

## CertainTeed Low-Slope Roof Systems



Fasteners



ISO Cold



FlintEDGE\*

For more information on CertainTeed Commercial Roofing Products, go to [www.certainteed.com](http://www.certainteed.com).

CertainTeed Flintlastic® roofing products are intended for use by professional roofing contractors only. It is the responsibility of the installer to follow all appropriate and required safety precautions in conjunction with the installation of any CertainTeed roofing product.

Meets or exceeds ASTM D6164 (SA Mid Ply and SA Cap), ASTM D6163 (SA Cap FR) and ASTM D4601 (SA NailBase and PlyBase).



UL 2218 Class 4 Impact Resistance - Certain systems are UL classified as to impact resistance as described in the UL Roofing Materials and Systems Directory.



ICC-ES ESR-1388



### CertainTeed Corporation

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# FLINTLASTIC® SA

## Self-Adhered Roof Systems for Low-Slope Residential Roofs

Includes Application Instructions for Ambient Temperatures, 20°F - 49°F







After more than a century of making reliable, durable roofing materials, CertainTeed remains a leading trusted brand for roofing distributors and contractors. We're rated #1 with America's building and remodeling professionals.

So whether you have a residential or commercial project, you can turn to CertainTeed with confidence. We've been around a long time, and our expertise goes into giving you better products.

We manufacture complete systems and protect you with strong warranties. We use the highest quality materials, and that makes for better roofs — not to mention lower life-cycle costs.

It's all a part of our promise to you.

Quality made certain. Satisfaction guaranteed.™

### Self-Adhered SBS-Modified Bitumen Roofing System For Low-Slope Roofs

CertainTeed Flintlastic® SA is a premium, self-adhered SBS-Modified bitumen roofing system. With high quality materials bottom to top, components of the Flintlastic SA system include:

**Flintlastic SA NailBase**

(base/anchor—mechanically attached)

**Flintlastic SA PlyBase**

(base or interply, self-adhered)

**Flintlastic SA MidPly**

(premium base or interply, self-adhered)

**Flintlastic SA Cap** (self-adhered)

**Flintlastic SA Cap FR** (fire-rated, self-adhered)

**Flintlastic SA Cap CoolStar**

(highly reflective, self-adhered)

**Flintlastic SA Cap FR CoolStar**

(fire-rated, highly reflective, self-adhered)

**FlintPrime® Aerosol**

**FlintPrime SA**

(quick-dry water-based primer as needed)

**FlintBond® SBS-Modified Adhesive, Caulk or Trowel Grade** (only, for construction details)

### What Are The Advantages?

Self-adhered roofing offers the time-tested protection of modified bitumen roof systems for a fraction of the labor with no fumes, flame, asphalt kettle or occupant disturbance. The application of self-adhered low-slope roof systems is also easier to master than traditional bituminous application methods.

**Flintlastic SA systems are valued for:**

- Superior initial and long-term bonds;
- Excellent applicator handleability in hot or cold temperatures;
- Allowed application temperatures as low as 20°F (cold weather application instructions must be followed when ambient temperatures are between 20°F - 49°F);
- Wide array of cap sheet colors true-blended to complement popular CertainTeed shingles
- National stocking at all CertainTeed facilities with mix-truck allowance (shingles/Flintlastic SA);
- Excellent sales and applicator support.

### Where can I use it?

The value associated with labor savings and safety can be applied to any roof project. In addition, Flintlastic SA roof systems are ideal when access to the roof is limited, such as high-rise buildings. And no asphalt kettle means no odor, which makes SA systems an ideal solution on healthcare, education, hospitality and residences/condos where occupant comfort is tremendously desirable.

### Considerations for Intended Use

If multiple SA products are listed, products are listed in order of warranty duration from shortest to longest, with the exception of SA Cap and SA Cap-FR; SA Cap FR is intended for use where Class A fire rating is required (see iq.ulprospector.com for Class A system specification). **NOTE:** Removal of the roof system (at end of life) may be difficult when adhering PlyBase or MidPly direct to a roof deck (i.e. wood, concrete).

### Energy Savings

Flintlastic SA Cap and SA Cap FR are available with CoolStar highly reflective granules, and can be used to comply with the 2016 California Title 24 Part 6 Cool Roof Requirements, CRRS product ID 0668-0146. Specific product details can be found on product technical data sheets or by viewing [www.coolroofs.org](http://www.coolroofs.org).

### The Flintlastic SA Family Of Products

CertainTeed offers two types of primers for use with Flintlastic SA systems. FlintPrime asphalt primer and FlintPrime SA quick-dry, water-based primer are designed to enhance the adhesion of self-adhered roofing membranes. Available in 14 oz spray cans, 1-gallon cans, 3.5-gallon buckets, and 5-gallon pails.



FlintBond SBS-Modified Bitumen Adhesive is a premium grade adhesive. With Flintlastic SA membranes, the Trowel and Caulk grade may be used for endlap, sidelap bead and vertical flashing details. Available in 10.3 oz caulk tube, 3 gallon, and 5 gallon drums. A hot air welder, in combination with a hand-held silicone roller, may also be used for these details in lieu of FlintBond and is required for cold weather application.

## Important Application Considerations

Every professional roofer is familiar with the tools needed to complete a roof installation, but just as a recap, specific tools you'll need to install Flintlastic SA include:

- A weighted roller for pressing the membrane into place, 2" to 4" in diameter (70 lbs.);
- Suitable trowel for applying FlintBond to flashing details;
- Roofer's knife with hooked blade;
- Caulk gun for applying beads of FlintBond;
- Seam probing tool to check for voids;
- Hot Air Welder for cold weather applications or, if preferred, for flashing details year round;
- **AS NEEDED:** Long-handled (standing) roller with 1/8" - 1/4" nap for applying primer (1/8" nap for smooth surfaces, 1/4" nap for more porous surfaces).

### Please Keep in Mind:

- Do not attempt application if ice, snow, moisture or dew are present. As noted throughout the chapter, when ambient temperatures are between 20°F and 49°F, cold weather application instructions must be followed.
- Substrates must be free of dust, dirt, oil, debris and moisture.
- Store Flintlastic SA rolls indoors on upright pallets, protected from the elements. Rolls that are improperly stored or have been warehoused for prolonged periods of time may lose their tack and should not be used. In cold weather rolls **MUST** be stored indoors, minimum 60°F, or in warming huts prior to application; **DO NOT INSTALL COLD ROLLS.**
- If the material isn't bonding, **STOP** the application!
- Always remember to put safety first and follow all OSHA safety guidelines with any roofing installation.
- Primer, if used, must be applied at the specified rate and must be allowed to cure as specified.
- Work with manageable lengths of base, ply and cap membranes for the particular job. Where appropriate, cut rolls into 1/3- or 1/2 -roll lengths.
- Allow material to relax a minimum of 15 minutes prior to installation. In cold weather allow rolls to relax indoors or in warming huts if possible; avoid allowing rolls to fall below 50°F (avoid material contraction).
- **All plies of the assembly should be installed in one day. If blue film must be exposed for longer periods of time, cover with tarp or suitable alternate protection.**

