



Staff Report

Knoxville Historic Zoning Commission

File Number: 3-D-25-HZ

Meeting: 3/20/2025
Applicant: Nick DiRoberto, Smoky Mountain Deck Builders LLC
Owner: Marshall Jensen

Property Information

Location: 412 E. Scott Ave. **Parcel ID** 81 L Q 012
District: Old North Knoxville H
Zoning: RN-2 (Single-Family Residential Neighborhood)
Description: Queen Anne Cottage, c.1907

One story frame Queen Anne with brick patterned asphalt roll wall covering. Hip roof with lower cross gable, asphalt shingle covering and diamond shaped attic vent. Double hung one over one windows. One story three-quarters front porch with replacement aluminum columns and balustrade and engaged round wood pilasters with Doric capitals. Interior offset brick chimney. Brick foundation. Irregular plan. Leaded, beveled glass sidelights and transom at front entrance. Altered siding and replacement window. Late hipped frame addition on rear from enclosure of original porch.

Description of Work

Level II Construction of Addition or Outbuilding

Removal of existing one-story wooden deck, stairs, and railing at the rear of the property, which were built in 2018.

Installation of new 22' wide by 15' deep, 4/12 pitch, shed roof clad in fiberglass asphalt architectural shingles, approximately 9' above the deck. Installation of fascia on new roof.

Installation of new one-story deck, stairs, and railing in its place, supported by concrete footings and 6x6 pressure treated wood posts. The new deck will be 22' wide by 15' deep, approximately 6' deeper than the existing, and will be made from decorative wood composite decking with a herringbone pattern. The stairs will be made from wood composite decking. The stairs and the deck will feature a cedar railing with 4" aluminum balusters around the perimeter. The deck will be screened, and the 4x4 supporting posts and 2x4 frame for the screen will be made from cedar. A sliding screen door will be installed on the right elevation of the deck.

Applicable Design Guidelines

Old North Knoxville Design Guidelines, adopted by the Knoxville City Council on November 25, 2004.

C. Porches

2. Design elements to be incorporated in any new porch design must include tongue and groove wood floors, beadboard ceilings, wood posts and/or columns and sawn and turned wood trim when appropriate. If balustrades are required, they must be designed with spindles set into the top and bottom rails.

5. Porches and balconies visible from a street may not be enclosed unless the enclosure provides as much transparency as existed prior to the enclosure and is designed to be immediately removable.

L. Additions

1. Locate exterior additions at the rear of or on an inconspicuous side of a historic building, limiting the size and scale in relationship to the historic building, and using appropriate proportions.
2. Design new additions so that it is clear what is historic and what is new.
3. Consider the attached exterior addition both in terms of the new use and the appearance of other buildings in the historic district. Additions shall be distinguishable from the historic building, but shall be compatible in terms of mass, materials, size, texture, and scale. Additions shall be designed so they can be removed without destroying the form of the historic building.
4. New additions should not be visible from streets.
6. Do not cause a loss of historic character through a new addition.

Comments

N/A

Staff Findings

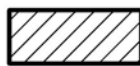
1. 417 E Scott Ave is a contributing resource to the ONK National Register Historic district and local overlay.
2. The existing deck was installed in 2018; replacement of the existing deck is appropriate. The property slopes significantly to the south/southeast, and both sides of the house are flanked by large surface parking lots or driveways. The proposed roofline and deck will be visible from the right-of-way on both sides, though at a lower height than the house's main level.
3. The placement of a deck on the rear elevation is appropriate within the guidelines.
4. In ONK, composite materials have been approved for flooring materials on new rear elevation decks, and on some upper-level front porches that are not visible from the street. While the herringbone pattern is not typical of historic porches or decks, the proposed deck will be on the rear elevation, covered with a roof, and enclosed with a screen, so it will not be visible from the right-of-way at all.
5. The deck and new roof structure do not result in modifications to character-defining features and could be removed with effect on the house.

Staff Recommendation

Staff recommends approval of Certificate 3-D-25-HZ as submitted.



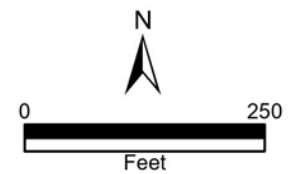
3-D-25-HZ
APPLICATION FOR CERTIFICATE OF APPROPRIATENESS



412 E. Scott Ave. 37917
Old North Knoxville H

Original Print Date: 3/6/2025
Knoxville/Knox County Planning -- Historic Zoning Commission

Petitioner: Nick DiRoberto, Smoky Mountain
Deck Builders LLC





DESIGN REVIEW REQUEST

- ☐ DOWNTOWN DESIGN (DK)
☒ HISTORIC ZONING (H)
☐ INFILL HOUSING (IH)

Nick DiRoberto

Applicant

3-D-25-HZ

Date Filed

Meeting Date (if applicable)

File Number(s)

CORRESPONDENCE

All correspondence related to this application should be directed to the approved contact listed below.

