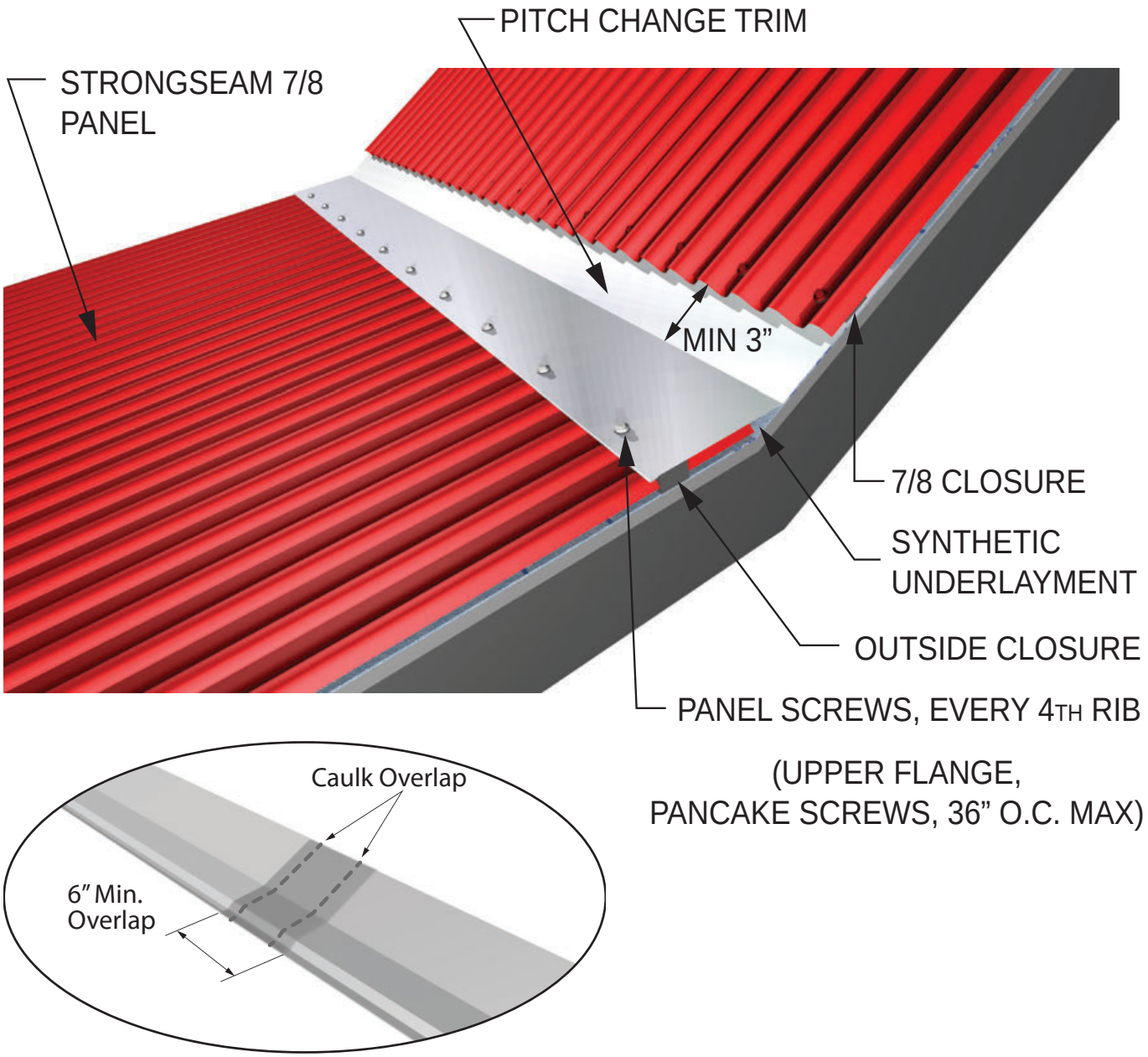
PRELIMINARY INSTALLATION GUIDE: ENDWALL



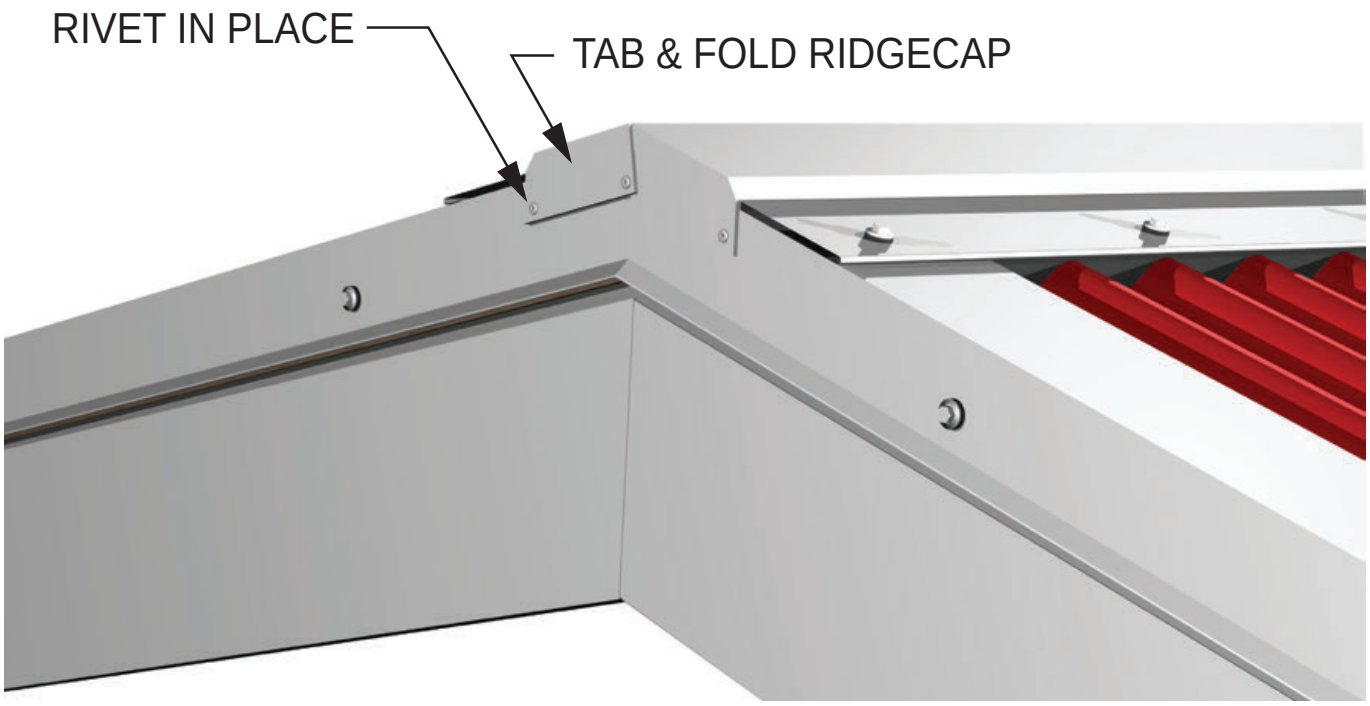
PRELIMINARY INSTALLATION GUIDE: GABLE TRIM