- Do not mix Flintlastic SA membranes with other types of roof membranes. Flintlastic SA membranes are specifically designed to be applied together. The permanent top film of the base and ply sheets cannot receive torching, hot asphalt or other non self-adhered application methods. The Flintlastic SA Cap (or SA Cap FR), PlyBase and MidPly cannot be applied to any surfaces other than as described herein.
- When applying Flintlastic SA on slopes exceeding 1" in 12", membranes shall be back nailed. When applied parallel to the slope, Flintlastic SA shall be blind-nailed at end laps 2" in from top edge, 6" o.c. through tin discs and to wood nailers. See General Requirements Section of CertainTeed Commercial Roof Systems Specifications for details.
- When using FlintBond for flashing details, target 1/4" FlintBond® bleed out at endlap areas. Use caution not to roll weighted roller into bleed out."
- Do not use cold adhesives, such as FlintBond, with Flintlastic SA membranes other than for flashing details and cap sheet overlaps as described herein.
- Additional application details and recommendations can be found in the CertainTeed Commercial Roof Systems Specifications.

### COLD WEATHER APPLICATION:

- Store materials in a heated location and draw materials as needed. If the materials have been exposed to cold temperatures, allow a sufficient period of time in a heated environment for them to warm to 50°F.
- **DO NOT INSTALL COLD ROLLS.**
- A hot air welder, in combination with a hand-held silicone roller, should be utilized to heat and seal sidelaps, endlaps and details. Specific "heat and roll" instructions are included within subsections of this Chapter. **DO NOT** overheat or attempt to weld laps with a torch.

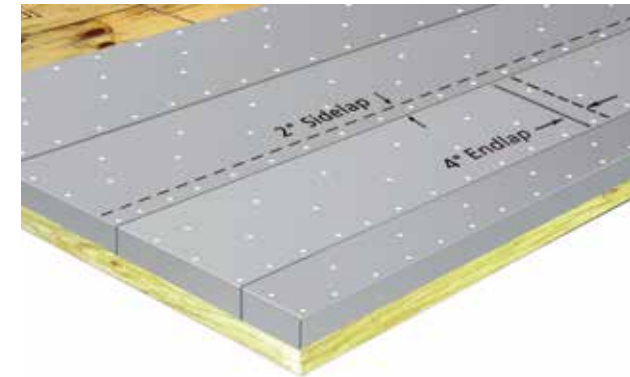
### Application Of Base Sheet

Flintlastic SA NailBase may be used as an anchor sheet (mechanically fastened); PlyBase or MidPly may be used as a base ply (fully adhered, watertight). **NOTE:** PlyBase or MidPly may also be used as interply layers in three-ply systems, see Application of Interply (Optional).

### Mechanically Attached Base

Beginning at the low point of the roof, mechanically fasten Flintlastic SA NailBase to nailable deck using appropriate fasteners (see Fasteners chart). Start with an appropriate roll width (see Field Details Reference) to accommodate offsetting of sidelaps of subsequent layers in the

roof system for increased water protection. Install so that no sidelaps are against the flow of water. A minimum fastening pattern is every 9" on center on sidelaps and every 18" on center in two staggered rows in the field of the sheet. Overlap base sheet sidelaps a minimum 2" and endlaps 4".



FIELD DETAILS REFERENCE

	2-PLY SYSTEMS		3-PLY SYSTEMS		
	Base	Cap	Base	Ply	Cap
Starter row width	19-11/16" (1/2 roll)	39-3/8" (full roll)	26-1/4" (2/3 roll)	19-11/16" (1/2 roll)	39-3/8" (full roll)
Side laps	2"	3"	2"	2"	3"
End laps, staggered 36"	4"	6"	4"	4"	6"

Turn base sheet over facia by 2" and fasten. Offset endlaps of adjacent courses a minimum of 3'. **Do Not Leave Base Sheet Exposed To The Weather.** Cover in the same day with optional SA interply and/or SA Cap (FR).



### Self-Adhered Base

SA PlyBase or SA MidPly may be self-adhered to approved substrates such as mechanically fastened or adhered FlintBoard ISO/FlintBoard ISO Cold, or primed substrates (i.e. concrete roof decks, gypsum coverboards, etc).

When using FlintPrime SA, allow to dry thoroughly, but no more than four hours to retain tack-enhancing properties. If substrate (i.e. FlintBond ISO) is attached with fasteners, prime exposed metal with FlintPrime Aerosol before adhering either SA PlyBase or SA MidPly. Before adhering a base ply,

### FASTENER REFERENCE

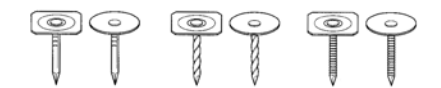
#### Standard (Round Head) Roofing Nails and Cap (Note: CertainTeed does not permit the use of plastic caps)

For use with Base Sheet, Flash/Termination Bar on Plywood Decks, Non Veneer Decks, Wood Plank Decks



#### Large Head Roofing Nails

For use with Base Sheet, Flash/Termination Bar on Plywood Decks, Non Veneer Decks, Wood Plank Decks



#### Base Sheet Fasteners for some Cementitious Roof Decks

For use with Base Sheet on Light Weight Insulation Concrete, Poured Gypsum

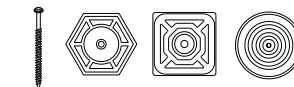


#### Self-Locking Fasteners

For use with Base Sheet on Cement/Wood Fiber



#### Insulation Fasteners



sweep the surface of the deck or insulation to remove any debris that could interfere with adhesion. Begin application at the low point of the roof. Start with an appropriate roll width (see Field Details Reference) to accommodate offsetting of sidelaps of subsequent layers in the roof system for increased water protection. Install flush to roof edge. Design layout so that no sidelaps are against the flow of water.

Cut rolls into manageable lengths and allow to relax a minimum of 15 minutes. Fold the membrane back halfway lengthwise to remove the split release film.

Press membrane securely into place and repeat with the opposite half of the membrane. Use a heavy, weighted roller over the entire surface of the SA PlyBase or SA MidPly to secure the membrane. Work from the center of the roll outwards across the width to eliminate air pockets; **DO NOT** roll lengthwise as it can cause the roll to stretch.

Overlap sidelaps of subsequent SA PlyBase or SA MidPly membrane courses a minimum 2" and endlaps 4". Offset (stagger) endlaps of adjacent courses a minimum 3'. Cut endlaps at opposing diagonal corners at an angle approximately 5-1/2"



long by the selvage dimension from the corners to minimize "T"-seams. Apply a bead or small trowel dab (quarter size) of FlintBond SBS Modified Bitumen Adhesive, Caulk or Trowel grade, at the edge of the angled cut to avoid a capillary. Use of a hand-held hot air gun at the joint area prior to rolling the membrane will maximize adhesion. It is recommended to apply a bead of FlintBond SBS Modified Bitumen Adhesive, Caulk grade, at all SA PlyBase or SA MidPly side and endlaps edges to eliminate a capillary.