- ☐ Owner ☒ Contractor ☐ Engineer ☐ Architect/Landscape Architect

Nick DiRoberto

SMOKY MOUNTAIN DECK BUILDERS LLC

Name

Company

299 Foxfire Lane

KINGSTON

TN

37763

Address

City

State

Zip

865-320-6990

Info@smokymountaindecks.com

Phone

Email

CURRENT PROPERTY INFO

Marshall Jensen

412 E Scott Ave Knoxville TN 37917

505-280-9860

Owner Name (if different from applicant)

Owner Address

Owner Phone

412 E Scott Ave Knoxville TN 37917

081LQ012

Property Address

Parcel ID

484

RN-2

Neighborhood

Zoning

AUTHORIZATION

Lindsay Lanois

Staff Signature

Please Print

Date

Nick DiRoberto

Nick DiRoberto

02/27/2025

Applicant Signature

Please Print

Date

REQUEST

DOWNTOWN DESIGN

Level 1:

- ☐ Signs ☐ Alteration of an existing building/structure

Level 2:

- ☐ Addition to an existing building/structure

Level 3:

- ☐ Construction of new building/structure ☐ Site design, parking, plazas, landscape

See required Downtown Design attachment for more details.

- ☐ Brief description of work: _____

HISTORIC ZONING

Level 1:

- ☐ Signs ☐ Routine repair of siding, windows, roof, or other features, in-kind; Installation of gutters, storm windows/doors

Level 2:

- ☐ Major repair, removal, or replacement of architectural elements or materials ☒ Additions and accessory structures

Level 3:

- ☐ Construction of a new primary building

Level 4:

- ☐ Relocation of a contributing structure ☐ Demolition of a contributing structure

See required Historic Zoning attachment for more details.

- ☐ Brief description of work: demoing current deck and rebuilding 15x22 deck with deckorators decking with stairs, screen walls and single slope roof

INFILL HOUSING

Level 1:

- ☐ Driveways, parking pads, access point, garages or similar facilities ☐ Subdivisions

Level 2:

- ☐ Additions visible from the primary street ☐ Changes to porches visible from the primary street

Level 3:

- ☐ New primary structure
☐ Site built ☐ Modular ☐ Multi-Sectional

See required Infill Housing attachment for more details.

- ☐ Brief description of work: _____

STAFF USE ONLY

ATTACHMENTS

- ☐ Downtown Design Checklist
☐ Historic Zoning Design Checklist
☐ Infill Housing Design Checklist

