As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and approval numbers on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. Statewide approved products are listed online @ www.floridabuilding.org

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
1. EXTERIOR DOORS			
A. SWINGING	Plast PRO	Fiberglass Entry	FL 15180.1
B. SLIDING			
C. SECTIONAL/ROLL UP			
D. OTHER			
2. WINDOWS			
A. SINGLE/DOUBLE HUNG	YKK	Vinyl Frame Low-E	FL 8114-R8
B. HORIZONTAL SLIDER			
C. CASEMENT			
D. FIXED			
E. MULLION			
F. SKYLIGHTS			
G. OTHER			
3. PANEL WALL			
A. SIDING	James Hardy	Lap Siding	FL 13192-R8
B. SOFFITS	Isaycon	Aluminum Soffit	FL 12198.1
C. STOREFRONTS			
D. GLASS BLOCK			
E. OTHER			
4. ROOFING PRODUCTS			
A. ASPHALT SHINGLES	Tamko	30yr Arch	FL 18355.1
B. NON-STRUCT METAL	Tamko	synthetic underlayment	FL 12328.1
C. ROOFING TILES			
D. SINGLE PLY ROOF			
E. OTHER			
5. STRUCT COMPONENTS			
A. WOOD CONNECTORS			
B. WOOD ANCHORS			
C. TRUSS PLATES			
D. INSULATION FORMS			
E. LINTELS			
F. OTHERS			
6. NEW EXTERIOR			
ENVELOPE PRODUCTS			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements.
Further, I understand these products may have to be removed if approval cannot be demonstrated during inspection.

James Lamb

Contractor or Owner Signature

NOTES: _____

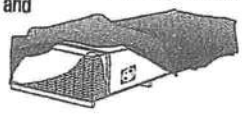
HardiePlank® Lap Siding

EFFECTIVE SEPTEMBER 2019

IMPORTANT: FAILURE TO FOLLOW JAMES HARDIE WRITTEN INSTALLATION INSTRUCTIONS AND COMPLY WITH APPLICABLE BUILDING CODES MAY VIOLATE LOCAL LAWS, AFFECT BUILDING ENVELOPE PERFORMANCE AND MAY AFFECT WARRANTY COVERAGE. FAILURE TO COMPLY WITH ALL HEALTH AND SAFETY REGULATIONS WHEN CUTTING AND INSTALLING THIS PRODUCT MAY RESULT IN PERSONAL INJURY. BEFORE INSTALLATION, CONFIRM YOU ARE USING THE CORRECT HARDIEZONE® PRODUCT INSTRUCTIONS BY VISITING HARDIEZONE.COM OR CALL 1-866-942-7343 (866-9-HARDIE)

STORAGE & HANDLING:

Store flat and keep dry and covered prior to installation. Installing siding wet or saturated may result in shrinkage at butt joints. Carry planks on edge. Protect edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.



⚠ CUTTING INSTRUCTIONS

OUTDOORS

1. Position cutting station so that airflow blows dust away from the user and others near the cutting area.
2. Cut using one of the following methods:
   - a. Best: Circular saw equipped with a HardieBlade® saw blade and attached vacuum dust collection system. Shears (manual, pneumatic or electric) may also be used, not recommended for products thicker than 7/16 in.
   - b. Better: Circular saw equipped with a dust collection feature (e.g. Roan® saw) and a HardieBlade saw blade.
   - c. Good: Circular saw equipped with a HardieBlade saw blade.

INDOORS

DO NOT grind or cut with a power saw indoors. Cut using shears (manual, pneumatic or electric) or the score and snap method, not recommended for products thicker than 7/16 in.

- DO NOT dry sweep dust; use wet dust suppression or vacuum to collect dust.
- For maximum dust reduction, James Hardie recommends using the "Best" cutting practices. Always follow the equipment manufacturer's instructions for proper operation.
- For best performance when cutting with a circular saw, James Hardie recommends using HardieBlade® saw blades.
- Go to jameshardiepros.com for additional cutting and dust control recommendations.

IMPORTANT: The Occupational Safety and Health Administration (OSHA) regulates workplace exposure to silica dust. For construction sites, OSHA has deemed that cutting fiber cement with a circular saw having a blade diameter less than 8 inches and connected to a commercially available dust collection system per manufacturer's instructions results in exposures below the OSHA Permissible Exposure Limit (PEL) for respirable crystalline silica, without the need for additional respiratory protection.

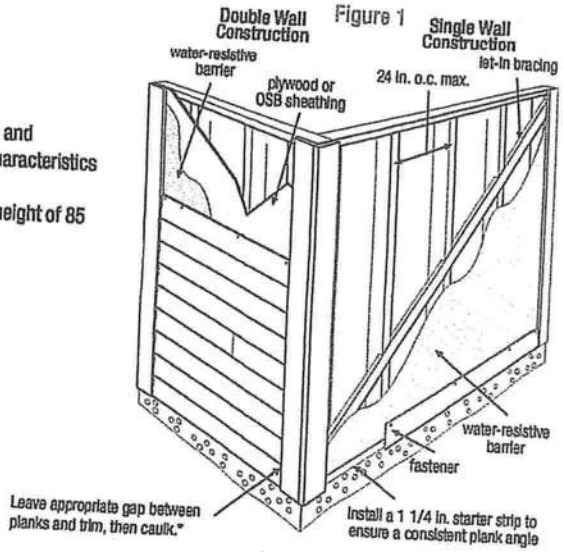
If you are unsure about how to comply with OSHA silica dust regulations, consult a qualified industrial hygienist or safety professional, or contact your James Hardie technical sales representative for assistance. James Hardie makes no representation or warranty that adopting a particular cutting practice will assure your compliance with OSHA rules or other applicable laws and safety requirements.

IMPORTANT: To prevent damage to the drip edge, extra care should be taken when removing planks from the pallet, while handling, and when installing with a lap gauge. Please see additional handling requirements on page 4.

GENERAL REQUIREMENTS:

- HardiePlank® lap siding can be installed over braced wood or steel studs, 20 gauge (33 mils) minimum to 16 gauge (54 mils) maximum, spaced a maximum of 24 in o.c. or directly to minimum 7/16 in thick OSB sheathing. See General Fastening Requirements. Irregularities in framing and sheathing can mirror through the finished application. Correct irregularities before installing siding.
- Information on installing James Hardie products over non-nailable substrates (ex: gypsum, foam,etc.) can be located in JH Tech Bulletin 19 at www.jamehardie.com
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration. James Hardie does manufacture HardieWrap® Weather Barrier, a non-woven non-perforated housewrap[1], which complies with building code requirements.
- Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6 in. in the first 10 ft..
- Do not use HardiePlank lap siding in Fascia or Trim applications.
- Do not install James Hardie products, such that they may remain in contact with standing water.
- HardiePlank lap siding may be installed on flat vertical wall applications only.
- For larger projects, including commercial and multi-family projects, where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin "Expansion Characteristics of James Hardie® Siding Products" at www.jameshardie.com.
- James Hardie Building Products provides installation /wind load information for buildings with a maximum mean roof height of 85 feet. For information on installations above 60 feet, please contact JH technical support.

Figure 1



INSTALLATION: JOINT TREATMENT

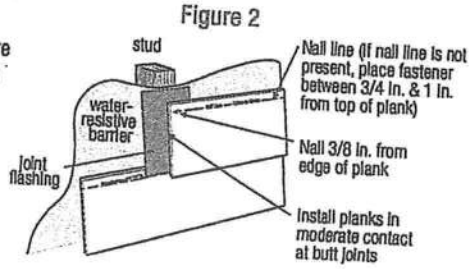
One or more of the following joint treatment options are required by code *(as referenced 2009 IRC R703.10.2)*

A. Joint Flashing (James Hardie recommended)

B. Caulking* (Caulking is not recommended for ColorPlus for aesthetic reasons as the Caulking and ColorPlus will weather differently. For the same reason, do not caulk nail heads on ColorPlus products.)

C. "H" jointer cover

Figure 2



Note: Field painting over caulking may produce a sheen difference when compared to the field painted PrimePlus. *Refer to Caulking section in these instructions.
[1]For additional information on HardieWrap® Weather Barrier, consult James Hardie at 1-866-4Hardie or www.hardiewrap.com

JamesHardie™

SELECT CEDARMILL® | SMOOTH | BEADED CEDARMILL® | BEADED SMOOTH

Visit jameshardiepros.com for the most recent version.