**Do Not Leave Base Sheet Exposed To The Weather.** Cover in the same day with optional SA interply and/or SA Cap/SA Cap FR.

### Cold Weather Application Instructions, Base Sheet

When ambient temperatures are between 20°F - 49°F;

- Whether base sheet is mechanically attached or self-adhered, store materials in a heated location and draw materials as needed. If the materials have been exposed to cold temperatures, allow a sufficient period of time in a heated environment for them to warm to 50°F.
- **DO NOT INSTALL COLD ROLLS.**
- No additional cold weather application precautions are required for base sheets.

### Application Of Interply (Optional)

**Note:** Proceed to "Before Installing Flintlastic SA Cap (or SA Cap FR)" if installing a 2-ply system.

Before installing Flintlastic SA PlyBase or SA MidPly sweep the underlying anchor sheet or base ply to remove any debris that could interfere with adhesion. Cut rolls to manageable lengths and allow to relax for a minimum of 15 minutes. Start with SA PlyBase or SA MidPly at the low point of the roof with appropriate roll width to offset sidelaps 18" from sidelaps of underlying anchor sheet or base ply (see Field Details chart) all flush to roof edge. Design layout so that no sidelaps are against the flow of water.

Fold the membrane back halfway lengthwise to remove the split release film. Press membrane securely into place and repeat with the opposite half of the membrane. Use a heavy, weighted roller over the entire surface of the SA PlyBase or SA MidPly to secure the membrane. Work from the center of the roll outwards across the width to eliminate air pockets; **DO NOT** roll lengthwise as it can cause the roll to stretch.

Overlap sidelaps of subsequent SA PlyBase or SA MidPly membrane courses a minimum 2" and endlaps 4". Offset (stagger) endlaps of adjacent courses a minimum 3'.

Cut endlaps at opposing diagonal corners at an angle approximately 5-1/2" long by the selvage dimension from the corners to minimize potential water incursion at T-Seams (see T-Seam Detail). Apply a bead or small trowel dab (quarter size) of FlintBond SBS Modified Bitumen Adhesive, Caulk or Trowel grade, at the edge of the angled cut to avoid a capillary. Use of a hand-held hot air gun at the joint area prior to rolling the membrane will maximize adhesion. It is recommended to apply a bead of FlintBond SBS Modified Bitumen Adhesive, Caulk grade, at all SA PlyBase or SA MidPly side and endlap edges to eliminate a capillary.

**Do Not Leave Base Sheet Exposed To The Weather.** Cover in the same day with SA Cap (FR).

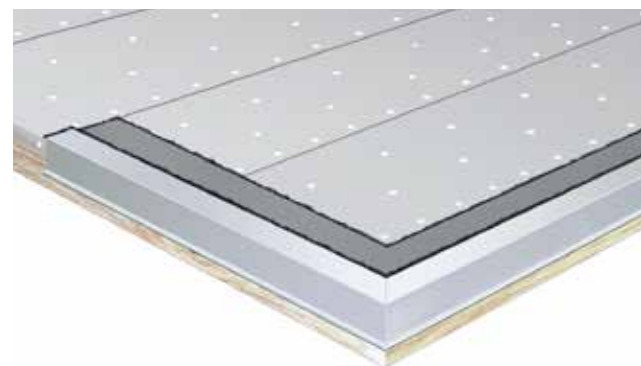
### Cold Weather Application Instructions, Interply Sheet

When ambient temperatures are between 20°F - 49°F;

- Store materials in a heated location and draw materials as needed. If the materials have been exposed to cold temperatures, allow a sufficient period of time in a heated environment for them to warm to 50°F.
- **DO NOT INSTALL COLD ROLLS.**
- No additional cold weather application precautions are required for interply sheets.

### Before Installing Flintlastic SA Cap Or SA Cap FR

If roof edge detail utilizes edge metal, proceed as follows.



### Edge Metal for Two-Ply Systems (with no interply)

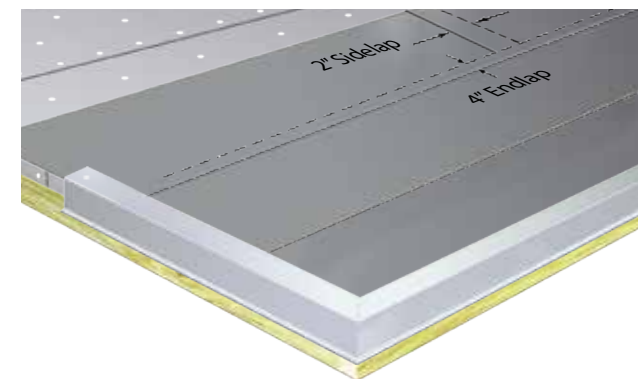
If an interply is not installed, install a 9" wide flashing strip of SA PlyBase or SA MidPly (material assumed to match base sheet if fully adhered) onto the field of the roof and flush to the roof edge, self-adhered. Install minimum 26 gauge edge metal using appropriate fasteners, set entirely in a uniform 1/8" - 1/4" thick troweling of FlintBond Trowel. Fasten edge metal through the surface, through the anchor and flashing strip, into the deck using appropriate fasteners (see Fastener Reference), spaced 4" on

center in two staggered rows. Remove any oil from the metal surface using a vinegar and water solution. Prime the horizontal surface of the metal with FlintPrime Aerosol and allow primer to dry/tackify. Apply a bead of caulk grade FlintBond at the roof side edge of the metal where it meets the flashing strip.

### Edge Metal for Three-Ply Systems (with interply)

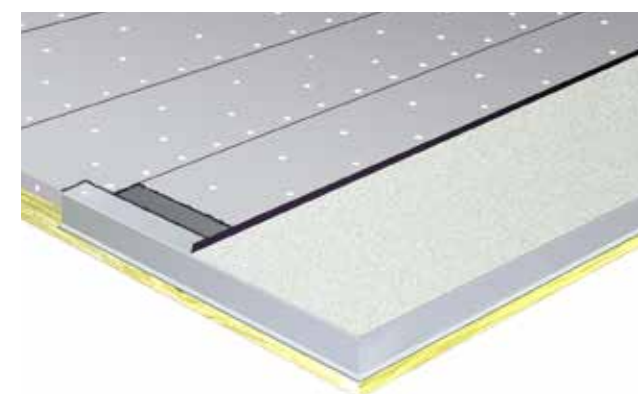
If an interply has been installed over the base sheet, install minimum 26 gauge edge metal using appropriate fasteners and set in 1/8" - 1/4" bed of FlintBond Trowel adhesive. Fasten edge metal through the metal surface, through the base/interply and into the deck using appropriate fasteners (see Fastener Reference), spaced 4" on center in two staggered rows. Remove any oil from the metal surface using a vinegar and water solution. Prime the horizontal surface of the metal with FlintPrime Aerosol and allow to dry/tackify. Apply a bead of caulk grade FlintBond to the edge of the metal where it meets the SA PlyBase or SA MidPly.