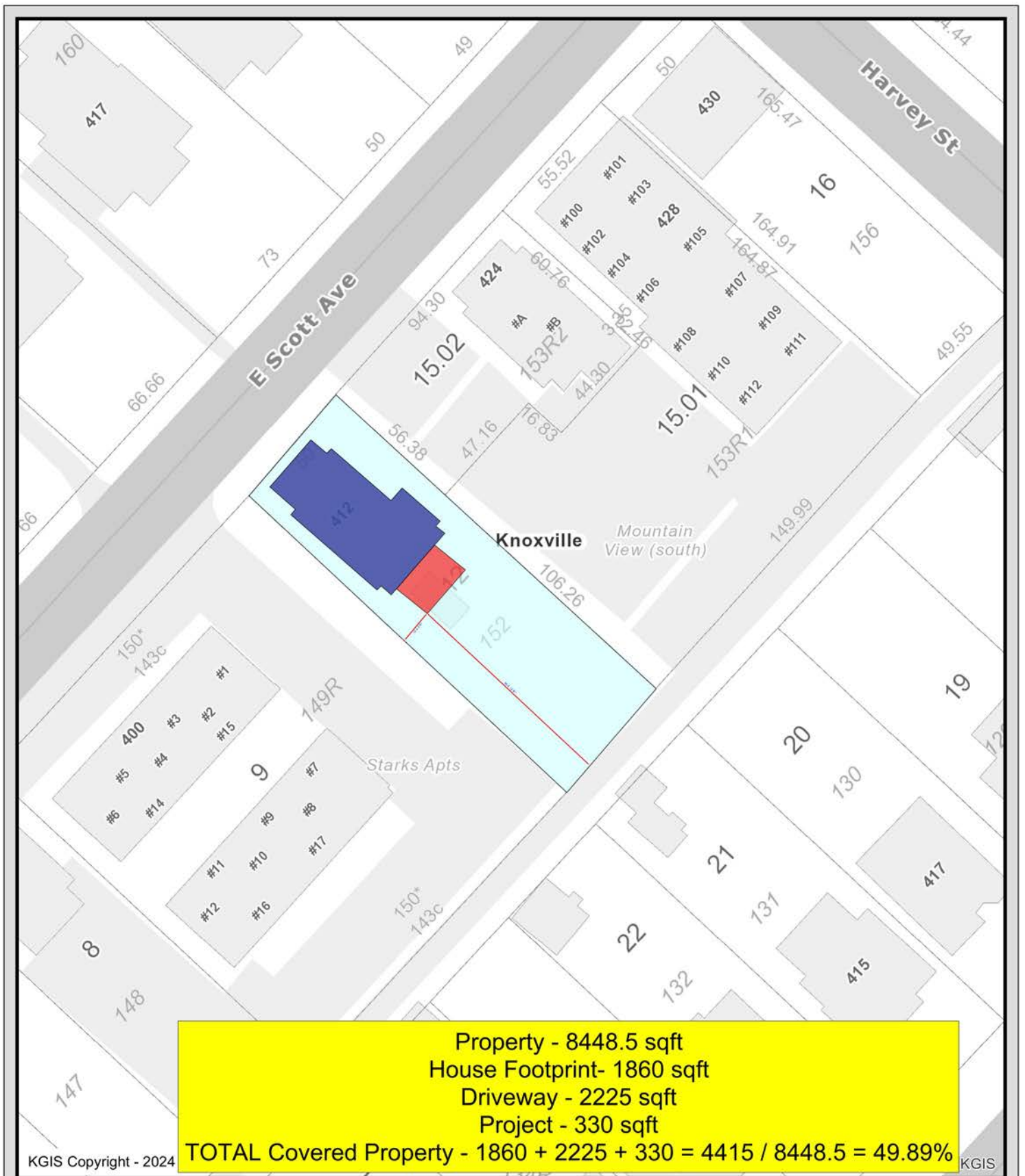
ADDITIONAL REQUIREMENTS

- ☐ Property Owners / Option Holders

Level 1: \$50 • **Level 2:** \$100 • **Level 3:** \$250 • **Level 4:** \$500

FEE 1:**FEE 2:****FEE 3:****TOTAL:**

Pd. 02/28/2025, SG

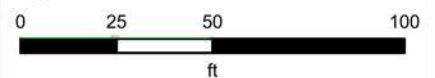


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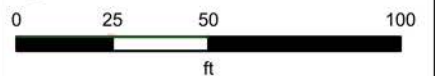