CLEARANCE AND FLASHING REQUIREMENTS

Figure 3
Roof to Wall

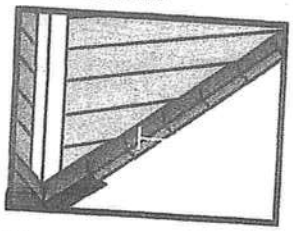


Figure 4
Horizontal Flashing

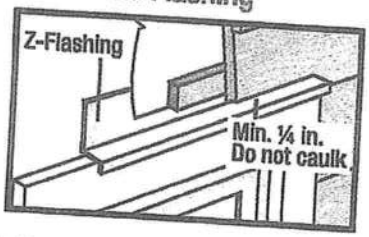


Figure 5
Kickout Flashing

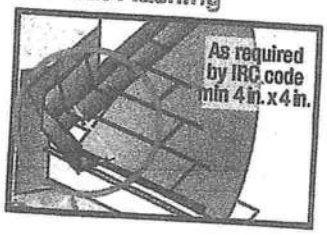


Figure 6
Slabs, Path, Steps to Siding

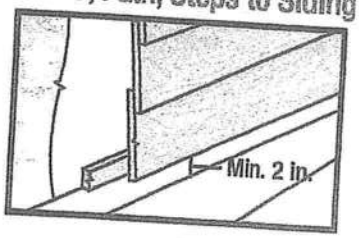


Figure 7
Deck to Wall

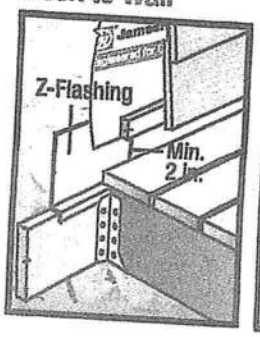


Figure 8
Ground to Siding

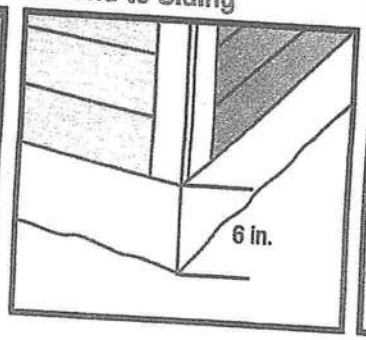


Figure 9
Gutter to Siding

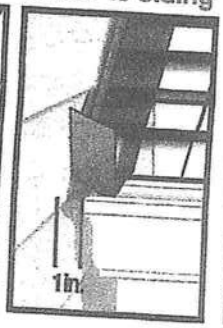


Figure 10
Sheltered Areas

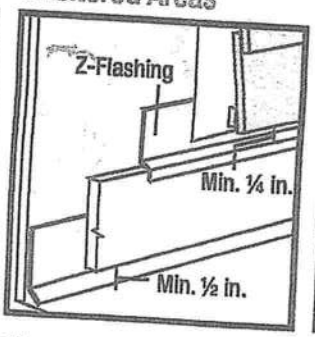


Figure 11
Mortar/Masonry

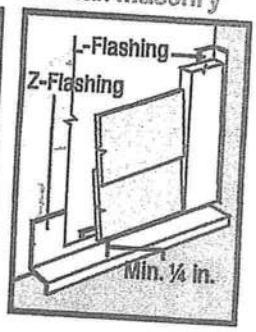


Figure 12
Drip Edge

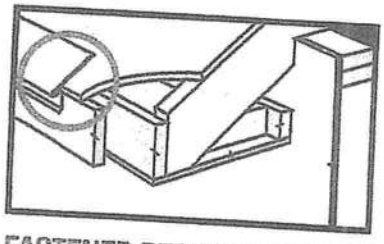


Figure 13
Block Penetration

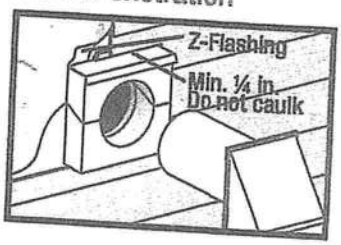
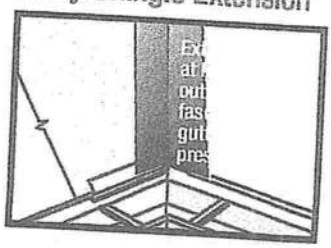


Figure 14
Valley/Shingle Extension



FASTENER REQUIREMENTS*

Refer to the applicable ESR report online to determine which fastener meets your wind load design criteria.

Blind Nailing is the preferred method of installation for HardiePlank® lap siding products. Face nailing should only be used where required by code for high wind areas and must not be used in conjunction with Blind nailing (Please see JH Tech bulletin 17 for exemption when doing a repair).

BLIND NAILING

Nails - Wood Framing
- Siding nail (0.09 in. shank x 0.221 in. HD x 2 in. long)
- 11ga. roofing nail (0.121 in. shank x 0.371 in. HD x 1.25 in. long)

Screws - Steel Framing
- Ribbed Wafer-head or equivalent (No. 8 x 1 1/4 in. long x 0.375 in. HD) Screws must penetrate 3 threads into metal framing.

Nails - Steel Framing
- ET & F Panelfast® nails or equivalent (0.10 in. shank x 0.313 in. HD x 1-1/2 in. long) Nails must penetrate minimum 1/4 in. into metal framing.

OSB minimum 7/16 in.
- Siding nail (0.09 in. shank x 0.215 in. HD x 1-1/2 in. long
- Ribbed Wafer-head or equivalent (No. 8 x 1 5/8 in. long x 0.375 in. HD).

FACE NAILING

Nails - Wood Framing
- 6d (0.113 in. shank x 0.267 in. HD x 2 in. long)
- Siding nail (0.09" shank x 0.221" HD x 2" long)

Screws - Steel Framing
- Ribbed Bugle-head or equivalent (No. 8-18 x 1-5/8 in. long x 0.323 in. HD) Screws must penetrate 3 threads into metal framing.

Nails - Steel Framing
- ET & F pin or equivalent (0.10 in. shank x 0.25 in. HD x 1-1/2 in. long) Nails must penetrate minimum 1/4 in. into metal framing.

OSB minimum 7/16 in.
- Siding nail (0.09 in. shank x 0.221 in. HD x 1-1/2 in. long)

*Also see General Fastening Requirements; and when considering alternative fastening options refer to James Hardie's Technical Bulletin USTB 5 - Fastening Tips for HardiePlank Lap Siding.

FASTENER REQUIREMENTS *continued*

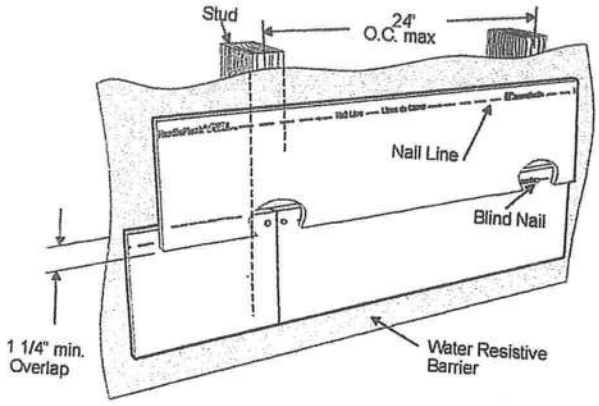


Figure 14

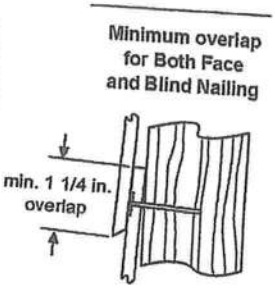
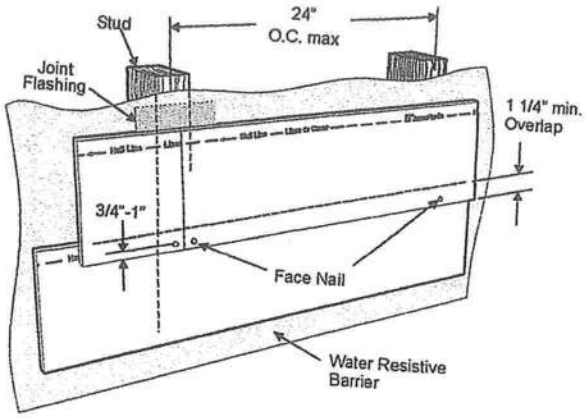


Figure 15



Laminate sheet to be removed immediately after installation of each course for ColorPlus® products.

Pin-backed corners may be done for aesthetic purposes only. Finish nails are recommended for pin-backs. Headed siding nails are allowed. Place pin-backs no closer than 1 in. from plank ends and 3/4 in. from plank edge into min. 3/8 in. wood structural panel. Pin-backs are not a substitute for blind or face nailing.

GENERAL FASTENING REQUIREMENTS

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion. James Hardie recommends the use of quality, hot-dipped galvanized nails. James Hardie is not responsible for the corrosion resistance of fasteners. Stainless steel fasteners are recommended when installing James Hardie® products near the ocean, large bodies of water, or in very humid climates.

Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5

- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- NOTE: Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult James Hardie Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space).
- NOTE: Whenever a structural member is present, HardiePlank should be fastened with even spacing to the structural member. The tables allowing direct to OSB or plywood should only be used when traditional framing is not available.

CUT EDGE TREATMENT

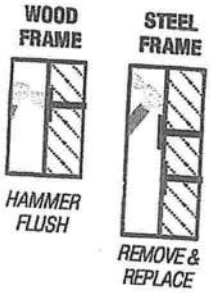
Caulk, paint or prime all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

CAULKING

For best results use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions. **Note: some caulking manufacturers do not allow "tooling".**

PNEUMATIC FASTENING

James Hardie products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer - Does not apply for installation to steel framing).



PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® products. Factory-primed James Hardie products must be painted within 180 days of installation. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

- Care should be taken when handling and cutting James Hardie ColorPlus® products. During installation use a wet soft cloth or soft brush to gently wipe off any residue or construction dust left on the product, then rinse with a garden hose.
- Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with new HardiePlank® lap siding with ColorPlus® Technology.
- Laminate sheet must be removed immediately after installation of each course.
- Terminate non-factory cut edges into trim where possible, and caulk. Color matched caulks are available from your ColorPlus® product dealer.
- Treat all other non-factory cut edges using the ColorPlus Technology edge coaters, available from your ColorPlus product dealer.

Note: James Hardie does not warrant the usage of third party touch-up or paints used as touch-up on James Hardie ColorPlus products.

Problems with appearance or performance arising from use of third party touch-up paints or paints used as touch-up that are not James Hardie touch-up will not be covered under the James Hardie ColorPlus Limited Finish Warranty.

COVERAGE CHART/ESTIMATING GUIDE

Number of 12 ft. planks, does not include waste

COVERAGE AREA LESS OPENINGS

SQ (1 SQ = 100 sq.ft.)	HARDIEPLANK® LAP SIDING WIDTH (exposure) 5 1/4 4	6 1/4 5	7 1/4 6	7 1/2 6 1/4	8 6 3/4	8 1/4 7	9 1/4 8	9 1/2 8 1/4	12 10 3/4
1	25	20	17	16	15	14	13	13	9
2	50	40	33	32	30	29	25	25	19
3	75	60	50	48	44	43	38	38	28
4	100	80	67	64	59	57	50	50	37
5	125	100	83	80	74	71	63	63	47
6	150	120	100	96	89	86	75	75	56
7	175	140	117	112	104	100	88	88	65
8	200	160	133	128	119	114	100	100	74
9	225	180	150	144	133	129	113	113	84
10	250	200	167	160	148	143	125	125	93
11	275	220	183	176	163	157	138	138	102
12	300	240	200	192	178	171	150	150	112
13	325	260	217	208	193	186	163	163	121
14	350	280	233	224	207	200	175	175	130
15	375	300	250	240	222	214	188	188	140
16	400	320	267	256	237	229	200	200	149
17	425	340	283	272	252	243	213	213	158
18	450	360	300	288	267	257	225	225	167
19	475	380	317	304	281	271	238	238	177
20	500	400	333	320	296	286	250	250	186

This coverage chart is meant as a guide. Actual usage is subject to variables such as building design. James Hardie does not assume responsibility for over or under ordering of product.