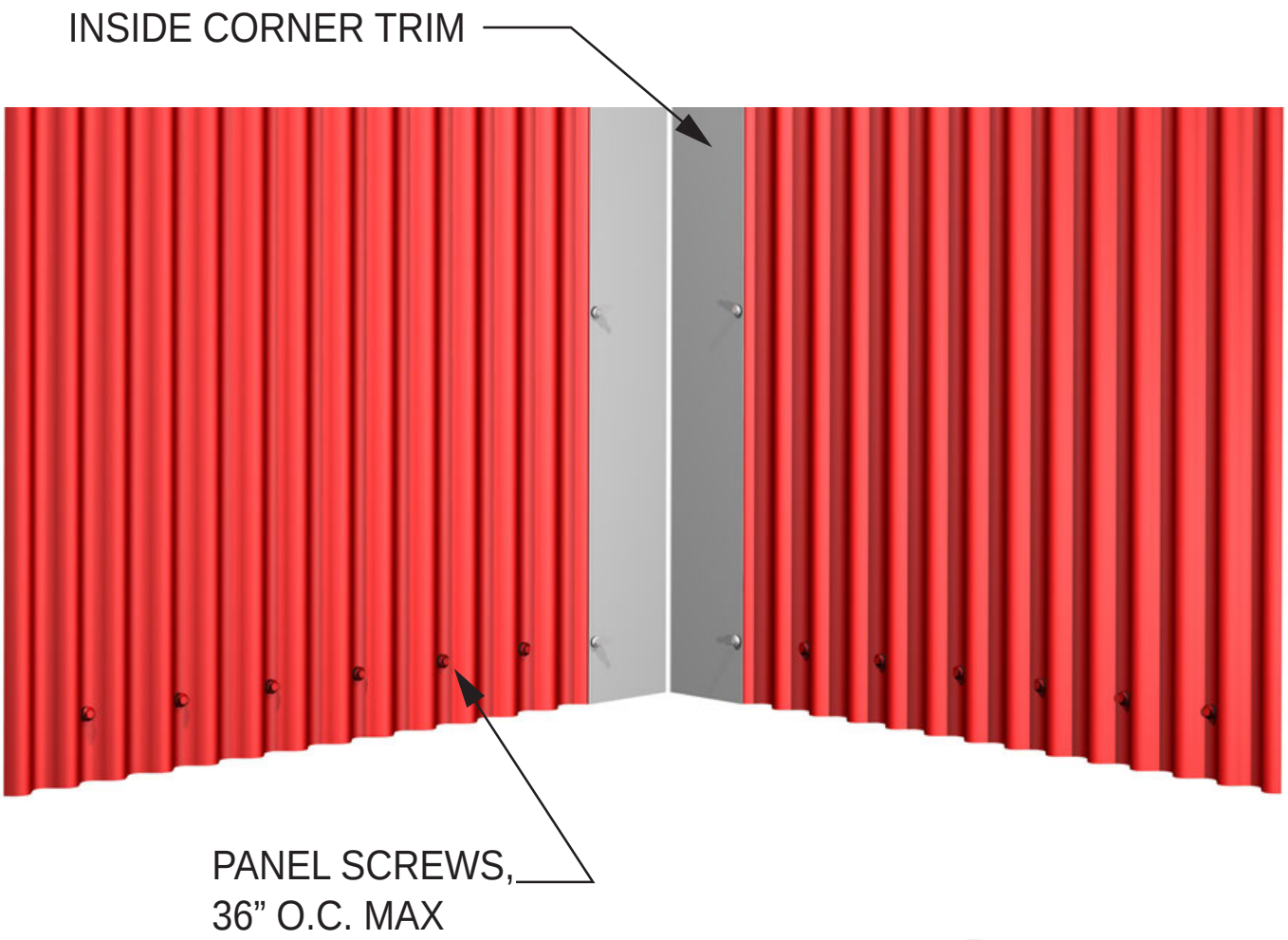
PRELIMINARY INSTALLATION GUIDE: PITCH CHANGE TRIM

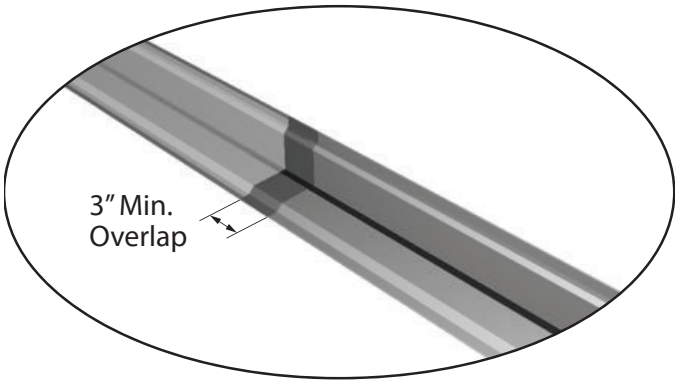