Proceed to installing SA Cap or SA Cap FR.



### Application Of Flintlastic SA Cap (Or SA Cap FR)

Before installing Flintlastic SA Cap or SA Cap FR, sweep the underlying sheet to remove any debris that could interfere with adhesion. Then start at the low point of the roof with a full roll width to offset



sidelaps from the underlying membrane a minimum of 18" (see Field Details Reference). Cut rolls into manageable lengths and allow to relax for a minimum of 15 minutes.

Position SA Cap or SA Cap FR with selvage edge release strip at high side of roof and the opposite side flush to the roof's edge. Once positioned, lift and fold back (lengthwise) the lower half of the membrane. Remove the split release film and press firmly into place. Then repeat with the other (high side of the roof) half of the membrane.



Follow the same layout and split release film procedures as for SA PlyBase or SA MidPly, but overlap sidelaps 3" and endlaps 6". Install in weather-lapped fashion, with no laps against the flow of water. Use a weighted roller over the entire surface of Flintlastic SA Cap or SA Cap FR to secure it in place and prevent voids, from the center of the roll outwards across the width to eliminate air pockets; **DO NOT** roll lengthwise as it can cause the roll to stretch.

As subsequent membrane lengths are installed, remove the selvage edge release strip just prior to overlapping to keep the adhesive area protected and clean.



Cut endlaps at opposing diagonal corners at an angle approx. 3" by 5-1/2" from the corners to minimize water incursion at T-seams (see T-Seam Detail). Treat rake edge application similarly, cutting diagonal corners off Cap selvage edge above rake metal.



One of the following options must be followed for any granule over granule overlap, such as an endlap:

1. Apply a uniform 1/8" - 1/4" troweling of FlintBond® Trowel to the entire 6" width of the underlying sheet, extending beyond underlying lap 1/4" or;
2. Apply heat from a hot-air welder with a 2" tip to the overlapped sheet while applying rolling pressure from a silicone roller to the overlapping sheet. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlapped granulated surface while bonding the overlapping SA Cap or SA Cap FR with rolling pressure. Roll the overlapping SA Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. A 6" endlap requires three passes. Apply a bead of FlintBond Caulk along the edge.

**WHEN AMBIENT TEMPERATURES ARE BETWEEN 20°F - 49°F THE HOT-AIR WELDER METHOD MUST BE APPLIED.**

Once the membrane has had a chance to bond, check all laps and joints for full adhesion. If the membrane can be lifted at any area it is not properly adhered. A seam probing tool can be helpful to check for voids at laps. If necessary, use appropriate hand-held hot air welding tool and seam roller or an application of FlintBond to seal unbonded areas if they exist.

### Cold Weather Application Instructions, Cap Sheet

When ambient temperatures are between 20°F - 49°F:

- Store materials in a heated location and draw materials as needed. If the materials have been exposed to cold temperatures, allow a sufficient period of time in a heated environment for them to warm to 50°F.  
**DO NOT INSTALL COLD ROLLS.**

- For edge metal details apply heat from a hot-air welder with a 2" tip to the overlapped, primed metal surface while applying rolling pressure from a silicone roller to the overlapping SA Cap. With the hot air welder set between 300°F - 500°F (setting 2-3), apply heat to the lap interface while bonding SA Cap with rolling pressure on the granulated surface. Roll the lap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge.

- Apply the same "heat and roll" technique as described above at all sidelaps. Apply a bead of FlintBond Caulk along the edge.

- Apply a similar "heat and roll" to endlaps with the hot air welder set between 900°F - 1,100°F (setting 8-10). A 6" endlap requires three passes. Apply a bead of FlintBond Caulk along the edge.

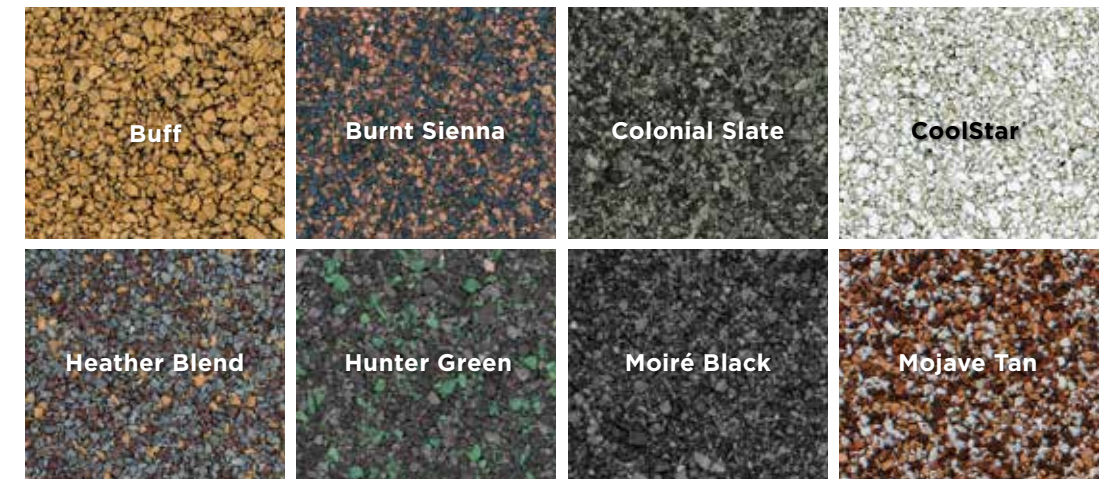
**For more information on cold weather application, please watch:**  
<https://www.certainteed.com/commercial-roofing/resources/installing-flintlastic-sa-self-adhered-roof-systems-cold-temperatures/>

### Construction Details

Included in this manual are a few common construction details. Please refer to CertainTeed Commercial System Specifications or certainteed.com for complete details, or the NRCA for details not found within this manual. Important to note with all details, all metal must be primed and set in FlintBond Trowel Adhesive and all overlaps over mineral surfacing must utilize either FlintBond Trowel or the combination of a hot-air welder and silicone roller (cold weather requirement).