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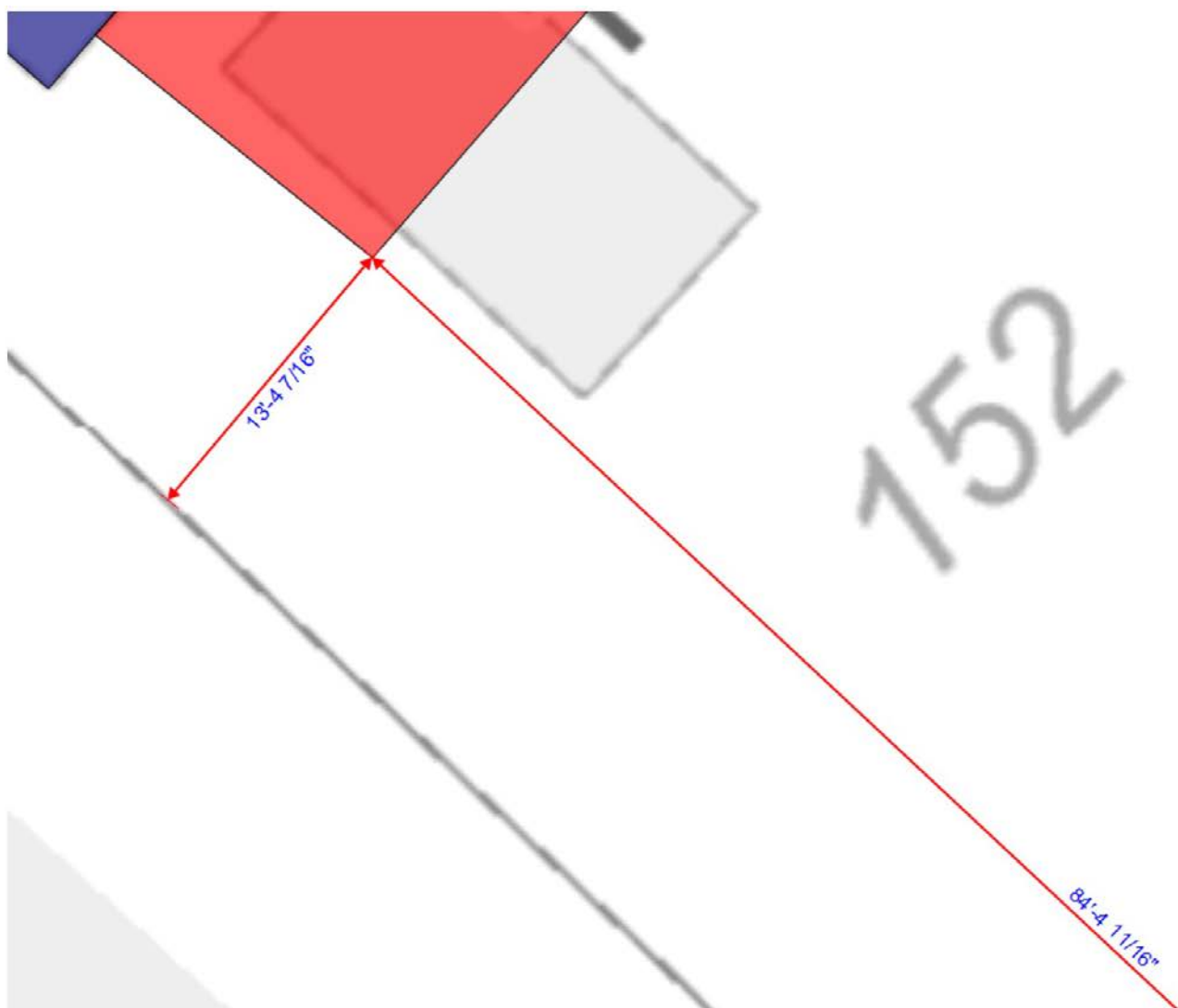
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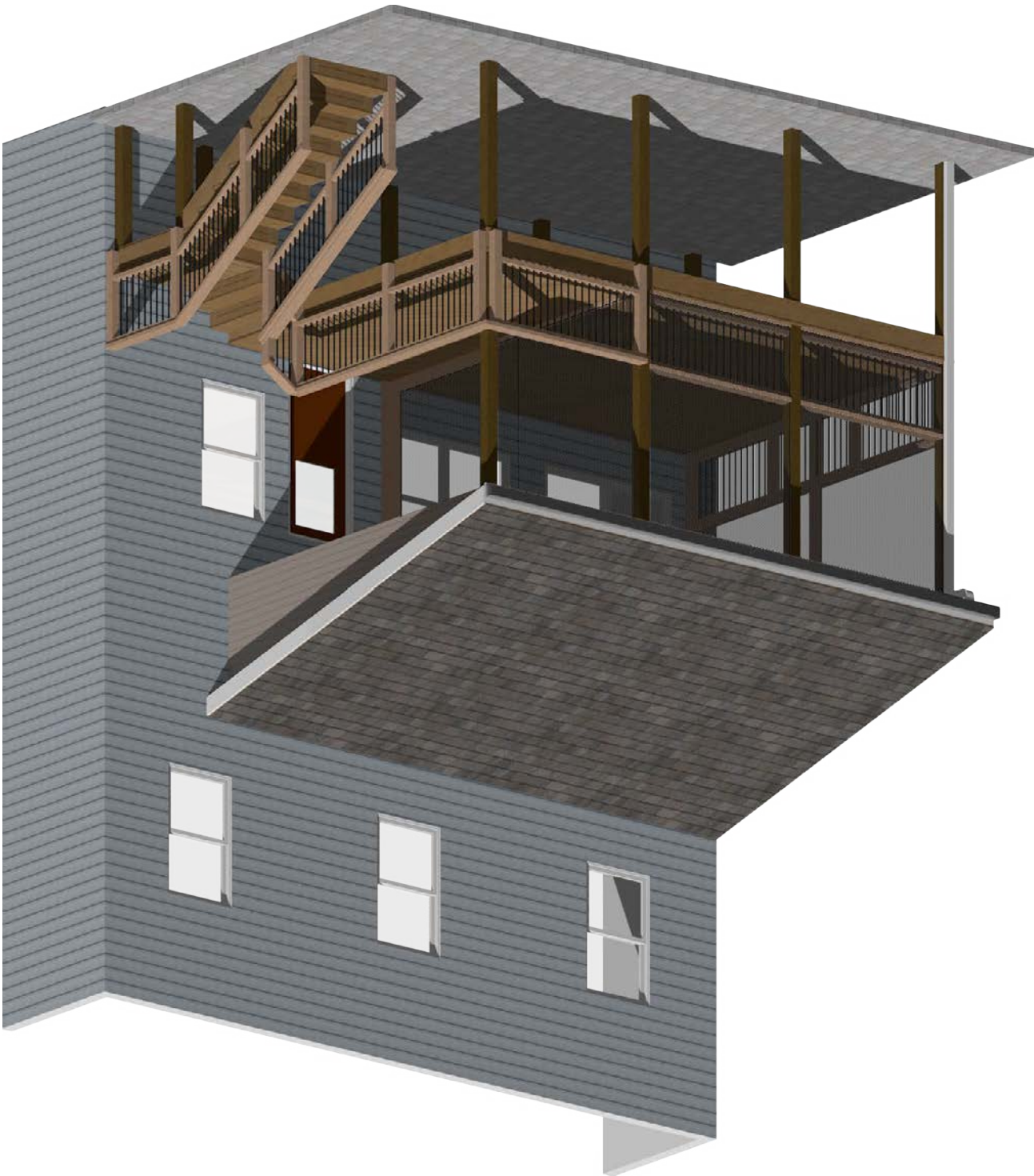


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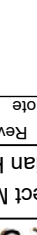