PRELIMINARY INSTALLATION GUIDE: PEAK PLATE TRIM

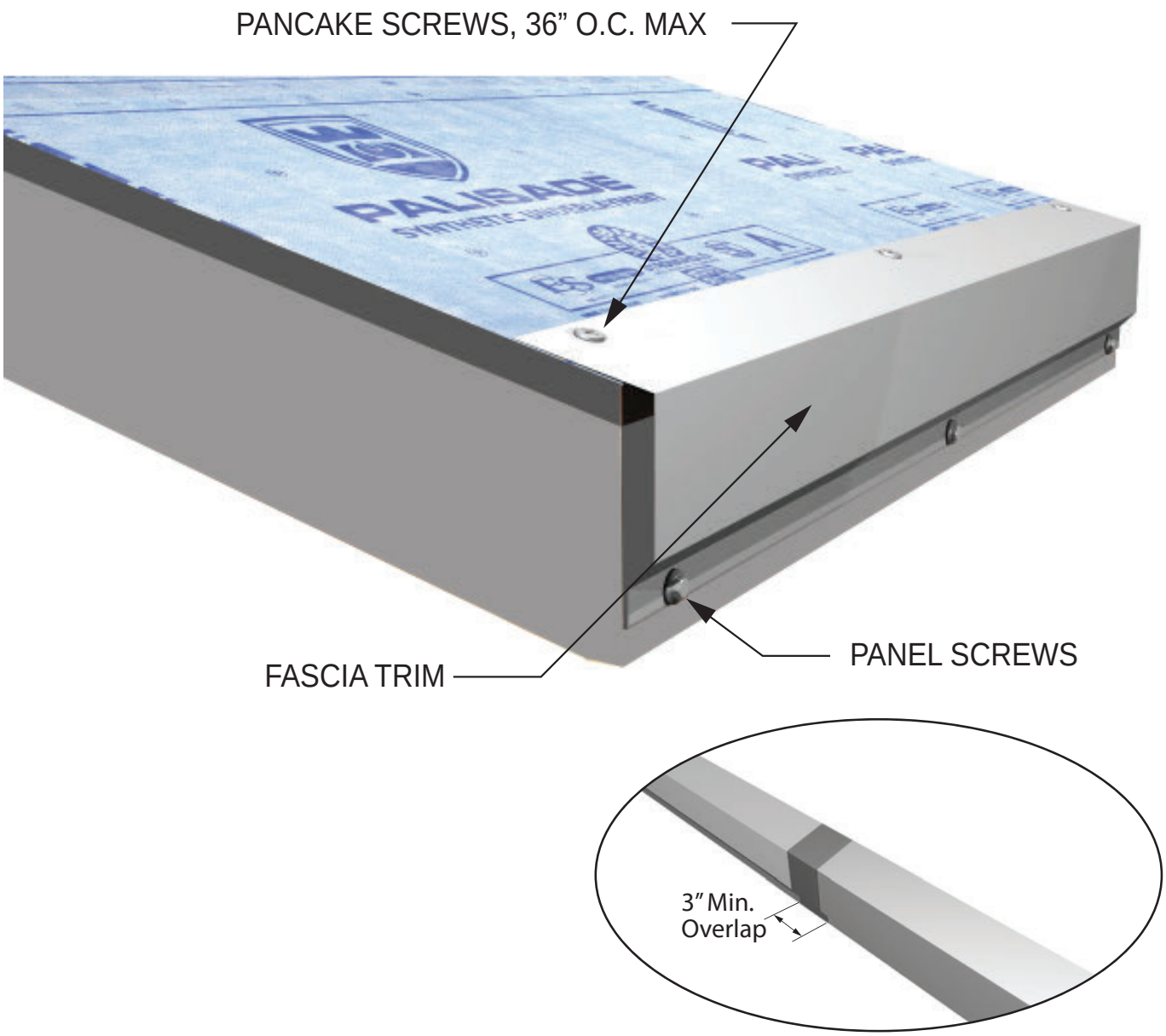


PRELIMINARY INSTALLATION GUIDE: INSIDE CORNER TRIM