### Flintlastic® SA Cap Colors

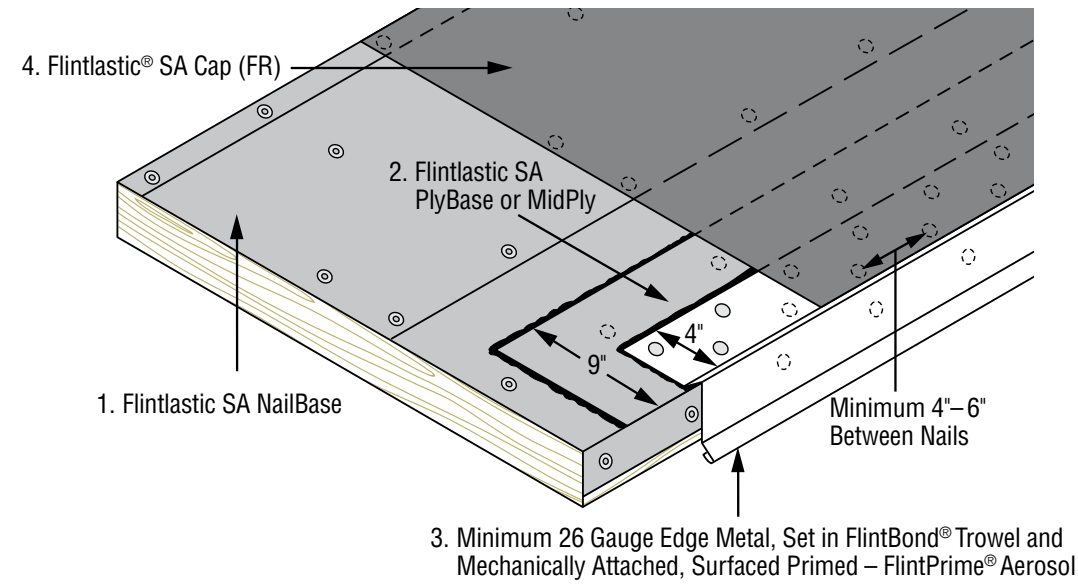
Flintlastic SA Cap is available in a variety of "true-blend" colors to complement popular CertainTeed shingles.





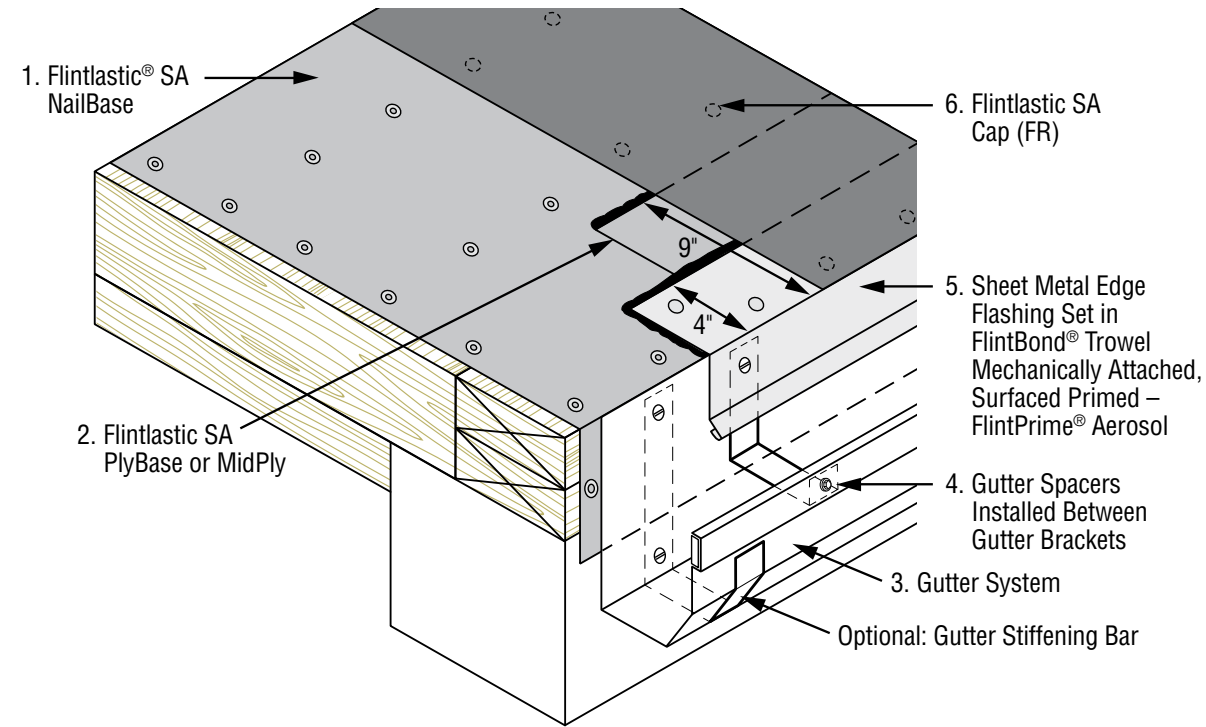
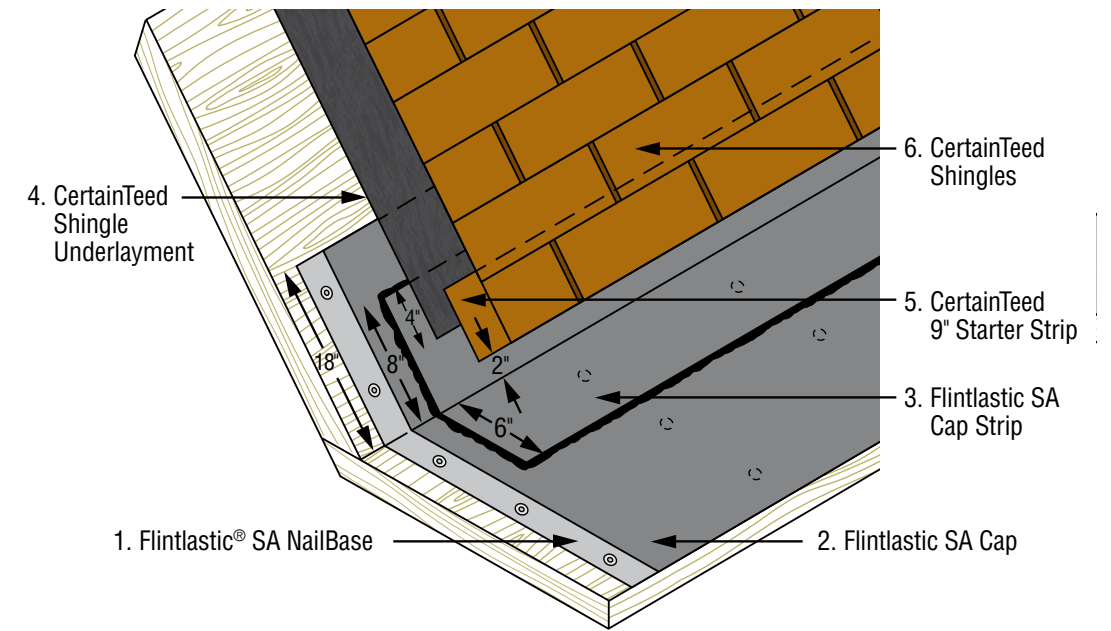
**Typical Construction Details - Flintlastic® SA 2 Ply Systems**