PAINTING JAMES HARDIE® SIDING AND TRIM PRODUCTS WITH COLORPLUS® TECHNOLOGY

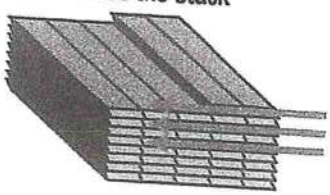
When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:

- Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
- Repriming is normally not necessary
- 100% acrylic topcoats are recommended
- DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
- Apply finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature
- DO NOT caulk nail heads when using ColorPlus products, refer to the ColorPlus touch-up section

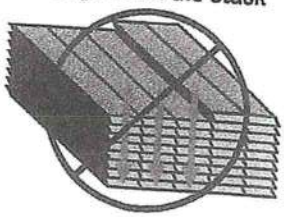
ADDITIONAL HANDLING REQUIREMENTS

IMPORTANT: To prevent damage to the drip edge, extra care should be taken when removing planks from the pallet, while handling, and when installing with a lap gauge. Planks are interlocked together on the pallet, therefore they should be removed from the pallet horizontally (side to side) to allow planks to unlock themselves from one another.

Pull from across the stack



Do not go down the stack



HS11117 P4/4 09/19

DANGER: May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product. Refer to the current product Safety Data Sheet before use. The hazard associated with fiber cement arises from crystalline silica present in the dust generated by activities such as cutting, machining, drilling, routing, sawing, crushing, or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. When doing any of these activities in a manner that generates dust you must (1) comply with the OSHA standard for silica dust and/or other applicable law, (2) follow James Hardie cutting instructions to reduce or limit the release of dust; (3) warn others in the area to avoid breathing the dust; (4) when using mechanical saw or high speed cutting tools, work outdoors and use dust collection equipment; and (5) if no other dust controls are available, wear a dust mask or respirator that meets NIOSH requirements (e.g. N-95 dust mask). During clean-up, use a well maintained vacuum and filter appropriate for capturing fine (respirable) dust or use wet clean-up methods - never dry sweep.

⚠ **WARNING:** This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. For more information go to P65Warnings.ca.gov.

RECOGNITION: In accordance with ICC-ES Evaluation Report ESR-2290, HardiePlank® lap siding is recognized as a suitable alternate to that specified in the 2006, 2009, 2012 & 2015 International Residential Code for One and Two-Family Dwellings, and the 2006, 2009, 2012 & 2015 International Building Code. HardiePlank lap siding is also recognized for application in the following: City of Los Angeles Research Report No. 24862, State of Florida Product Approval FL#13192, Miami-Dade County Florida NOA No. 17-0406.06, U.S. Dept. of HUD Materials Release 1263f, Texas Department of Insurance Product Evaluation EC-23, City of New York MEA 223-93-M, and California DSA PA-019. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.

Product warranties, safety information and additional installation information are available at jameshardiepros.com

JamesHardie™

Solutions

Safety. Science. Transformation.™

UL Solutions Evaluation Report

UL ER2919-01

Issued: May 21, 2013

Revised: February 29, 2024

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UL Solutions Category Code: ULEZ

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DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Sub-level 2: 07 30 00 – Steep Slope Roofing
Sub-level 3: 07 31 00 – Shingles and Shakes
Sub-level 4: 07 31 13 – Asphalt Shingles

COMPANY:

TAMKO BUILDING PRODUCTS LLC
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1. SUBJECT:

ELITE GLASS-SEAL,

HERITAGE, HERITAGE IR, HERITAGE PREMIUM, HERITAGE WOODGATE, HERITAGE VINTAGE, HERITAGE PROLINE STORMFIGHTER IR, HERITAGE PROLINE TITAN XT, STORMFIGHTER FLEX 3, AND STORMFIGHTER FLEX 4

HERITAGE VINTAGE 12 X 12 HIP AND RIDGE, 12-¼ X 12 HIP AND RIDGE, AND PROLINE 12-¼ X 12 HIP AND RIDGE

HERITAGE VINTAGE STARTER, TAMKO 10-INCH STARTER, TAMKO PERFORATED STARTER, TAMKO SHINGLE STARTER

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2. SCOPE OF EVALUATION

- 2021, 2018, 2015, and 2012 *International Building Code* ® (IBC)
- 2021, 2018, 2015, and 2012 *International Residential Code* ® (IRC)
- 2023 Florida Building Code – Building
- 2023 Florida Building Code – Residential
- ICC ES Acceptance Criteria for Quality Documentation (AC10)

The products underwent evaluation for the following properties:

- Exterior Fire Exposure (UL 790)
- Wind Resistance (ASTM D3161; ASTM D7158)
- Physical Properties (ASTM D3462)
- Impact Resistance (UL 2218)

3. REFERENCED DOCUMENTS

- UL 790, Standard Test Methods for Fire Tests of Roof Coverings
- UL 2218, Standard Test Methods for Impact Resistance of Prepared Roof Covering Materials
- ASTM D3161, Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method)
- ASTM D7158, Standard Test Method for Wind Resistance of Asphalt Shingles (Uplift Force/Uplift Resistance Method)
- ASTM D3462, Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules
- UL Subject 2375 Issue No. 2, Outline of Investigation for Hip and Ridge Shingles (UL Fire and Wind Tests)
- ICC-ES Acceptance Criteria for Quality Documentation (AC10)

4. USES

TAMKO asphalt shingles are used as roof coverings for new and existing roofs.

5. PRODUCT DESCRIPTION

5.1 General:

TAMKO asphalt shingles are roof covering materials complying with the following properties when installed as described in this report. The products are three-tab shingles, laminated shingles, starter shingles, and hip & ridge shingles.

Fire Classification: TAMKO asphalt shingles covered under this Report have been tested for fire classification Class A in accordance with UL 790. Shingles tested in accordance with UL 790 qualify for use under Section 1505.1 of the 2023 Florida Building Code - Building, IBC, Section R902.1 of the IRC and 2023 Florida Building Code - Residential.

Wind Resistance: TAMKO asphalt shingles covered under this Report have been tested for wind resistance in accordance with ASTM D3161 or ASTM D7158.

Shingles tested in accordance with ASTM D3161 are classified as Class F and qualify for use under the exception to Section 1504.2 of the 2021 IBC, Section 1504.1.1 of the 2018 and 2015 IBC, Section 1507.2.7.1 of the 2012 IBC and 2023 Florida Building Code - Building, the exception to Section R905.2.4.1 of the IRC, and Section R905.2.6.1 of 2023 Florida Building Code – Residential.

Shingles tested in accordance with ASTM D7158 are classified as Class H and qualify for use in locations as shown in Table 1504.2 of the 2021 IBC, Table 1504.1.1 of 2018 and 2015 IBC, Table 1507.2.7.1 of the 2012 IBC and 2023 Florida Building Code - Building, Table R905.2.4.1 of the IRC, or Table R905.2.6.1 of the 2023 Florida Building Code - Residential, where the maximum basic wind speed is **190** mph (67 m/s) or less with exposure category of B or C (ASCE 7) and a maximum building height of 60 feet (18.3 m). Installation must be in accordance with Section 1507.2 of the 2021 and 2018 IBC, 2023 Florida Building Code - Building, and Section 1507.2.7 of the 2015, and 2012 IBC, or Section R905.2 of the IRC and 2023 Florida Building Code - Residential, as applicable.

Physical Properties: TAMKO asphalt shingles covered under this Report have been tested for physical properties in accordance with ASTM D3462. Shingles tested in accordance with ASTM D3462 qualify for use under Section 1507.2.4 of the 2021 and 2018 IBC, Section 1507.2.5 of the 2015 and 2012 IBC, Section 1507.2.5 of the 2023 Florida Building Code - Building, or Section R905.2.4 of the IRC and 2023 Florida Building Code - Residential. When installed on new construction in accordance with this report and the TAMKO Building Products LLC installation instructions, the shingles are a Class A roof covering. When the shingles are installed over existing roof coverings, the Class A fire classification is maintained.

5.2 Three-Tab Shingles – Elite Glass-Seal:

Elite Glass-Seal shingles are three-tab shingles manufactured with a single fiberglass mat, coated on both sides with asphalt, and surfaced on the weather-exposed side with mineral granules. The shingles are self-sealing and have beads of thermal-tab sealing adhesive above the shingle butt on the weather side. See Table 2 for product dimensions and manufacturing locations.

5.3 Laminated Shingles – Heritage, Heritage IR, Heritage Premium, Heritage Woodgate, Heritage Vintage, Heritage Proline Stormfighter IR, Heritage Proline Titan XT, Stormfighter Flex 3, and Stormfighter Flex 4:

Heritage, Heritage IR, Heritage Premium, Heritage Woodgate, Heritage Vintage, Heritage Proline Stormfighter IR, Heritage Proline Titan XT, Stormfighter Flex 3, and Stormfighter Flex 4 shingles are laminated shingles manufactured with a double layer of fiberglass mats coated with asphalt on all sides and surfaced on the weather-exposed side with mineral granules. See Table 3, Table 4, Table 5, Table 6, Table 7, Table 10, Table 13, Table 13A, and Table 17 for product dimensions and manufacturing locations.