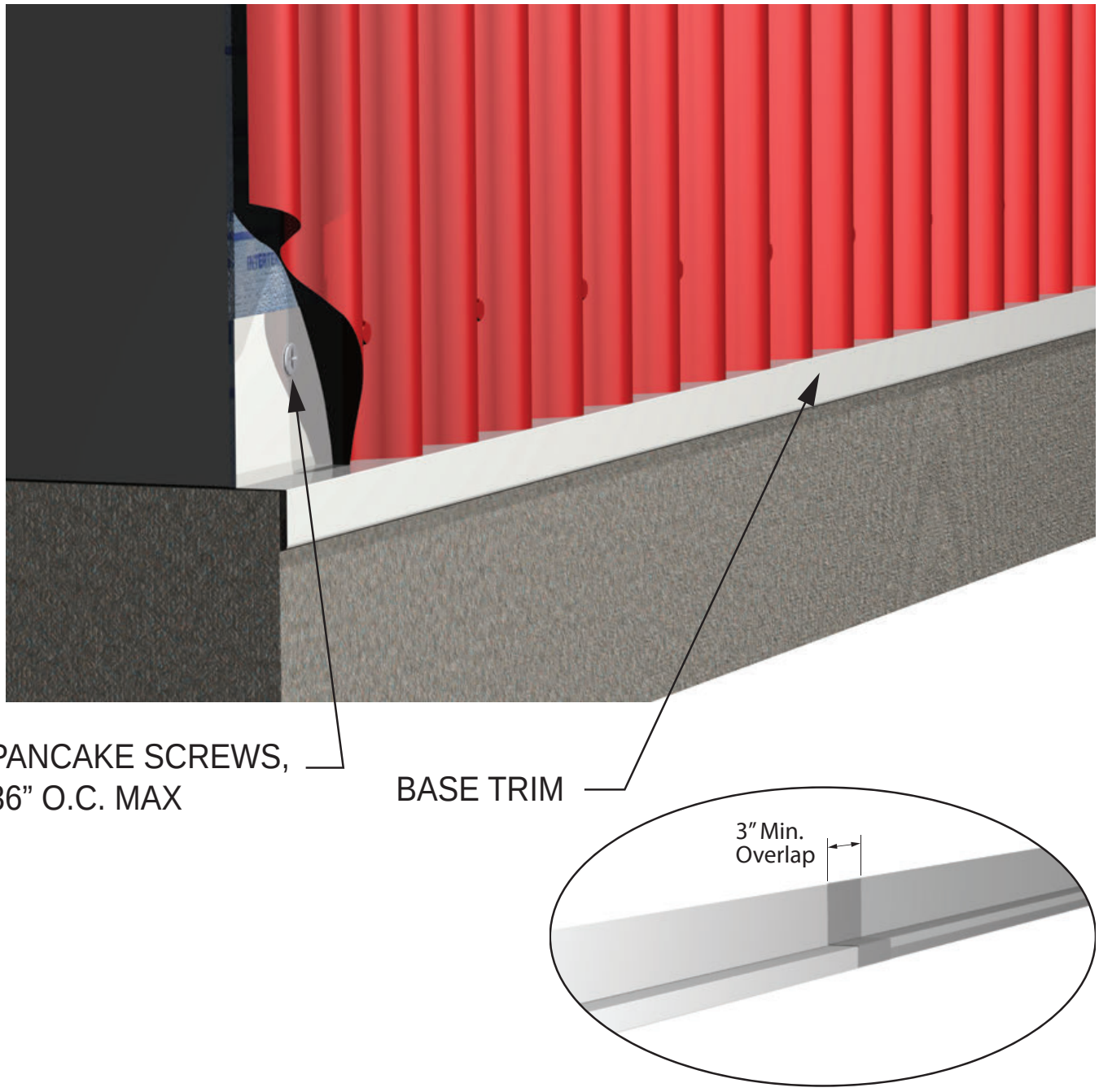




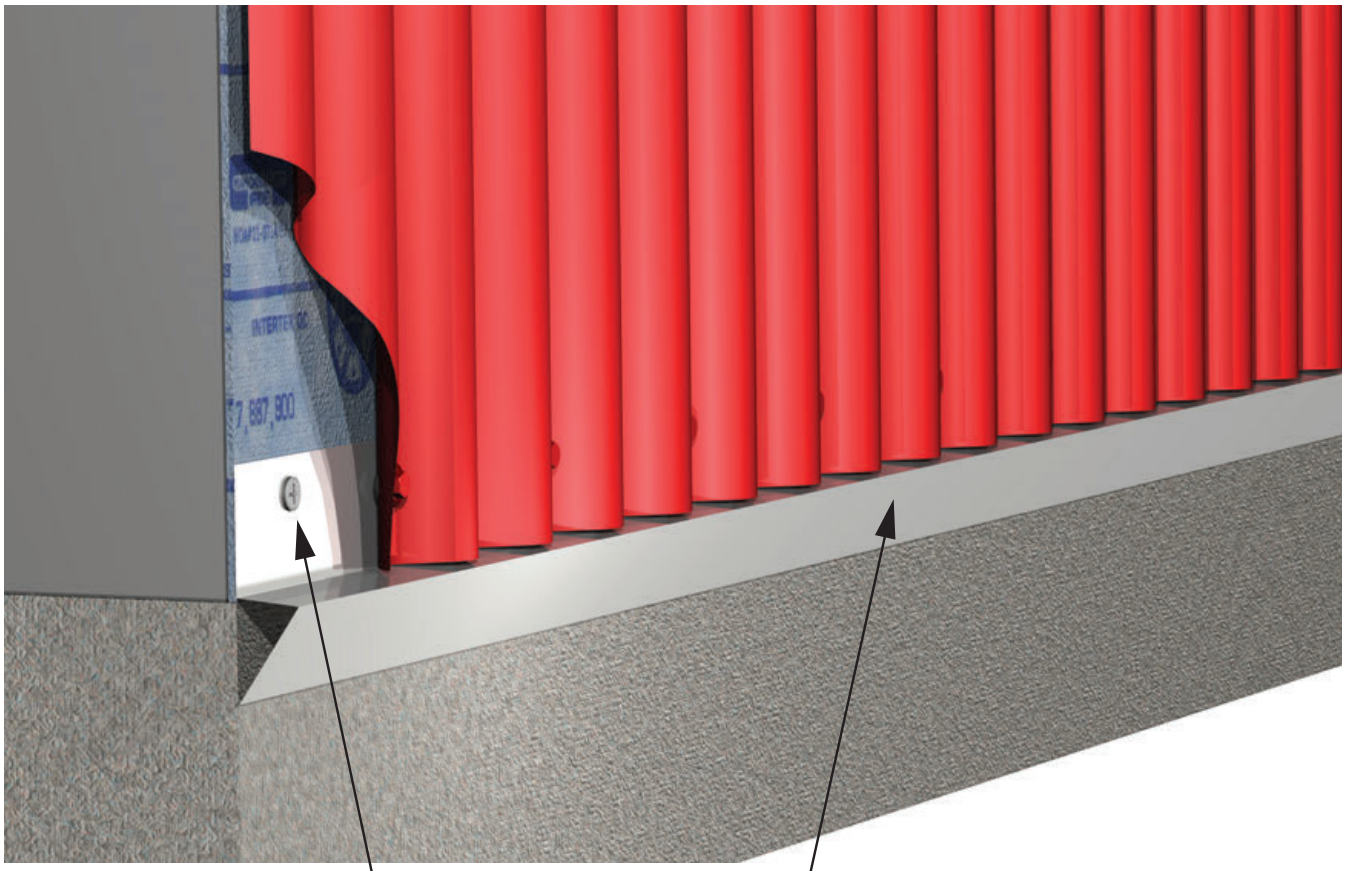
PRELIMINARY INSTALLATION GUIDE: FASCIA TRIM