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Project
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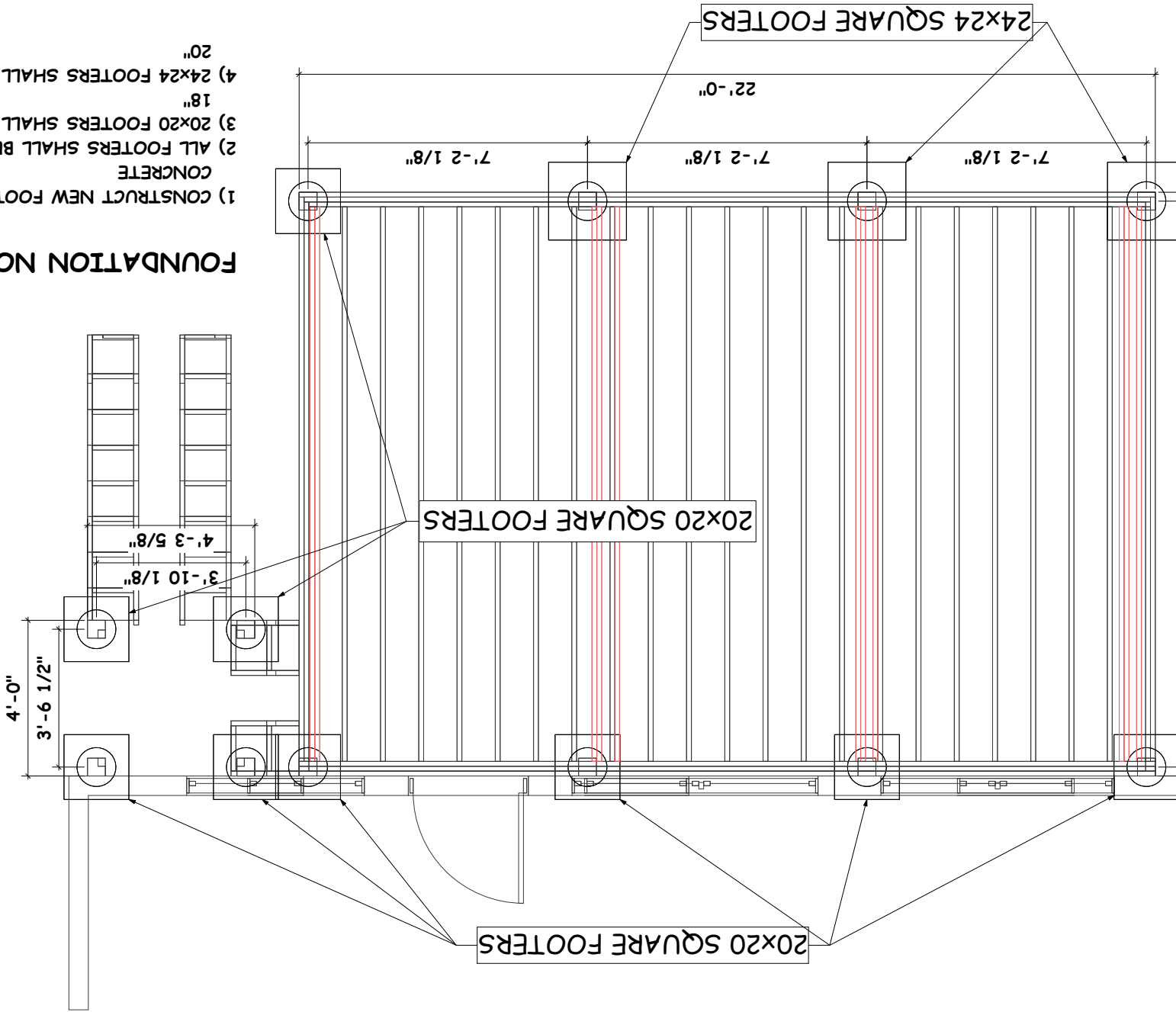
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Christian K			NO			Date		
Note								

COLLISION NOTES

**REMOVE EXISTING STAIRS, RAILS, & STAIRS
AN UP & HAUL OFF DEBRIS**



- FOUNDATION NOTES**
- 1) CONSTRUCT NEW FOOTINGS W/ HIGH STRENGTH CONCRETE
 - 2) ALL FOOTERS SHALL BE REINFORCED W/ #4 REBAR
 - 3) 20x20 FOOTERS SHALL HAVE A MINIMUM DEPTH OF 18"
 - 4) 24x24 FOOTERS SHALL HAVE A MINIMUM DEPTH OF 20"