5.4 Hip & Ridge Shingles – 12-¼ X 12 Hip and Ridge, Heritage Vintage 12 X 12 Hip and Ridge, 12-¼ X 12 Heritage Hip and Ridge IR, and Proline 12-¼ X 12 Hip and Ridge:

Hip and Ridge are prefabricated hip and ridge shingles available as 12-¼ X 12 Hip and Ridge, 12-¼ x 12 Heritage Hip and Ridge IR, and Proline 12-¼ x 12 Hip and Ridge. Heritage Vintage Hip and Ridge are prefabricated hip and ridge shingles available as 12 X 12 Hip and Ridge. As an alternative, Elite Glass-Seal shingles are cut into three 12-¼ inch by 12-inch (305 mm by 305 mm) hip and ridge shingles. See Table 8, Table 9, and Table 11 for product dimensions and manufacturing locations.

6. INSTALLATION

6.1 General:

TAMKO asphalt shingles must be installed in accordance with the applicable code, this report and the manufacturer's published installation instructions. The shingles must be installed in accordance with Section 1507.2 of the IBC and 2023 Florida Building Code - Building, or Section R905.2 of the IRC and 2023 Florida Building Code - Residential, as applicable, except as noted in this report.

The manufacturer's published installation instructions must be available at all times on the jobsite during installation.

Minimum roof slopes must be 2:12 (16.67% slope) for the three-tab shingles described under 5.2 of this Report and for the laminated shingles described under 5.3 of this Report.

6.2 Underlayment and Ice Barriers:

For roof slopes 4:12 and greater, the roof deck must be covered with a minimum of one layer of underlayment as described in Sections 7.2 and 7.3 of this Report. Underlayment application must be in accordance with Table 1507.1.1 of the 2021 and 2018 IBC, 2023 Florida Building Code - Building, and Section 1507.2.8 of the 2015 and 2012 IBC or Table R905.1.1(2) of the 2021 IRC, Section R905.2.7 of the 2018, 2015, and 2012 IRC, and Section 905.2.3 of the 2020 Florida Building Code - Residential, as applicable.

For roof slopes 2:12 and up to but less than 4:12, two layers of the underlayment described in Section 7.2 or one layer of the self-adhering polymer modified bitumen sheet in described in Section 7.3 of this Report are required. Underlayment application must be in accordance with Section 1507.1.1 of the 2021 and 2018 IBC, 2020 Florida Building Code - Building, and Section 1507.2.8 of the 2015 and 2012 IBC, Section R905.1.1 of the IRC, and 2023 Florida Building Code - Residential, as applicable.

In areas where there has been a history of ice forming along the eaves, causing a backup of water, an ice barrier must be provided in accordance with Section 1507.1.2 of the 2021 and 2018 IBC and Section 1507.2.8.2 of the 2023 Florida Building Code - Building, 2015 and 2012 IBC or Section R905.1.2 of the 2021 and 2018 IRC, 2023 Florida Building Code - Residential, Section R905.16.4.1 of the 2015 IRC, and Section R905.2.7.1 of the 2012 IRC, as applicable.

6.3 Starter Shingle:

A starter course, as described in Section 7.4 of this Report, must be attached to the eave edge using fasteners described in Section 7.5 of this Report, located 1-½ to 3 inches (38.1 to 76.2 mm) from the eave edge and spaced 1 inch (25.4 mm) and 12 inches (305 mm) from each end, for a total of four fasteners per shingle. Starter strips must overhang the eave and rake edges ¼ to ¾ inch (6.4 to 19.1 mm) if no drip edge flashing is present. If drip edge flashing is present, install shingles even with the drip edge or overhang the drip edge up to ¾ inch.

6.4 Asphalt Shingles:

The first course of field shingles must be installed over the starter course described in Section 7.4 of this Report.

Shingles must be installed with vertical joints offset a minimum of 4 inches (102 mm) from adjacent courses.

6.4.1 Three-Tab Shingles – Elite Glass-Seal:

For roof slopes 2:12 up to but less than 21:12 (16.67% to 175% slope), each shingle must be fastened to the roof deck using a minimum of four fasteners, spaced as shown in Table 2.

For roof slopes equal to or greater than 21:12 (175% slope), six fasteners must be used, spaced as shown in Table 2.

Fasteners must be in a nail area between 5-$^{5}/_{8}$ inches and 6-$^{7}/_{8}$ inches from the butt edge of the shingle.

Maximum exposure to the weather must be 5-⅛ inches (130 mm).

In colder climates or wind regions where it is questionable whether the thermal-sealing adhesive will activate to seal the shingles, the shingles can be hand-sealed. A 1-in diameter (25.4 mm) spot of asphalt cement complying with ASTM D4586, Type I, Class I, should be placed under the corner of each tab (two spots per tab).

6.4.2 Laminated Shingles – Heritage, Heritage IR, Heritage Premium, Heritage Woodgate, Heritage Proline Stormfighter IR, Heritage Proline Titan XT, StormFighter Flex 3 and StormFighter Flex 4:

For roof slopes 2:12 up to but less than 21:12 (16.67% to 175% slope), each shingle must be fastened to the roof deck using a minimum of four fasteners, spaced as shown in Tables 3, 4, 5, 6, 10, 13, and 13A.

For roof slopes equal to or greater than 21:12 (175% slope), six fasteners must be used, spaced as shown in Tables 3, 4, 5, 6, 10, 13, and 13A.

Maximum exposure to the weather must be 5-⅝ inches (143 mm).

In colder climates or wind regions where it is questionable whether the thermal-sealing adhesive will activate to seal the shingles, the shingles can be hand-sealed. Four evenly spaced 1-inch diameter (25.4 mm) spots of cement should be placed under the exposed portion of the shingle, approximately 1 inch (76 mm) above the butt edge.

6.4.3 Laminated Shingles – Heritage Vintage:

For roof slopes 2:12 up to but less than 21:12 (16.67% to 175% slope), each shingle must be fastened to the roof deck using a minimum of five fasteners, spaced as shown in Table 7.

For roof slopes equal to or greater than 21:12 (175% slope), nine fasteners must be used, spaced as shown in Table 7.

Fasteners must be located 6 and 11-½ inches (152 and 292 mm) above the butt edge of the shingles.

Maximum exposure to the weather must be 5 inches (127 mm).

In colder climates or wind regions where it is questionable whether the thermal-sealing adhesive will activate to seal the shingles, the shingles must be hand-sealed. Four evenly spaced 1-inch diameter (25.4 mm) spots of cement should be placed under the exposed portion of the shingle, approximately 1 inch (127 mm) above the butt edge.

6.5 Valley Construction and Other Flashing:

Valleys must consist of woven, open valley or closed-cut construction and must be flashed in accordance with Section 1507.2.8.2 of the 2021 and 2018 IBC, and Section 1507.2.9.2 of the 2023 Florida Building Code - Building, 2015 and 2012 IBC or Section R905.2.8.2 of the IRC and 2023 Florida Building Code - Residential. Other flashings must be in accordance with Sections 1503.2, 2021 and 2018 IBC, and 1507.2.9 of 2023 Florida Building Code – Building, Section 1507.2.9 of the 2015 and 2012 IBC, or Section R905.2.8 of the IRC and 2023 Florida Building Code - Residential, as applicable.

6.6 Hip and Ridge Application:

Hip and ridge shingles must be placed evenly over hips and ridges and must be fastened to the roof deck using two fasteners, one located on either side of the shingle, 5-½ inches (140 mm) or 5-⅝ inches (143 mm) from the exposed end, and 1 inch (25.4 mm) in from the edge as shown in Tables 8, 9, and 11. Fasteners must be a minimum ¼ inch (6.4 mm) longer than those used in the field of the roof, as specified in Section 7.5 of this report. The 12-¼ X 12 Hip and Ridge and Proline 12-¼ x 12 Hip and Ridge IR prefabricated hip and ridge shingles must be applied with a maximum exposure of 5-⅛ inches. (130 mm). Heritage Vintage 12 X 12 Hip and Ridge prefabricated hip and ridge shingles must be installed with a maximum exposure of 5 inches (127 mm). Hip and ridge shingles are installed starting at the bottom of the hip or from the end of the ridge opposite the direction of the prevailing wind.

6.7 Reroofing:

The existing asphalt shingle roof covering must be inspected in accordance with the provisions and limitations of Section 1512 of the 2021 IBC, Section 1511 of the 2018 and 2015 IBC, and Section 1510 of the 2012 IBC, Section 1511.1 of the 2023 Florida Building Code - Building, Section R908 of the IRC, or Section 901.1 of the 2023 Florida Building Code - Residential, as applicable. Prior to the reroofing, hip and ridge coverings must be removed.

Except as noted in this section, the shingles must be installed in accordance with Section 6.3 and 6.5 of this Report. Fasteners must be of sufficient length to penetrate ¾ inch (19.1 mm) into the sheathing, or through the sheathing where the sheathing is less than ¾ inch (19.1 mm) thick. Flashing and edging must comply with Section 6.4 and with Section 1512.5 of the 2021 IBC, 1511.6 of the 2018 and 2015 IBC and 2023 Florida Building Code - Building, Section 1510.6 of the 2012, IBC and Section R908.6 of the 2021, 2018 and 2015 IRC, 2023 Florida Building Code - Residential, and R907.6 of the 2012 IRC, as applicable.

7. INSTALLATION MATERIALS

7.1 Sheathing:

The roof deck must be code-complying, minimum ⅜-inch thick (9.5 mm), exterior plywood complying with DOC PS-1; rated sheathing complying with DOC PS-2; or solid sheathing using minimum nominally 1 by 6 lumber.

7.2 Underlayment:

Under the IBC or IRC, underlayment must comply with ASTM D226, Type I (minimum), ASTM D4869, Type I (minimum) , ASTM D1970, or ASTM D6757 as specified in Section 1507.2.3 of the IBC or Section 905.1.1 of the IRC. Under the 2023 Florida Building Code – Building, underlayment must comply with ASTM D226, ASTM D4869, ASTM D1970, ASTM D6757, or D8257 as specified in Section 1507.1.1. Under the IRC and 2023 Florida Building Code – Residential, underlayment must comply with ASTM D226, Type I (minimum), ASTM D4869, Type I (minimum), ASTM D1970, ASTM D6757, or ASTM D8257 as specified in Section R905.1.1.