CT-01 Edge Flashing

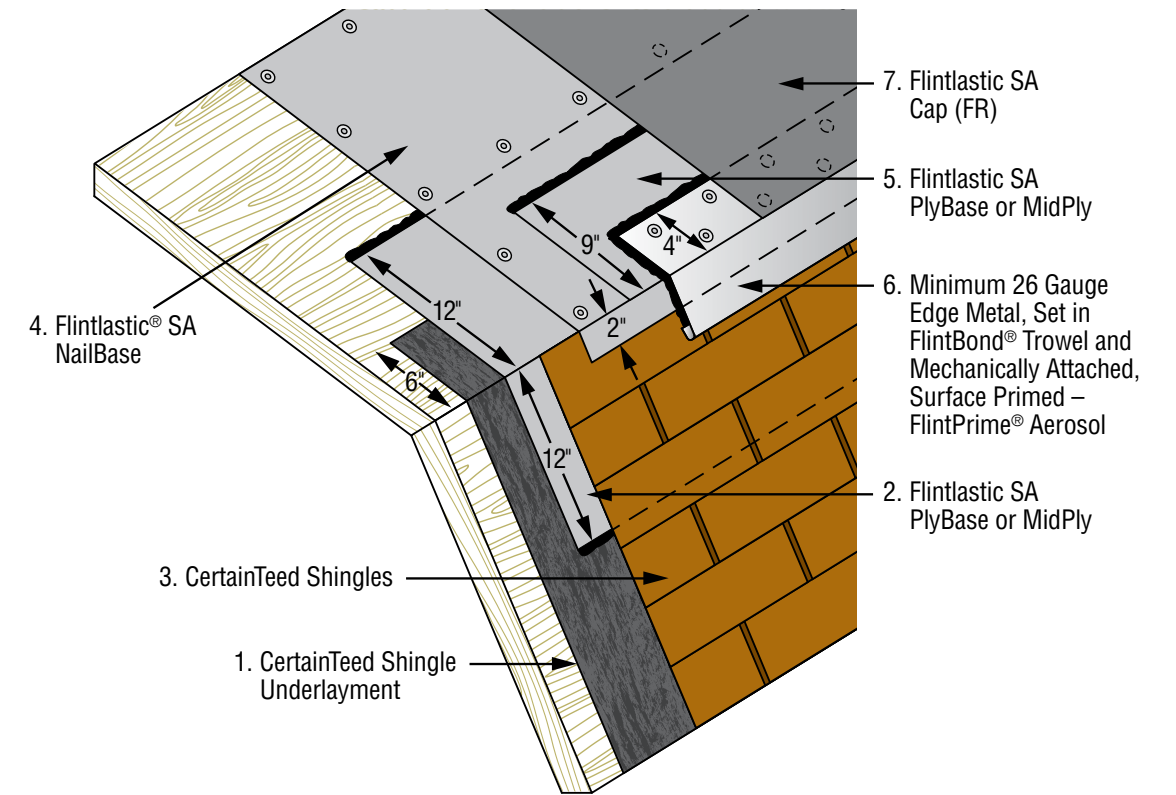


**Typical Construction Details - Flintlastic® SA 2 Ply Systems**

CT-23 Step to Low-Slope Roof Transition Flashing



CT-01B Edge Flashing - Gutter

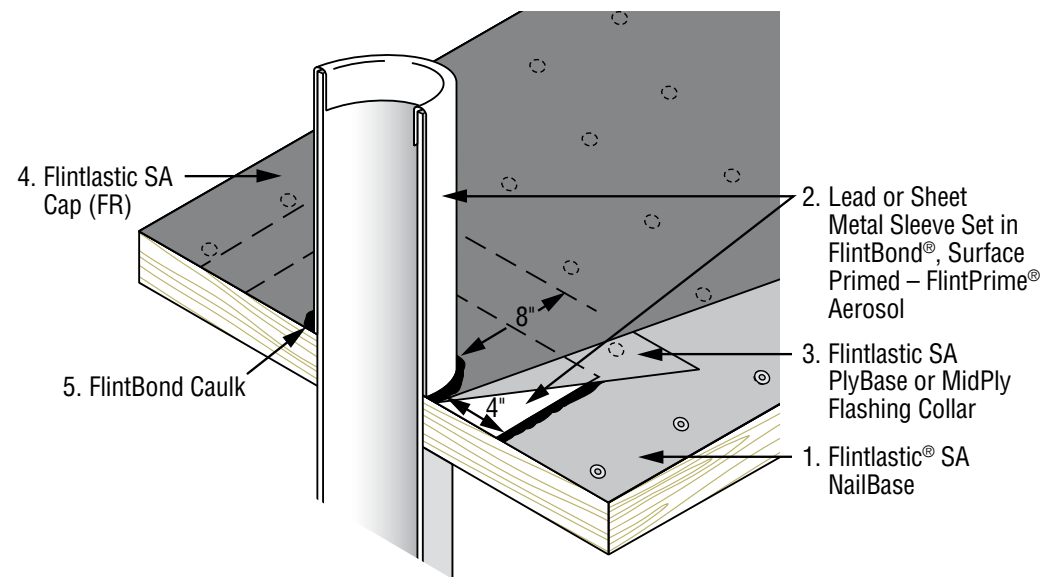
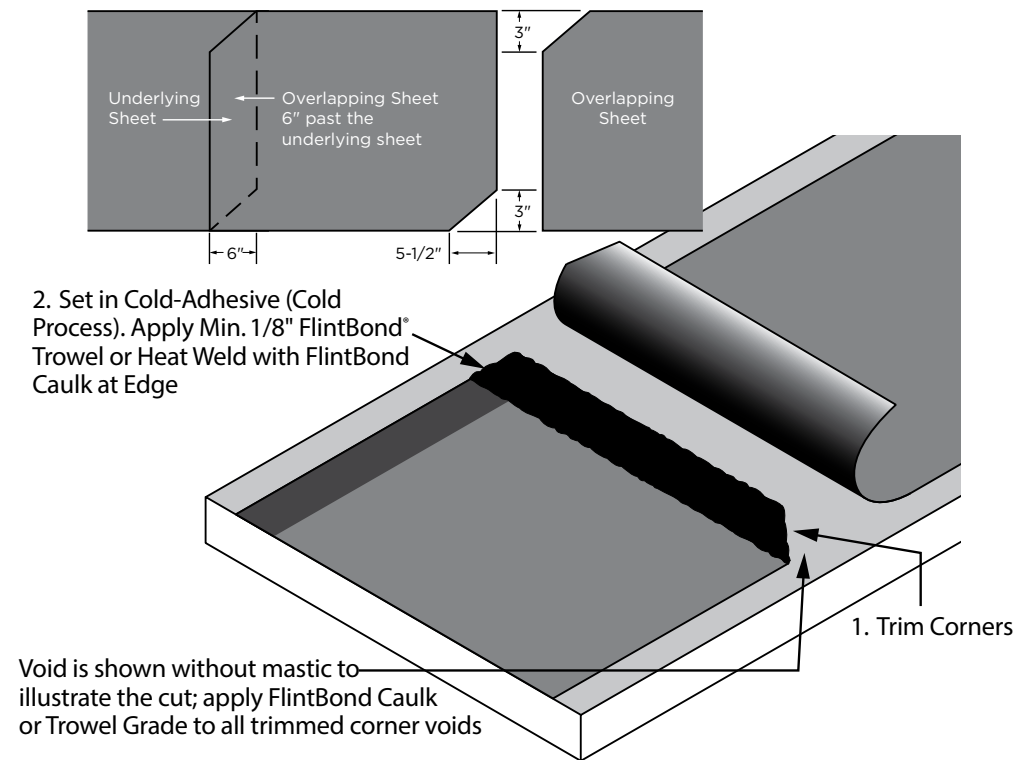