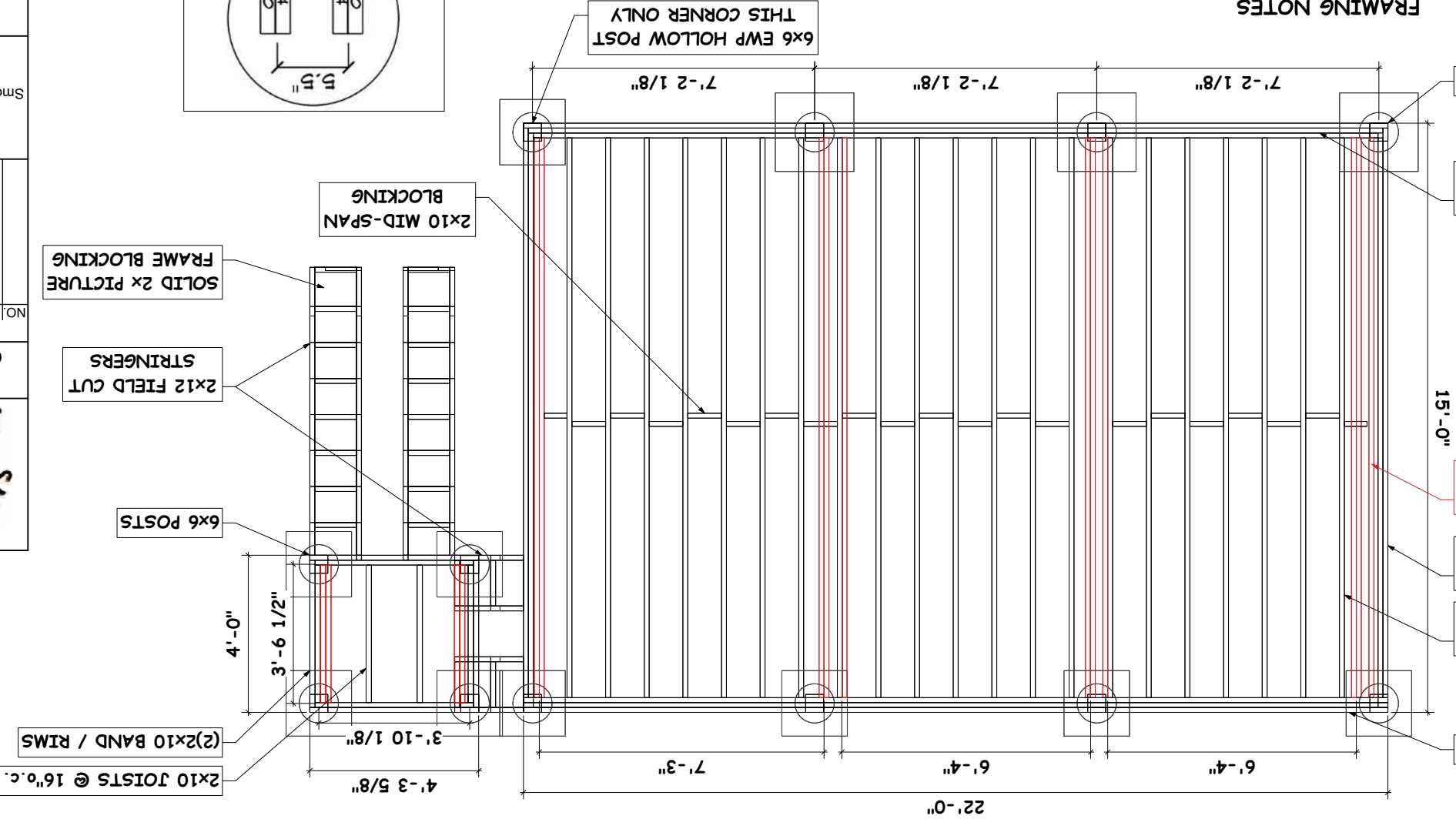
Project Manager
Christian K
Revised
NO Date Note

Design Firm
Smoky Mountain
299 Fox
Kingsport, TN

Framing

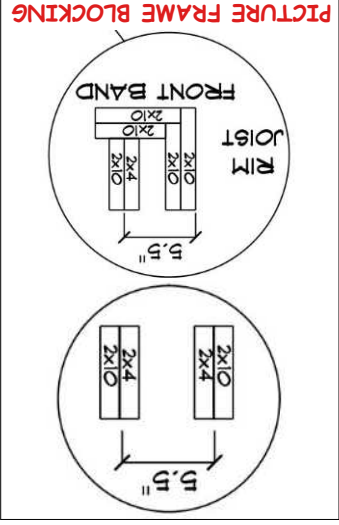
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JENS
412 E SCC
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FRAMING NOTES

- 1) ALL FRAMING LUMBER SHALL BE #1 PRESSURE TREATED
- 2) JOISTS SHALL BE 2x10
- 3) BANDS SHALL BE (3)2x10
- 4) RIM JOISTS SHALL BE (2)2x10
- 5) POSTS SHALL BE 6x6 WITH MAX SPAN HEIGHT OF 14', INSTALLED W/ ABA66Z
- 6) STRINGERS SHALL BE FIELD CUT 2x12, INSTALLED W/ LSCZ HANGERS
- 7) INSTALL LUG210Z JOIST HANGERS ON EACH END OF ALL NEW JOISTS
- 8) INSTALL HUC210-2Z ON EACH END OF NEW RIM JOISTS
- 9) INSTALL AC6Z ON EACH SIDE OF CENTER POSTS AT BAND LOCATION
- 10) INSTALL LCE4Z ON EACH SIDE OF END POSTS AT BAND LOCATION
- 11) FASTEN ALL NEW FRAMING MEMBERS TOGETHER W/ 3" GALV. RING SHANK NAILS
- 12) ALL NEW HANGERS SHALL BE INSTALLED USING MFG. RECOMMENDED FASTENERS