7.3 Self-adhering Polymer Modified Bitumen Sheet:

The self-adhering polymer modified bitumen sheet must comply with ASTM D1970.

7.4 Starter Shingles:

The starter course shingle consists of either TAMKO 10-inch starter, TAMKO Shingle Starter, TAMKO Perforated Starter, or a self-sealing three-tab shingle. If self-sealing three-tab shingles are used, remove the exposed tab portion and install with factory-applied sealant adjacent to the eaves.

Heritage Vintage requires a Heritage Vintage Starter shown in Table 12 is to be installed over the starter course at the eave edge.

TAMKO Shingles require a TAMKO Shingle Starter as shown as in Table 14, Table 15, or Table 16 which must be installed over the starter course at the eave edge.

7.5 Fasteners:

Fasteners must be minimum No. 12 gage [0.105 inch (2.7 mm)], ⅜-inch diameter head (9.5 mm), galvanized, stainless steel, aluminum or copper corrosion-resistance nails. Fasteners must be of sufficient length to penetrate into the sheathing ¾-inch (19.1 mm), or through the sheathing, where the sheathing is less than ¾-inch (19.1 mm) thick. Fasteners must be compliant with ASTM F1667.

7.6 Asphalt Cement:

Asphalt cement must comply with ASTM D4586, Type I, Class I.

8. CONDITIONS OF USE

8.1 General:

The TAMKO Asphalt Shingles described in this Report comply with, or are suitable alternatives to, what is specified in those codes listed in Section 2 of this Report, subject to the following conditions:

8.2 Materials and methods of installation shall comply with this Report and the manufacturer's published installation instructions. In the event of a conflict between the installation instructions and this Report, this Report governs.

8.3 See UL Product iQ™ database for Prepared Roof-Covering Materials evaluated for exterior fire exposure in accordance with UL 790 Standard Test Methods for Fire Tests of Roof Coverings (TFWZ).

8.4 The products listed in Table 1 of this Report are manufactured by TAMKO Building Products, located at the manufacturing locations named below, under the UL LLC Classification and Follow-Up Service Program, which includes inspections in accordance with the quality elements of ICC-ES Acceptance Criteria for Quality Documentation, AC 10.

Table 1 – Manufacturing Locations

Location	Plant ID (if applicable)
7910 S CENTRAL EXPY DALLAS TX 75216	D
4500 TAMKO DR FREDERICK MD 21704	F
601 N HIGH ST JOPLIN MO 64801	J
1598 HWY 183 PHILLIPSBURG KS 67661	P
KAUL INDUSTRIAL PARK 2300 35TH ST TUSCALOOSA AL 35401	T

9. SUPPORTING EVIDENCE

9.1 Manufacturer's descriptive product literature, including installation instructions.

9.2 See UL Product iQ™ database for the following:

9.2.1 UL test reports and Classification in accordance with UL 790, Class A and UL Subject 2375 for Roof-Covering Materials (TFWZ).

9.2.2 UL test reports and Classification in accordance with ASTM D3462 for Prepared Roof-Covering Materials (TFWZ).

9.2.3 UL test reports and Classification in accordance with ASTM D7158, Class H for Prepared Roof-Covering Materials (TGAH).

9.2.4 UL test reports and Classification in accordance with ASTM D3161, Class F Prepared Roof-Covering Materials (TFWZ).

9.2.5 UL test reports and Classification in accordance with UL 2218 Roof-covering Materials, Impact Resistance (TGAM).

9.3 Quality Documentation in accordance with ICC-ES Acceptance Criteria for Quality Documentation, AC10.

10. IDENTIFICATION

The TAMKO asphalt shingles described in this evaluation report are identified by a marking bearing the report holder's name, TAMKO Building Products LLC, the plant identification, the product name, the UL Solutions Classification Mark, and the evaluation report number UL Solutions ER2919-01. The validity of this evaluation report is contingent upon this identification appearing on the product or UL Solutions Classification Mark certificate.

11. USE OF UL SOLUTIONS EVALUATION REPORT

11.1 The approval of building products, materials or systems is under the responsibility of the applicable authorities.

11.2 UL Solutions Evaluation Reports shall not be used in any manner that implies an endorsement of the product, material or system by UL Solutions.

11.3 The current status of this report, as well as a complete directory of UL Solutions Evaluation Reports, may be found at UL.com/Solutions via Product iQ®.

Table 2 – **Elite Glass-Seal**

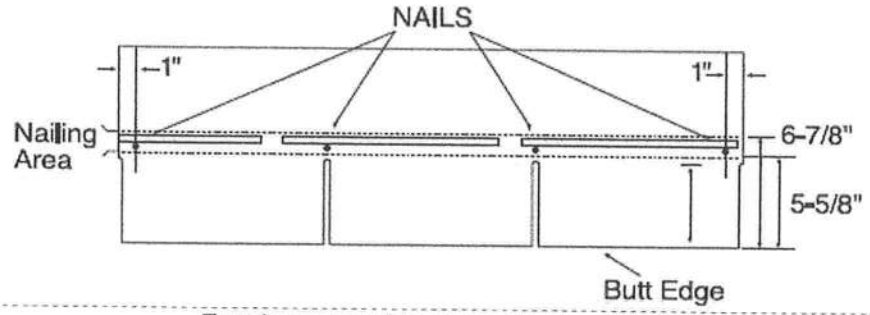
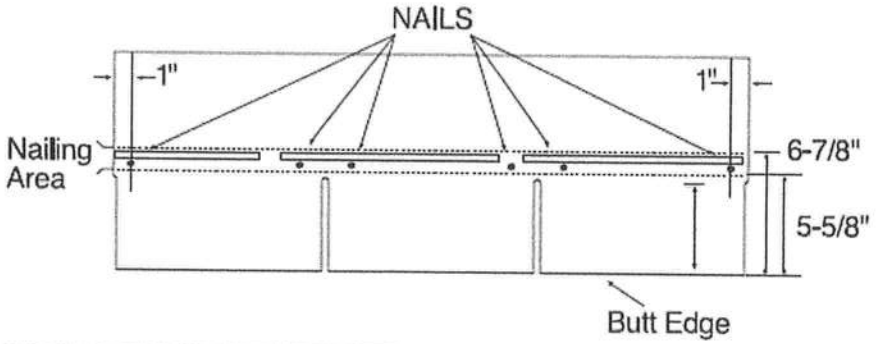
Dimensions:	12-¼" x 36"
Plant Location(s):	Frederick, Joplin
Fastening Pattern:	For slopes 2:12 up to but less than 21:12 
Fastening Pattern:	For slopes equal to or greater than 21:12 

Table 3 – Heritage

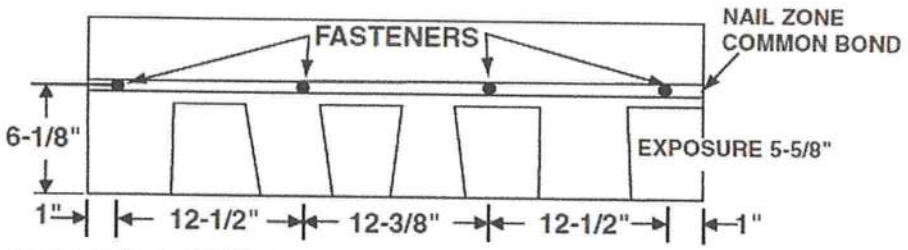
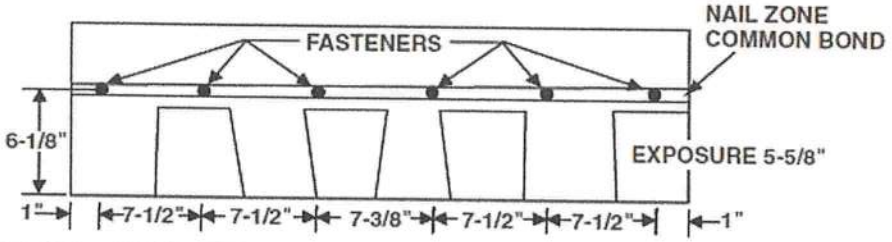
Dimensions:	13-¼" x 39-$^{3}/_{8}$"
Plant Location(s):	Dallas, Frederick, Joplin, Phillipsburg
Fastening Pattern:	For slopes 2:12 up to but less than 21:12 
Fastening Pattern:	For slopes equal to or greater than 21:12 

Table 4 – Heritage

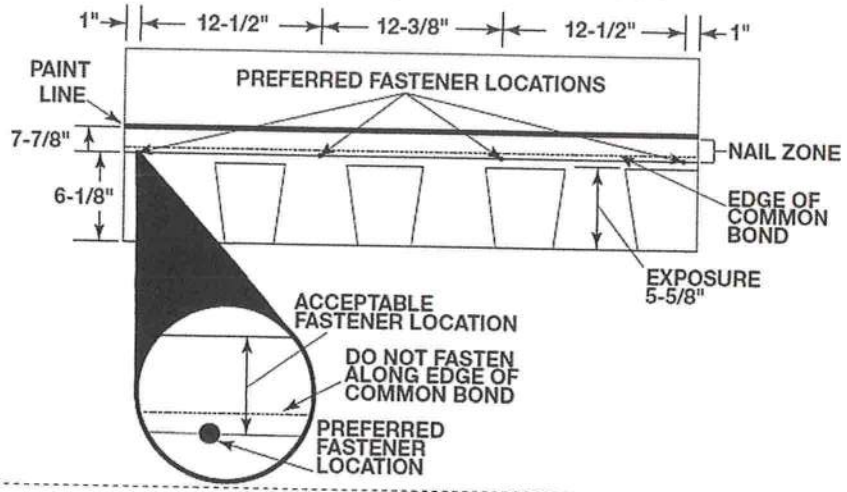
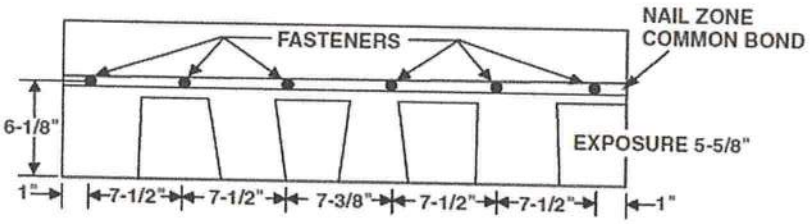
Dimensions:	13-¼" x 39-⅜"
Plant Location(s):	Tuscaloosa
Fastening Pattern:	For slopes 2:12 up to but less than 21:12 
Fastening Pattern:	For slopes equal to or greater than 21:12 