PRELIMINARY INSTALLATION GUIDE: BASE TRIM

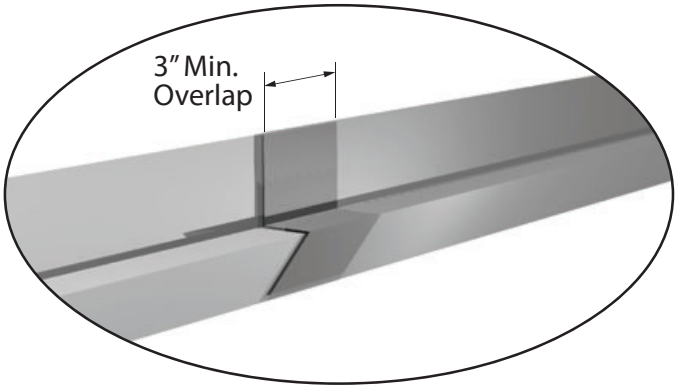


PRELIMINARY INSTALLATION GUIDE: RAT GUARD TRIM

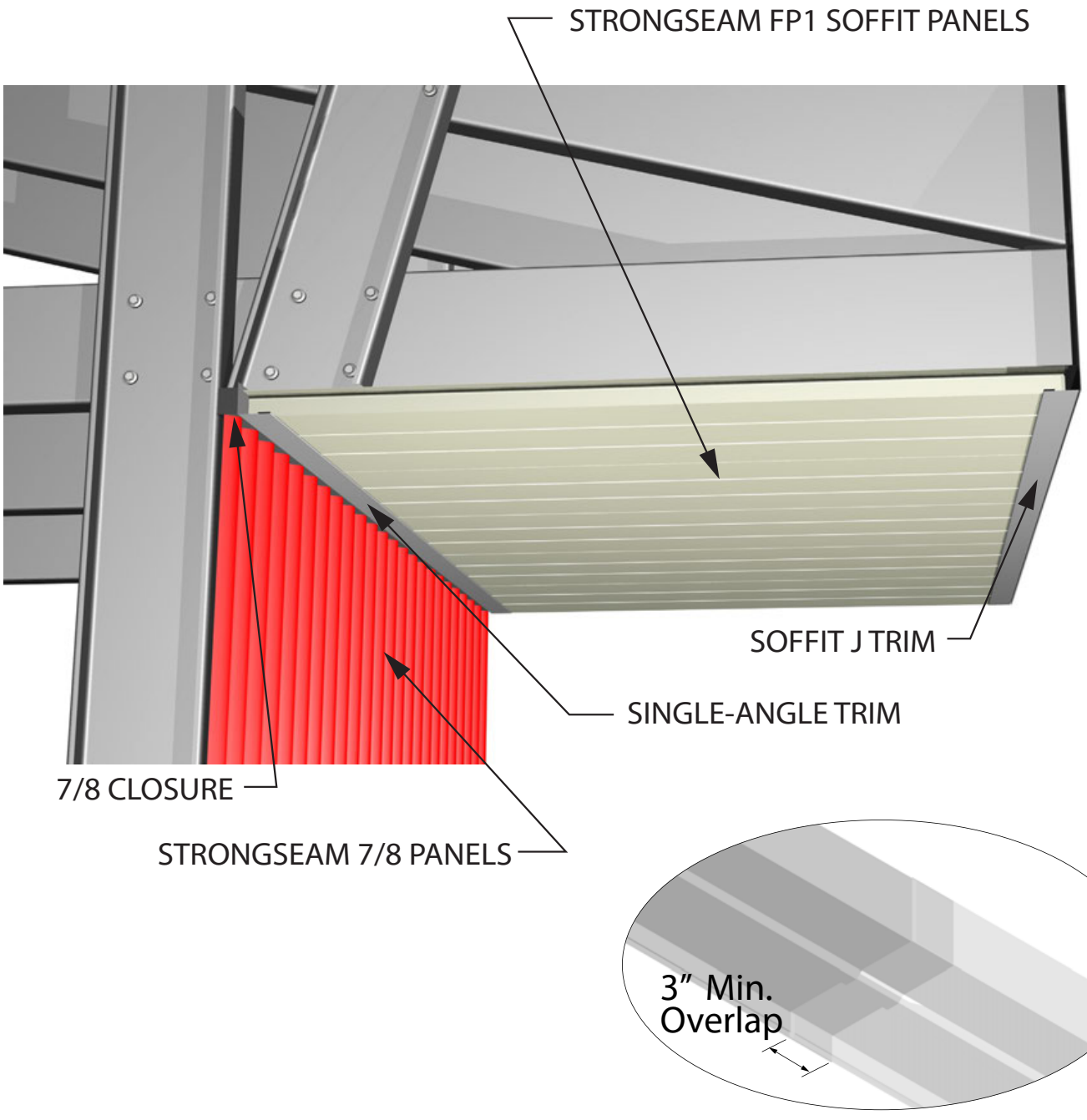