SOLID 2x PICTURE
FRAME BLOCKING

2x12 FIELD CUT
STRINGERS

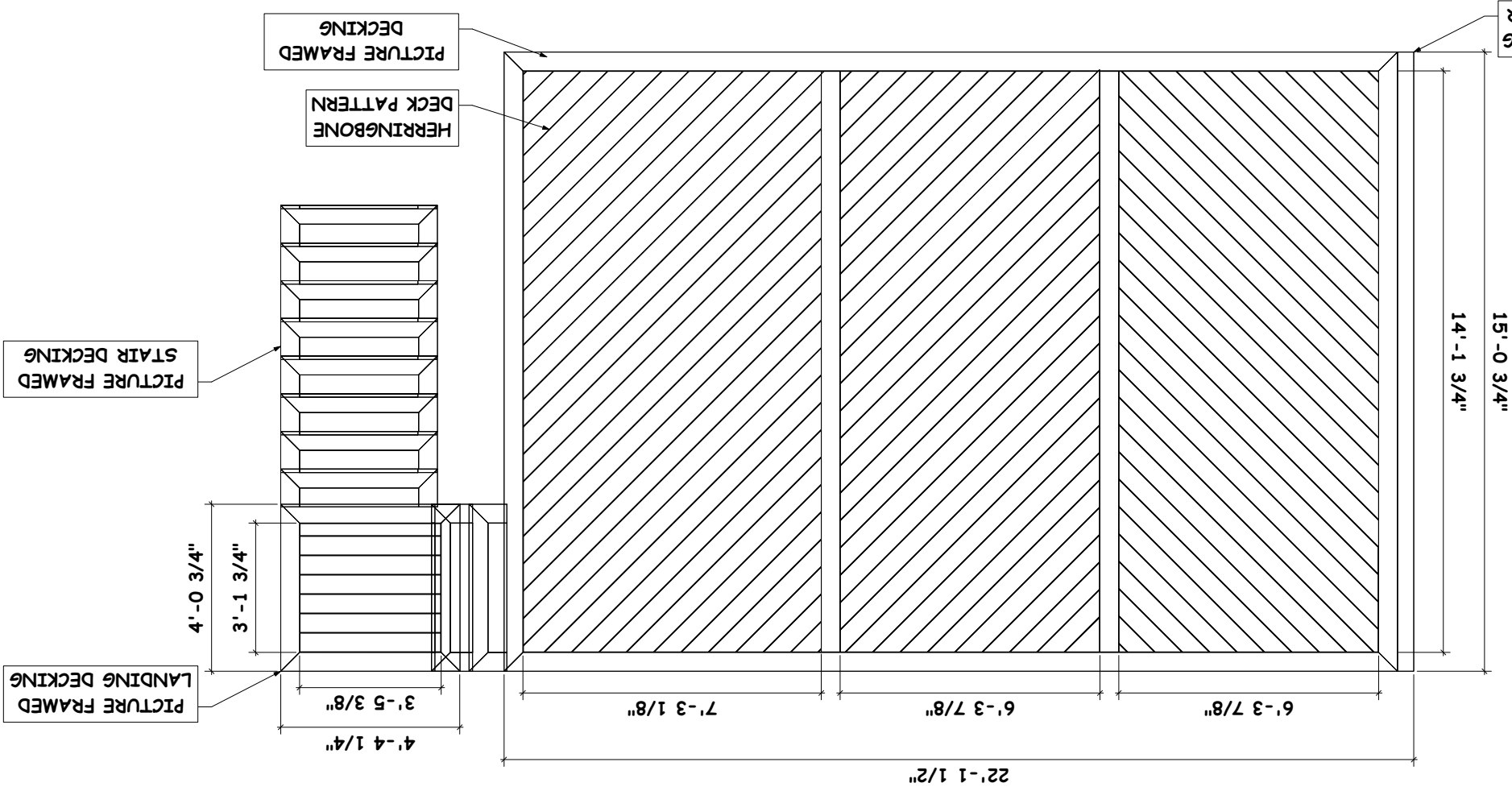
6x6 POSTS

2x10 MID-SPAN
BLOCKING

6x6 EWP HOLLOW POST
THIS CORNER ONLY

6x6 POSTS
HEADERS
EAM

0 LEDGER
JOISTS @
"o.c."
2x10 RIM
JOISTS
2x10 PF
BLOCKING
15'-0"



- 1) MAIN DECKING SHALL BE DECORATORS VENTURE, SANDBAR
- 2) PICTURE FRAME BORDER SHALL BE DECORATORS VENTURE, SANDBAR
- 3) FASCIA SHALL BE DECORATORS VENTURE, SANDBAR
- 4) MAIN DECK SHALL BE INSTALLED WITH CAMO WEDGE CLIPS, HIDDEN FASTENERS
- 5) PICTURE FRAME BORDER SHALL BE INSTALLED WITH COLOR MATCHED FACE SCREWS
- 6) FASCIA SHALL BE INSTALLED WITH COLOR MATCHED FACE SCREWS, 3 ROWS @ 12"o.c. & GLUED

DECKING NOTES

RAILING NOTES

- 1) RAILINGS SHALL BE R/S WRC W/
BLACK ALUMINUM BALUSTERS



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Design Firm
Smoky Mountain
299 Fox
Kingston, T