Table 5 – Heritage Premium

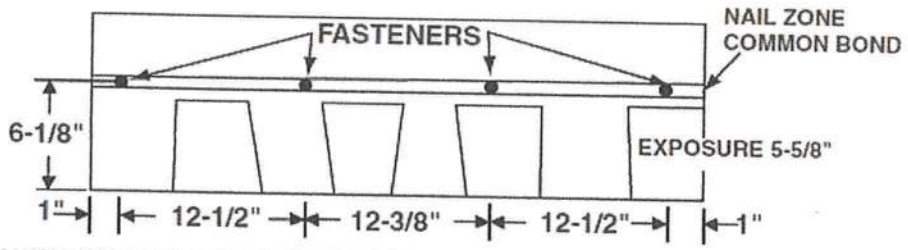
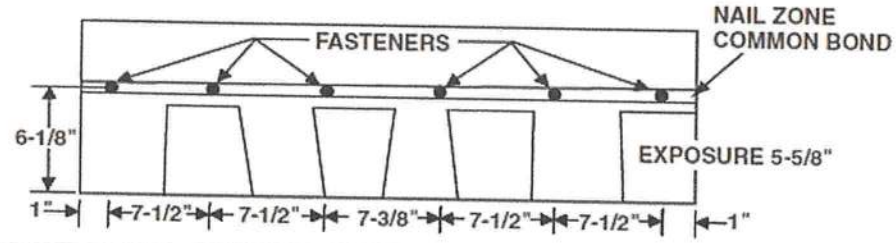
Dimensions:	13-¼" x 39-3/8"
Plant Location(s):	Phillipsburg, Frederick
Fastening Pattern:	For slopes 2:12 up to but less than 21:12 
Fastening Pattern:	For slopes equal to or greater than 21:12 

Table 6 – Heritage Woodgate

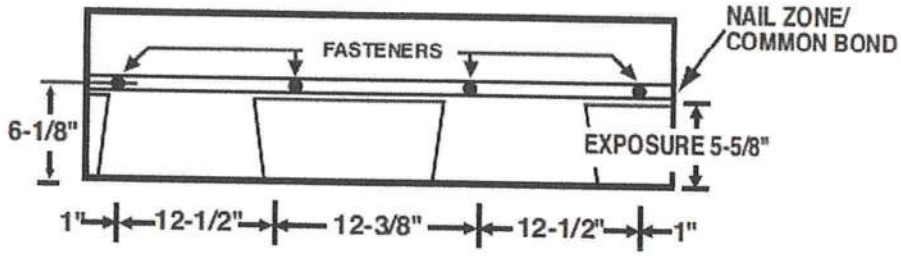
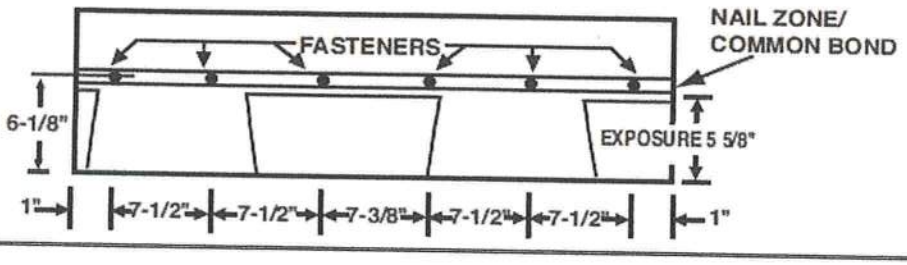
Dimensions:	13-¼" x 39-3/8"
Plant Location(s):	Dallas, Frederick
Fastening Pattern:	For slopes 2:12 up to but less than 21:12 
Fastening Pattern:	For slopes equal to or greater than 21:12 

Table 7 – Heritage Vintage

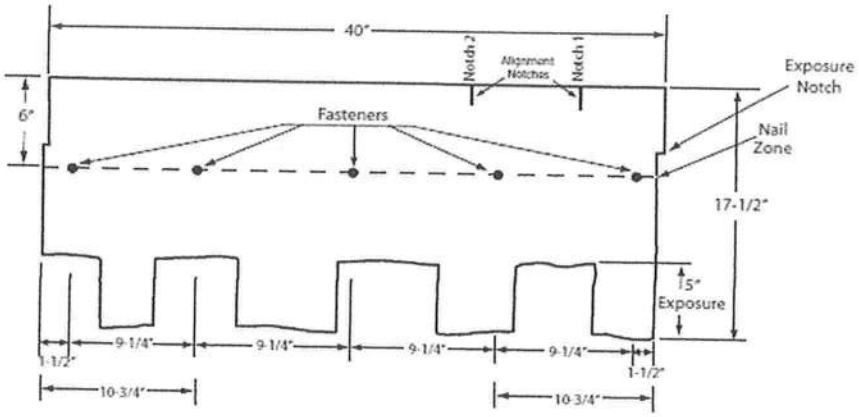
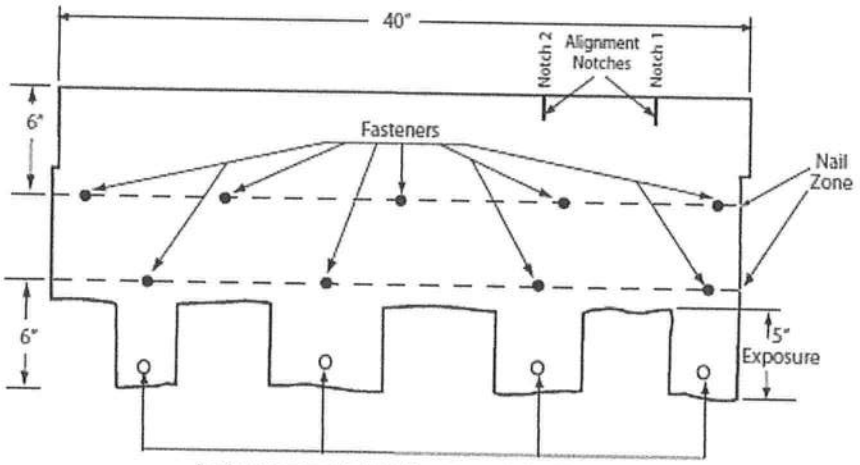
Dimensions:	17-1/2" x 40"
Plant Location(s):	Phillipsburg
Fastening Pattern:	For slopes 2:12 up to but less than 21:12 
Fastening Pattern:	For slopes equal to or greater than 21:12  Apply under each tab 1" diameter asphalt adhesive cement.

Table 8 – **Heritage Vintage 12 X 12 Hip and Ridge**

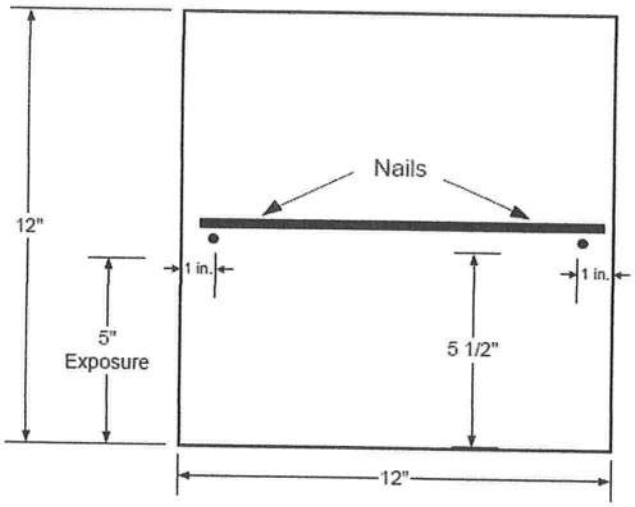
Dimensions:	12" x 12"
Plant Location(s):	Phillipsburg
Fastening Pattern:	

Table 9 – **12-¼ X 12 Hip and Ridge**

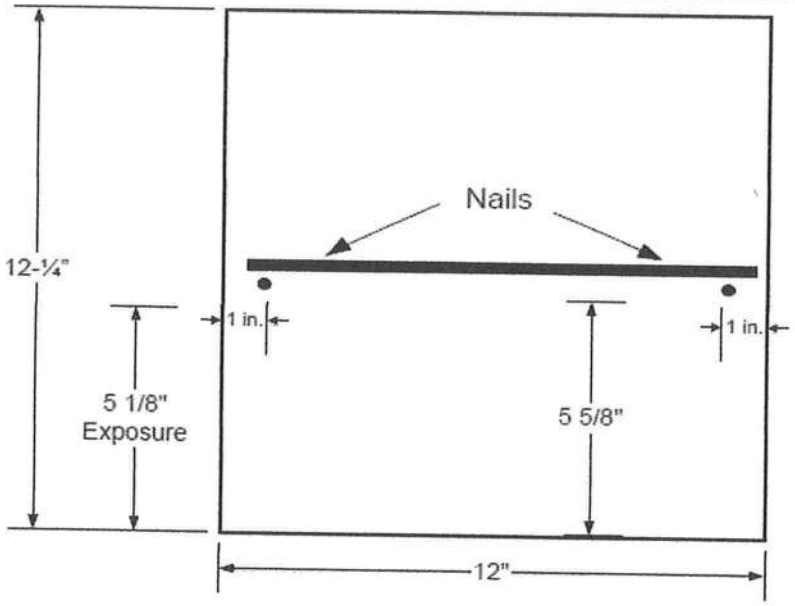
Dimensions:	12-¼" x 12"
Plant Location(s):	Frederick, Joplin
Fastening Pattern:	