PANCAKE SCREWS, 36” O.C. MAX

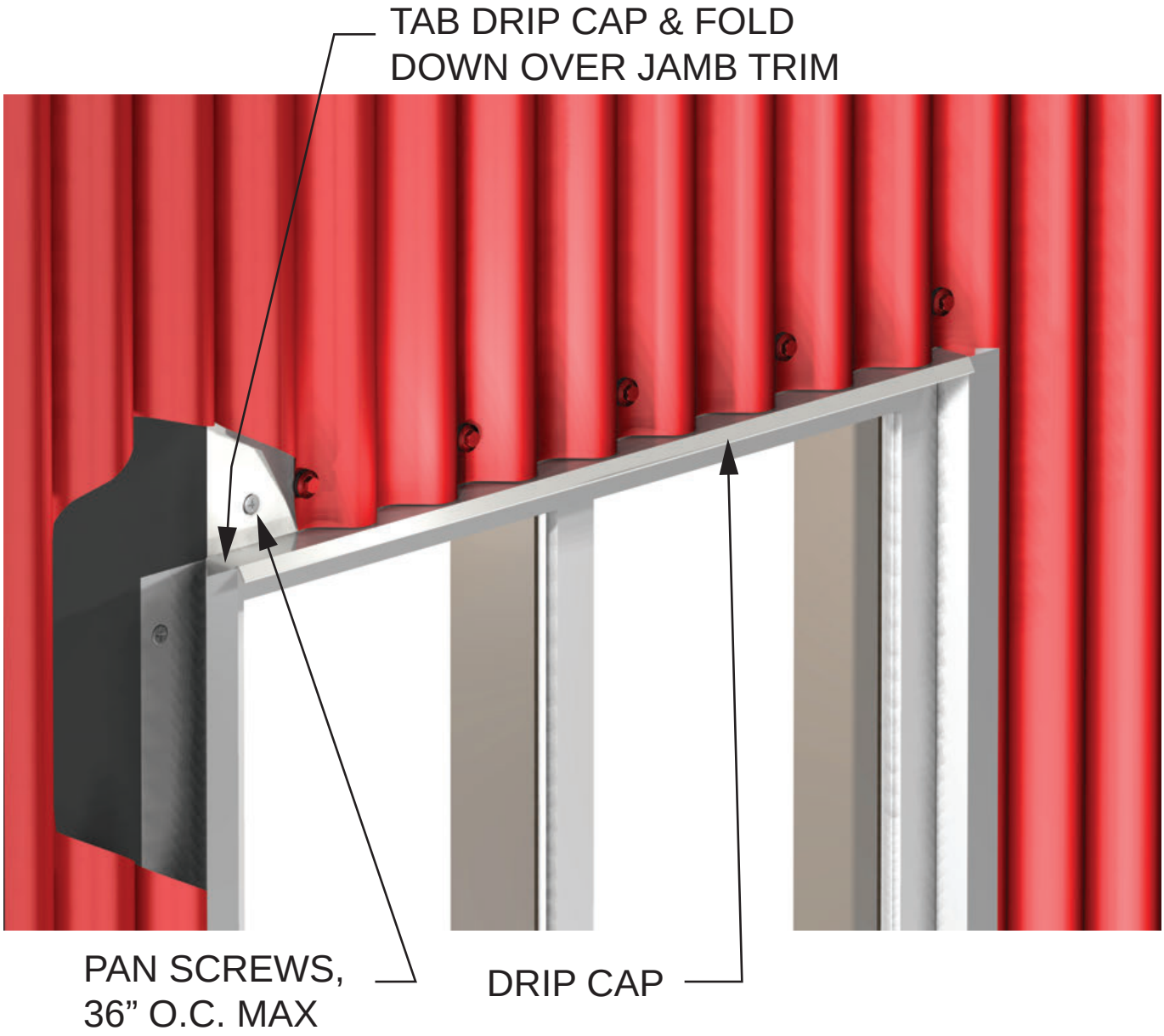
RAT GUARD TRIM



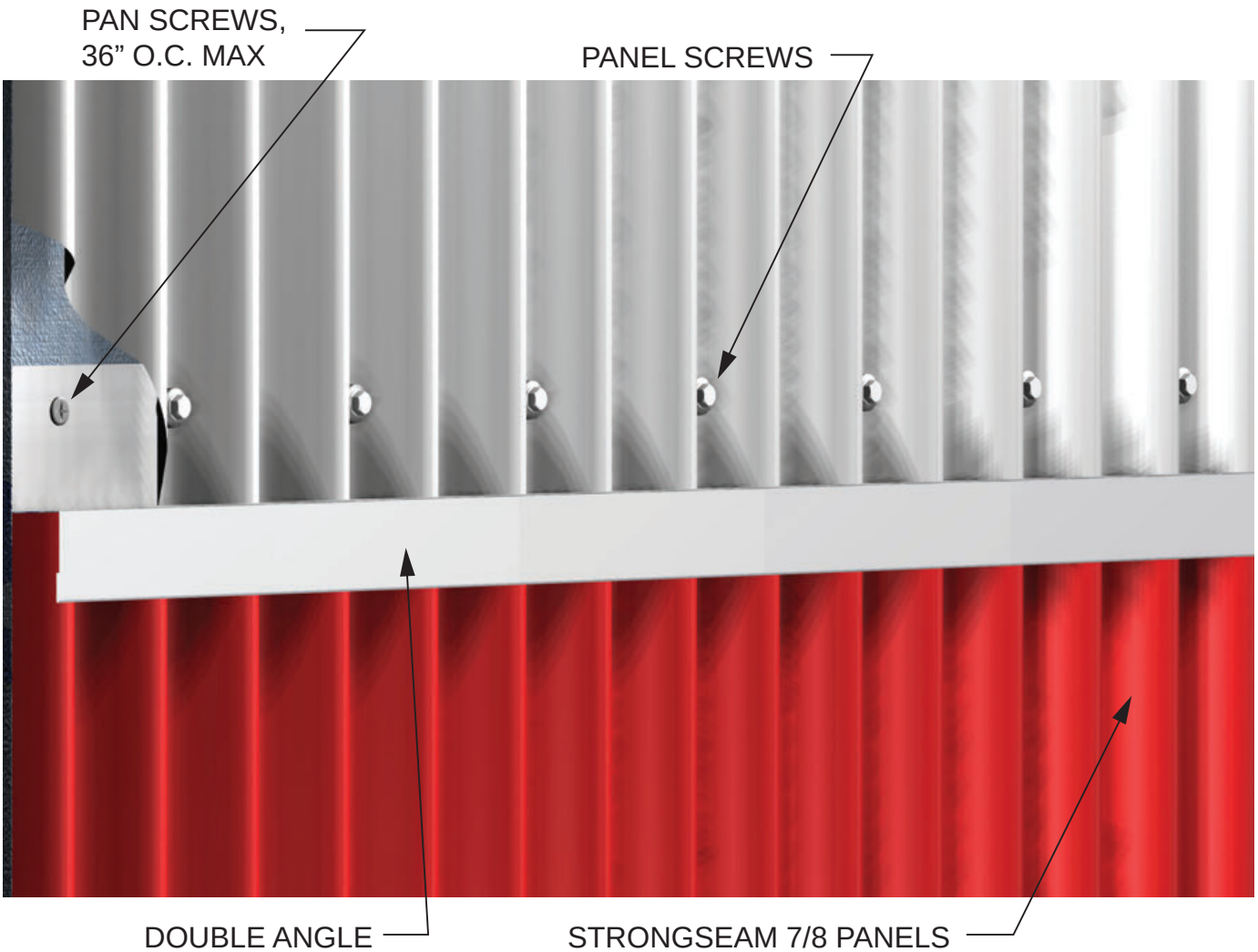
PRELIMINARY INSTALLATION GUIDE: SOFFIT PANEL