CT-24 Mansard Roof Transition Flashing



**Typical Construction Details - Flintlastic® SA 2 Ply Systems**

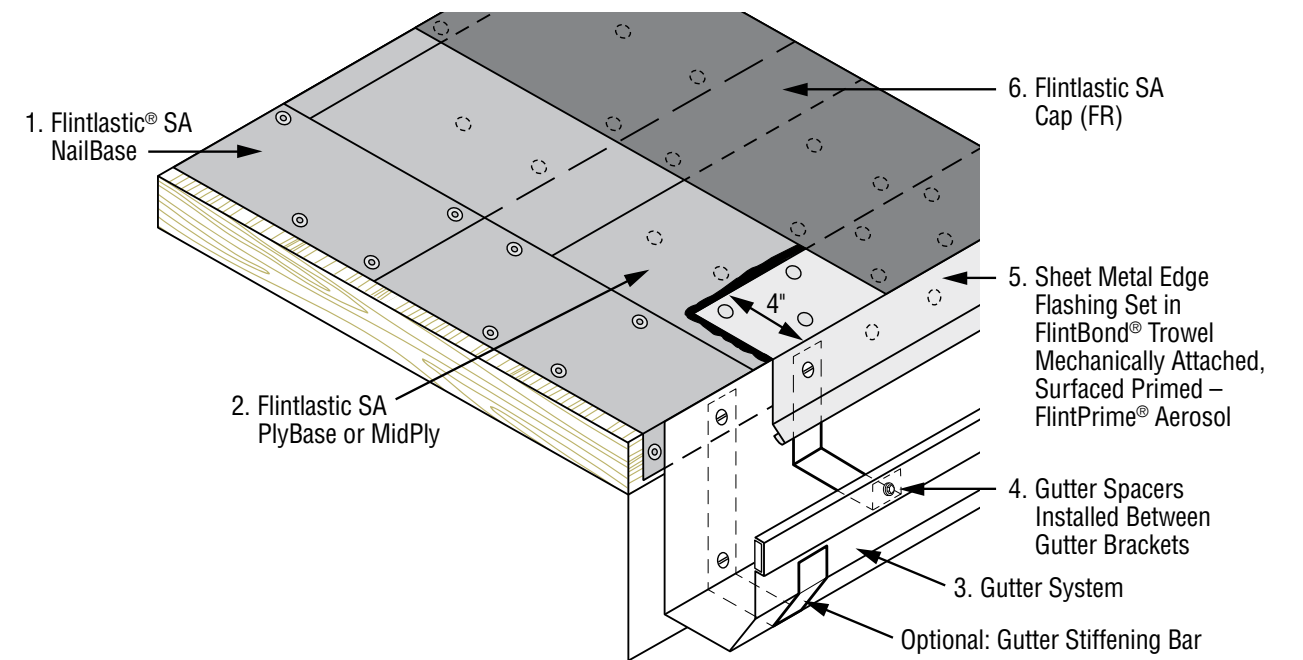
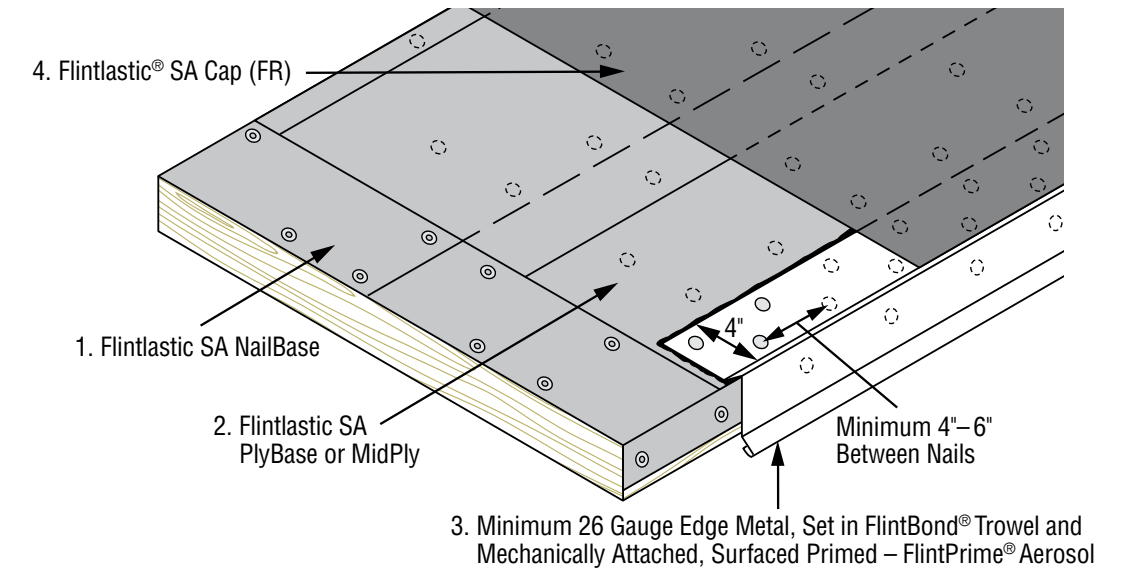
CT-22 End Lap Detail