Table 10 – Heritage IR

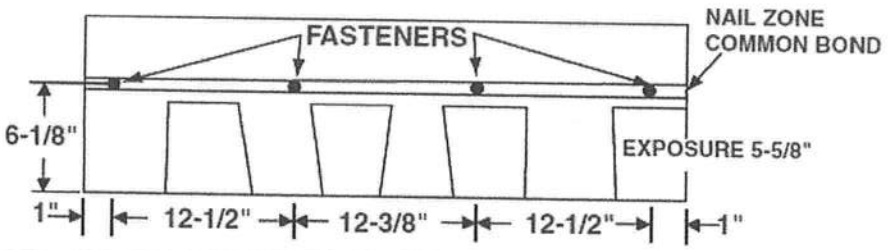
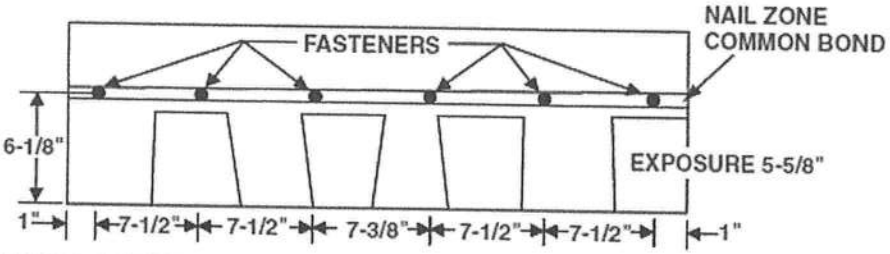
Dimensions:	13-¼" x 39-⅜"
Plant Location(s):	Joplin, Philipsburg
Fastening Pattern:	For slopes 2:12 up to but less than 21:12 
Fastening Pattern:	For slopes equal to or greater than21:12 

Table 11 Heritage Hip and Ridge IR, Proline 12-¼ x 12 Hip and Ridge

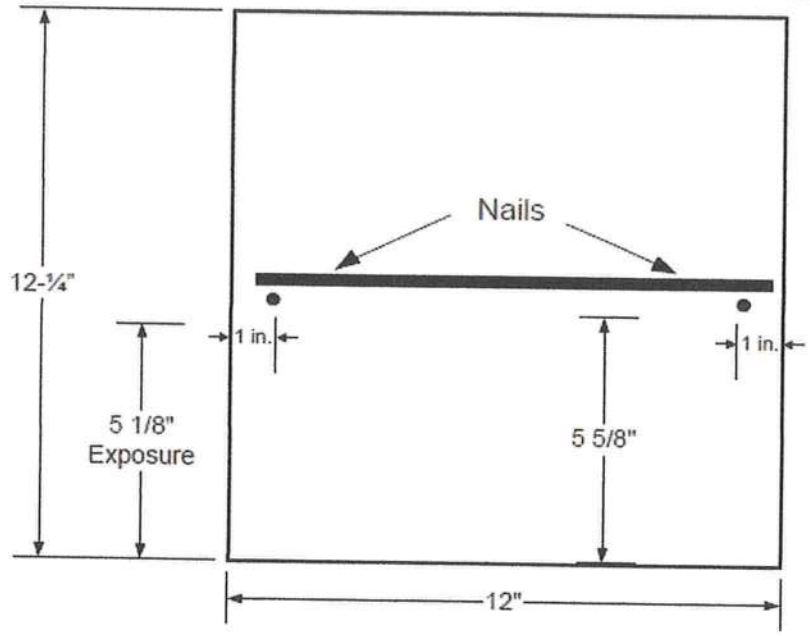
Dimensions:	12-¼" x 12"
Plant Location(s):	Joplin
Fastening Pattern:	

Table 12 Heritage Vintage Starter

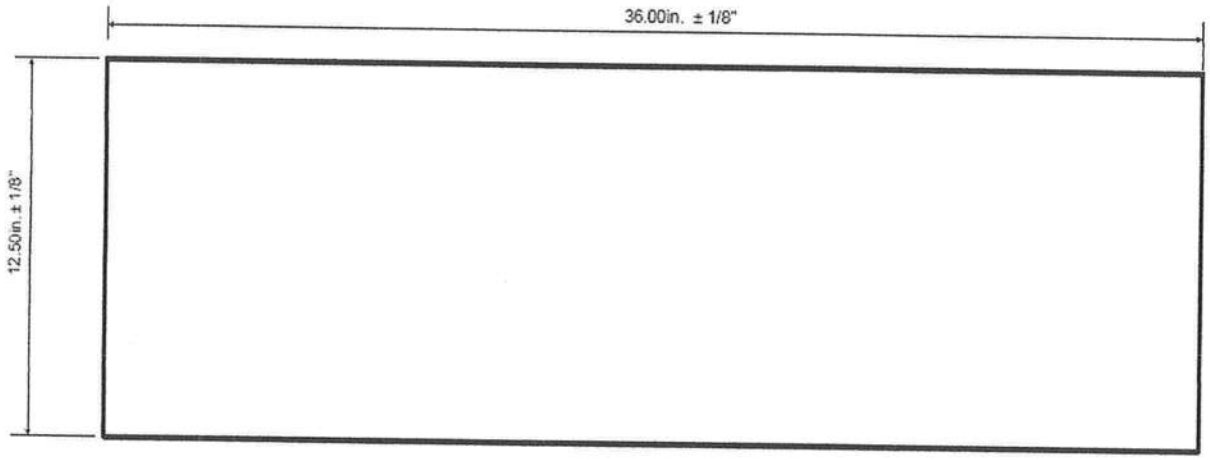


Table 13– Heritage Proline Titan XT

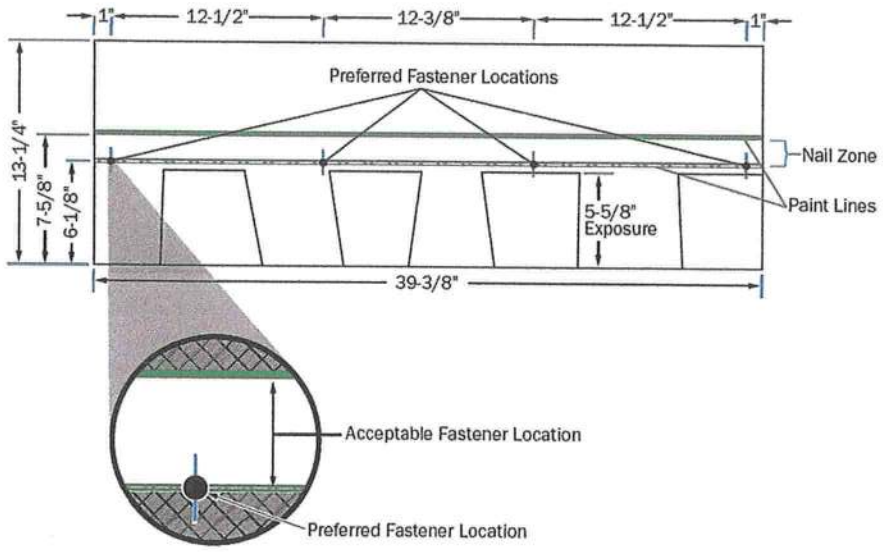
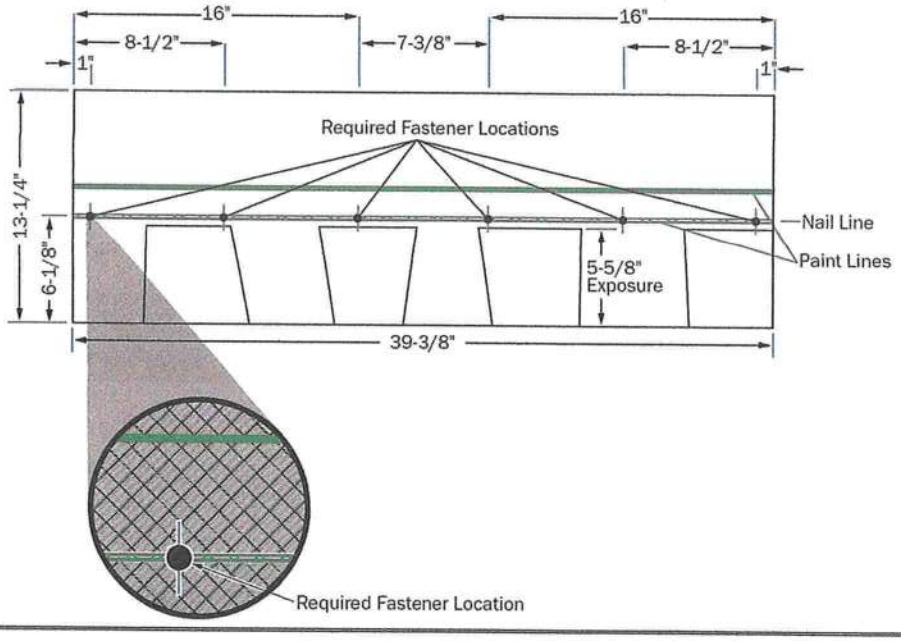
Dimensions:	13-¼" x 39-$^{3}/_{8}$"
Plant Location(s):	Frederick, Joplin, Tuscaloosa, Philipsburg, Dallas
Fastening Pattern:	For slopes 2:12 up to but less than 21:12 
Fastening Pattern:	For slopes equal to or greater than 21:12 