PRELIMINARY INSTALLATION GUIDE: DRIP CAP

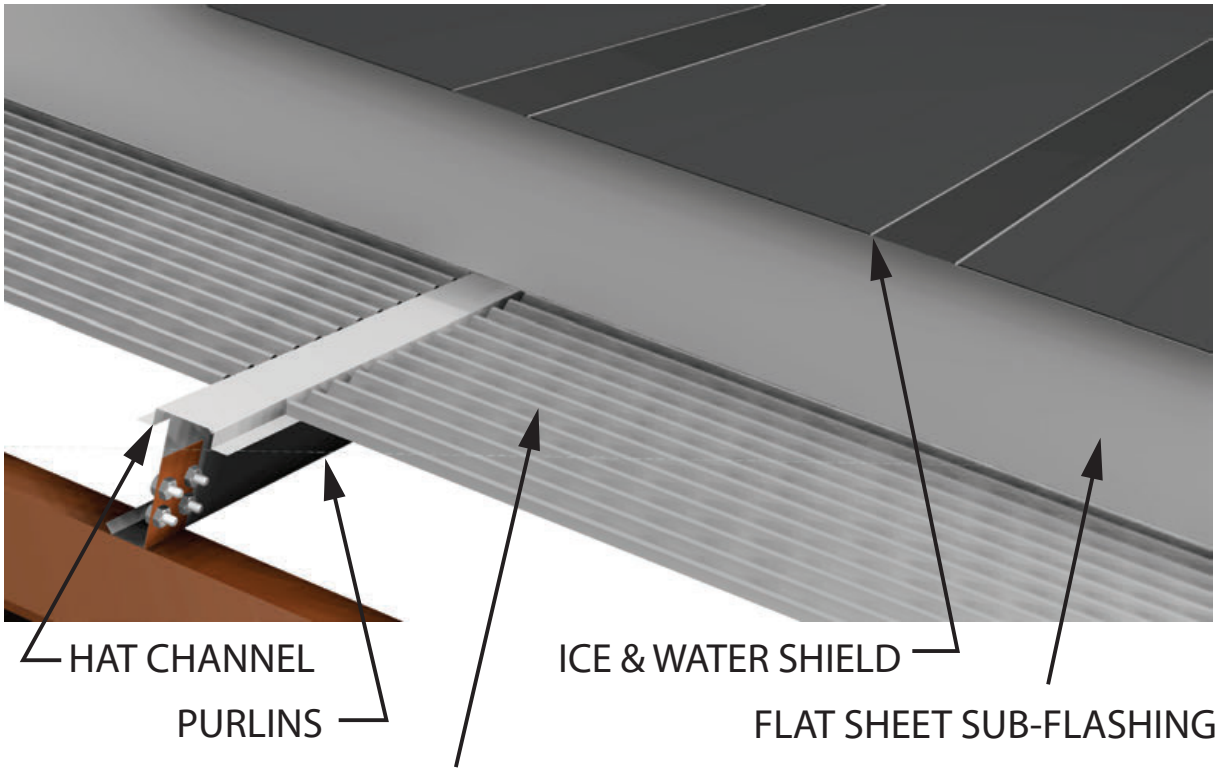


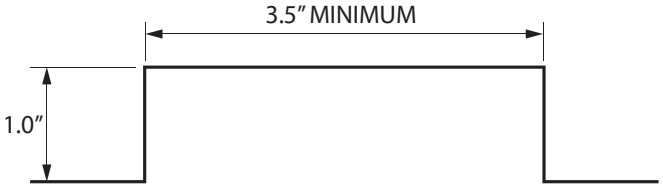
PRELIMINARY INSTALLATION GUIDE: WAINSCOT / DOUBLE-ANGLE



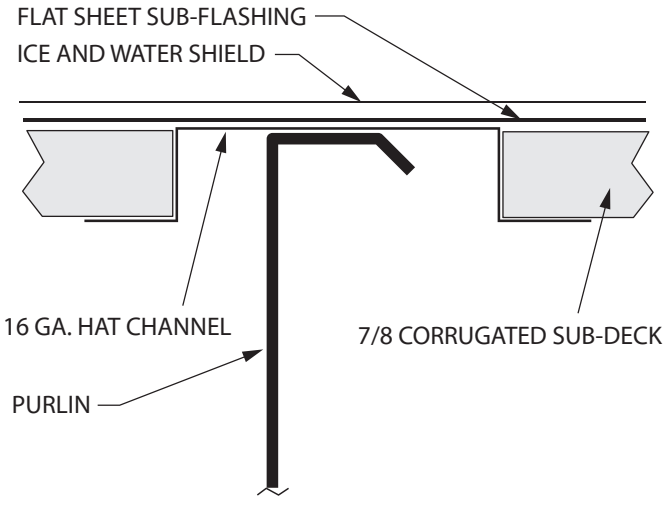
PRELIMINARY INSTALLATION GUIDE:

SUB-DECK FOR ROOF PENETRATIONS LARGER THAN 4" IN DIA.
APPLY 1' 0" MINIMUM AROUND PENETRATIONS