CT-13 Pipe Flashing - Lead or Sheet Metal

**Typical Construction Details - Flintlastic® SA 3 Ply Systems**

CT-01 Edge Flashing

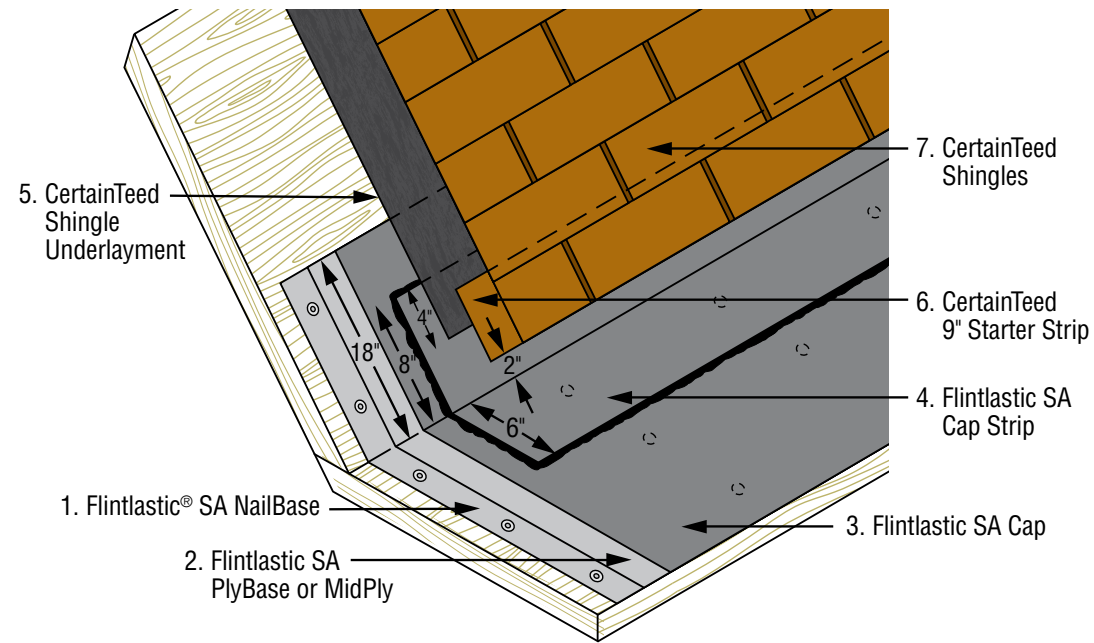


CT-01B Edge Flashing - Gutter



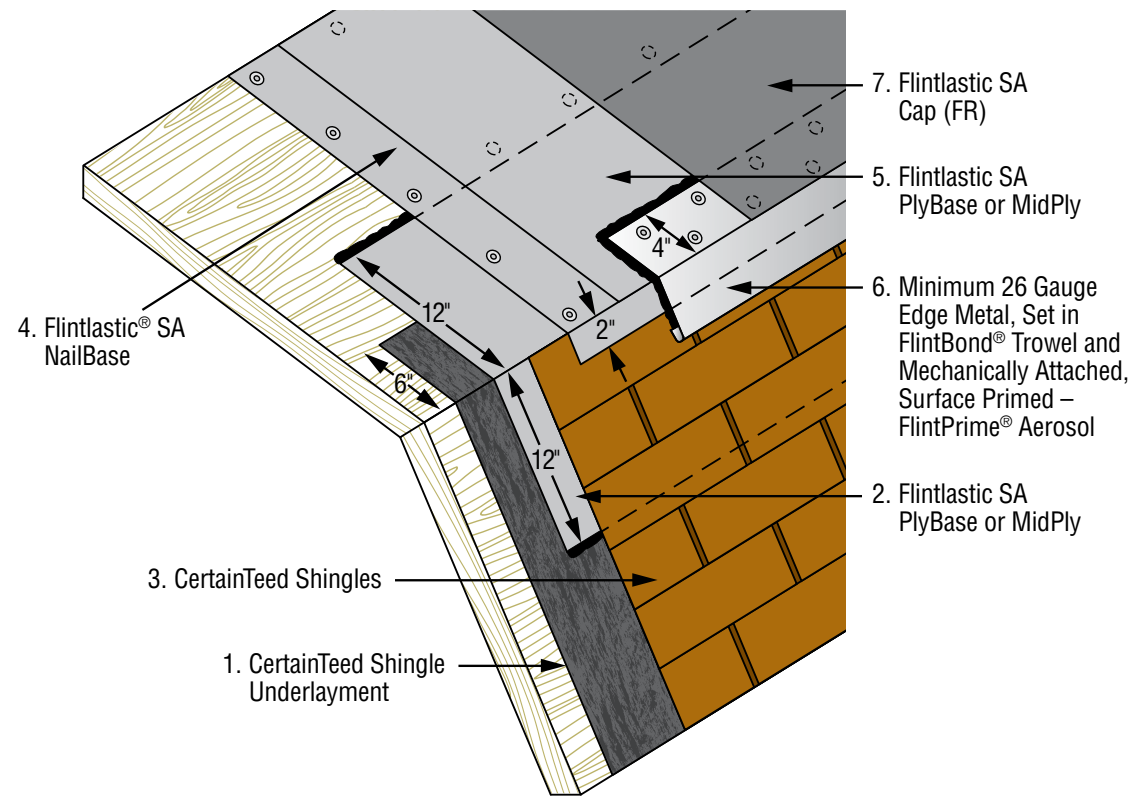
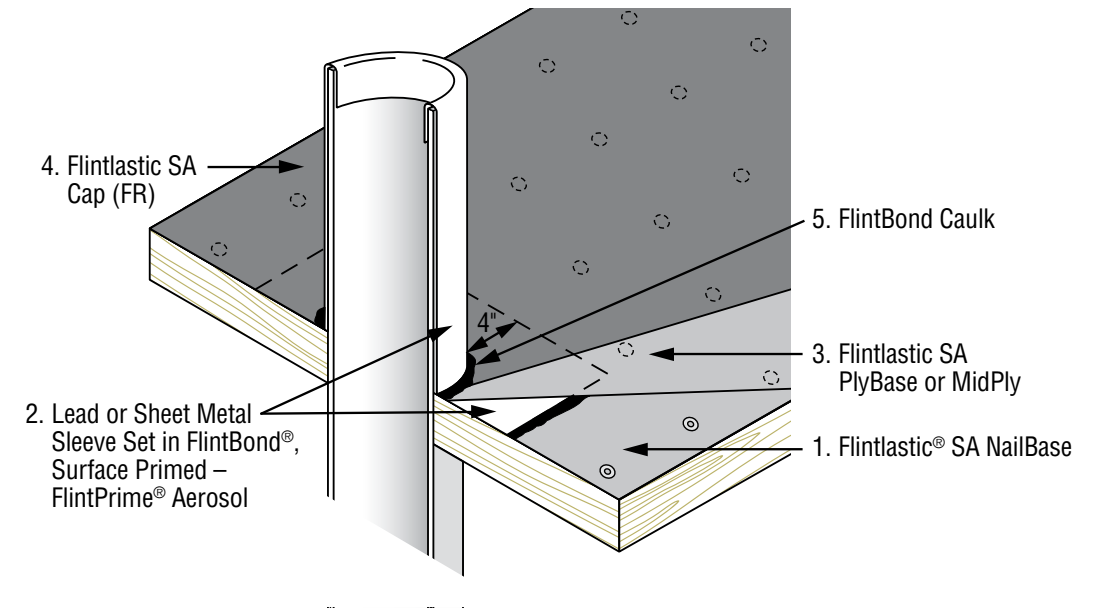
**Typical Construction Details - Flintlastic® SA 3 Ply Systems**

CT-23 Steep to Low-Slope Roof Transition Flashing



**Typical Construction Details - Flintlastic® SA 3 Ply Systems**

CT-13 Pipe Flashing - Lead or Sheet Metal



CT-24 Mansard Roof Transition Flashing