Table 13A– Heritage Proline Stormfighter IR

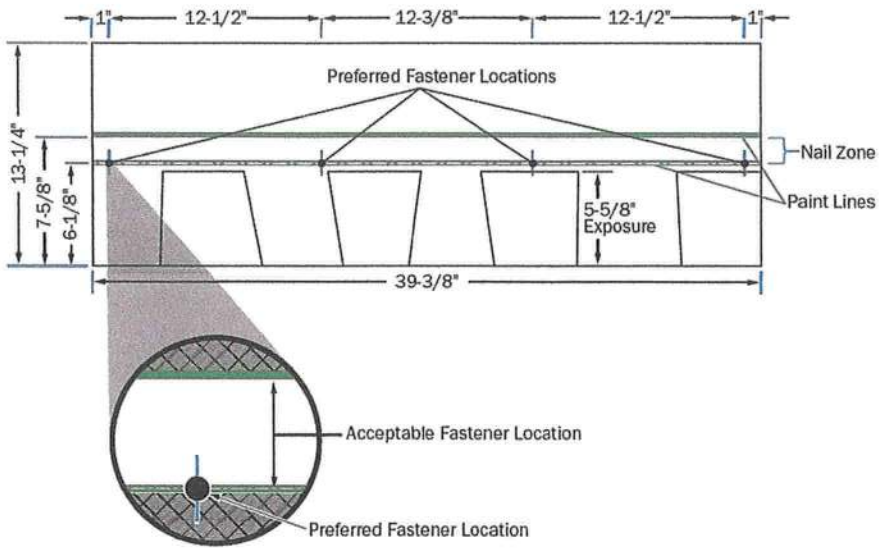
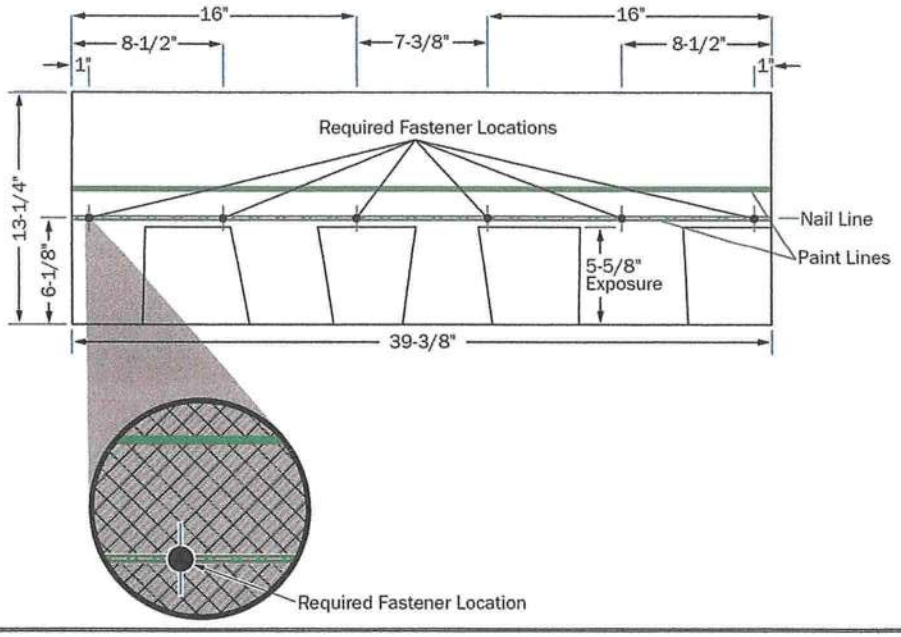
Dimensions:	13-¼" x 39-$^{3}/_{8}$"
Plant Location(s):	Joplin, Philipsburg
Fastening Pattern:	For slopes 2:12 up to but less than 21:12 
Fastening Pattern:	For slopes equal to or greater than 21:12 

Table 14– TAMKO 10-Inch Starter

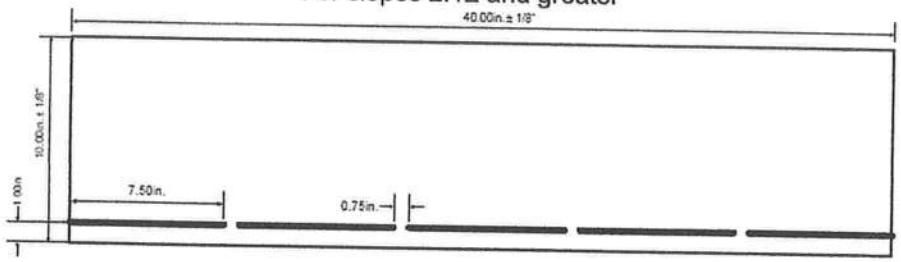
Dimensions:	10" x 40"
Plant Location:	Philipsburg
	For slopes 2:12 and greater 

Table 15– TAMKO Perforated Starter

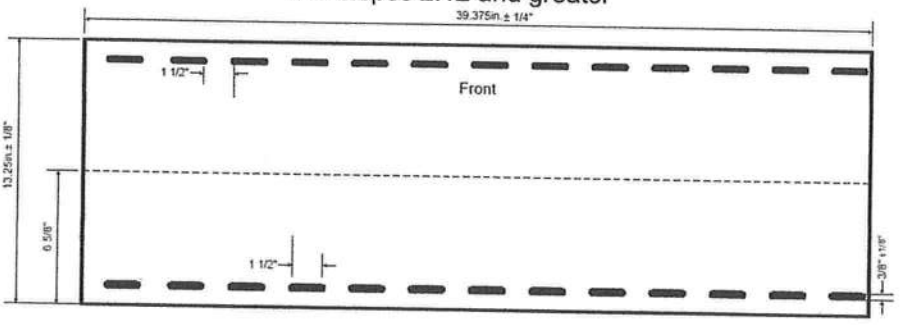
Dimensions:	13-¼" x 39-⅜"
Plant Location:	Frederick
	For slopes 2:12 and greater 

Table 16– TAMKO Shingle Starter

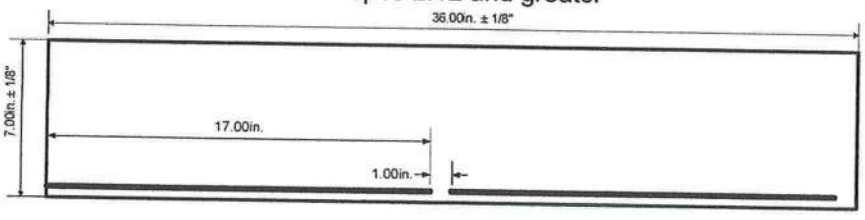
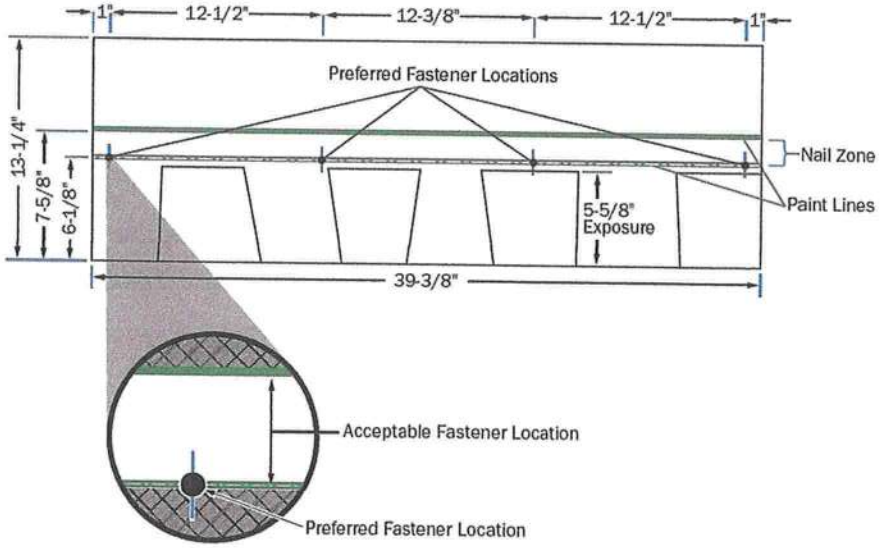
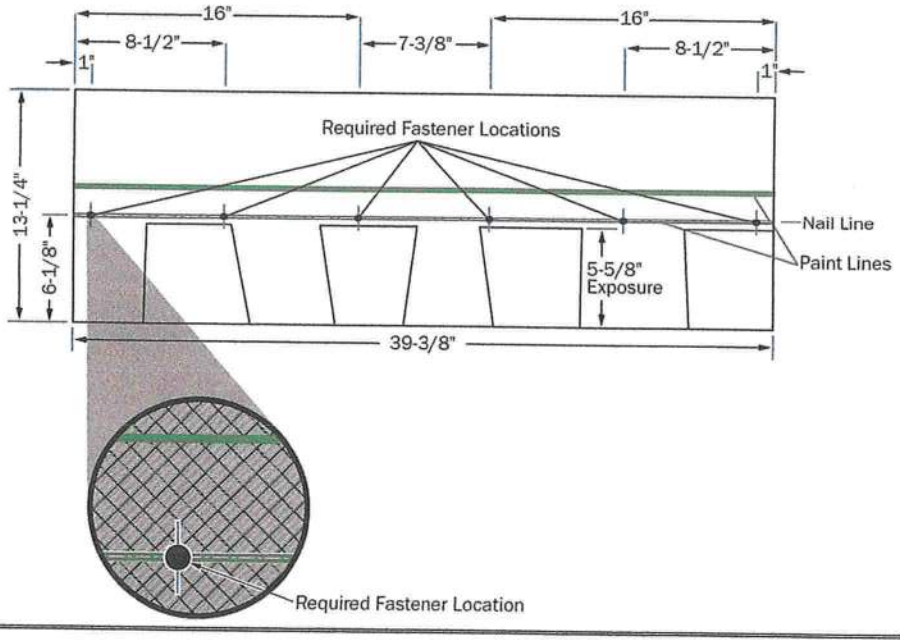
Dimensions:	7" x 36"
Plant Location:	Joplin
	For slopes 2:12 and greater 

Table 17 – Stormfighter Flex 3, Stormfighter Flex 4

Dimensions:	13-¼" x 39-$^{3}/_{8}$"
Plant Location(s):	Frederick, Joplin, Tuscaloosa, Philipsburg, Dallas
Fastening Pattern:	For slopes 2:12 up to but less than 21:12 
Fastening Pattern:	For slopes equal to or greater than 21:12 

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