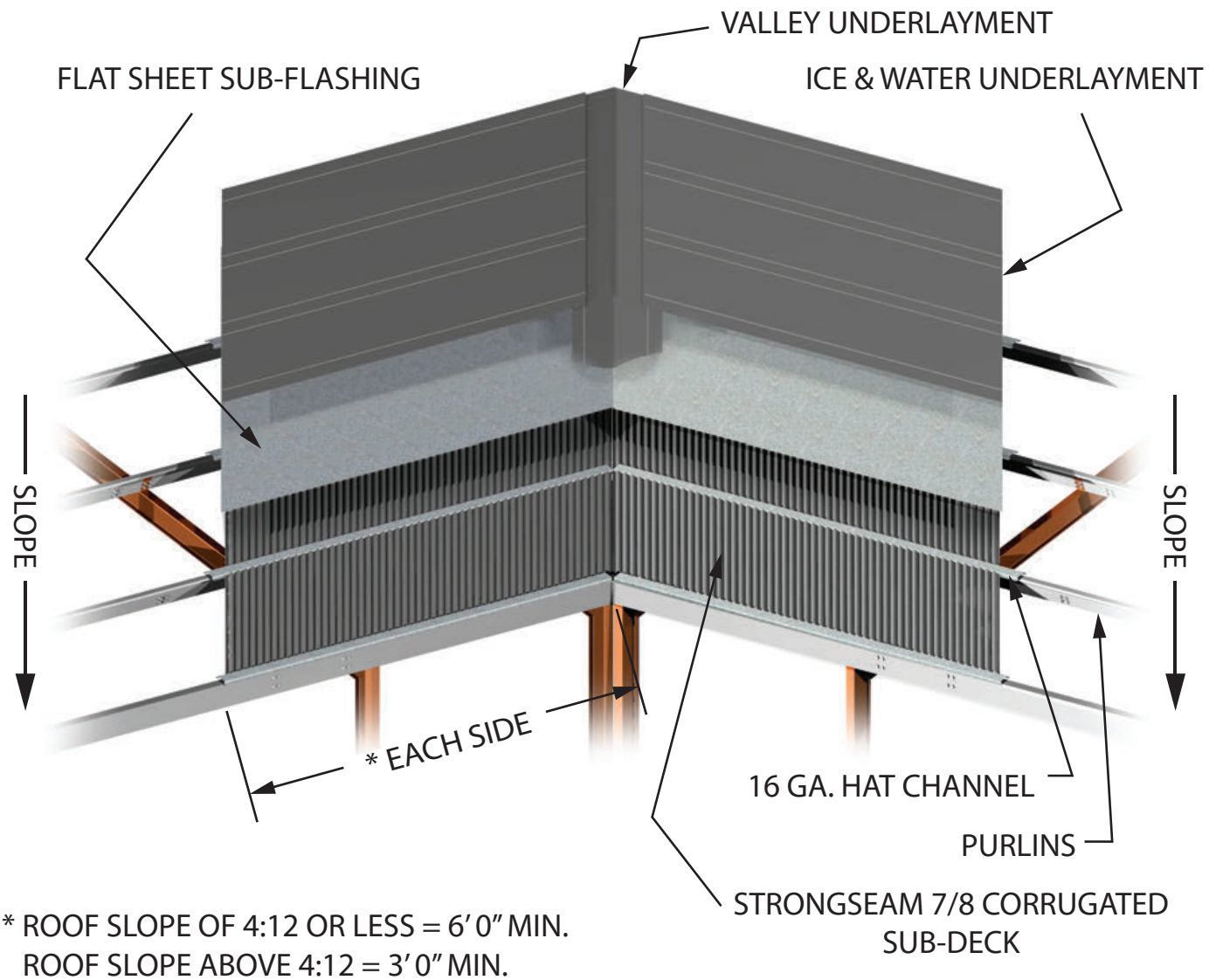


16 GA. HAT CHANNEL CONFIGURED TO FIT OVER Z-PURLIN TO ACCOMMODATE 7/8" CORRUGATED SUB-DECK



PRELIMINARY INSTALLATION GUIDE:

VALLEY DETAIL



* ROOF SLOPE OF 4:12 OR LESS = 6' 0" MIN.
ROOF SLOPE ABOVE 4:12 = 3' 0" MIN.

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Tulsa, Oklahoma 74116

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