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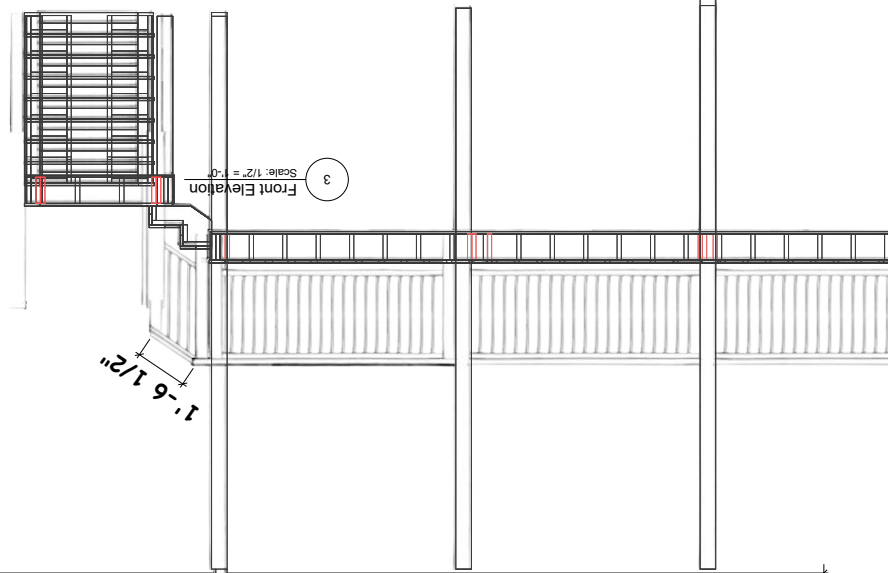
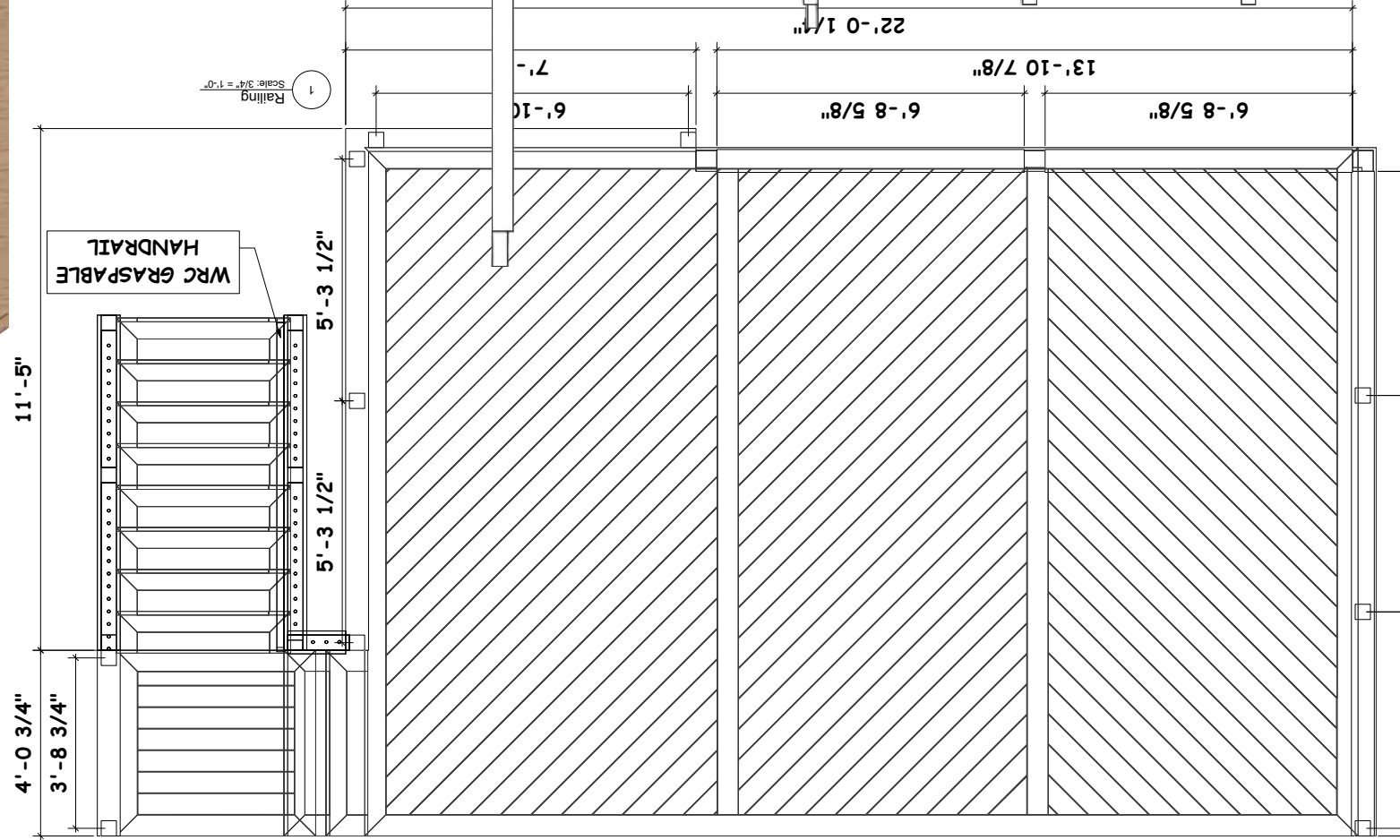
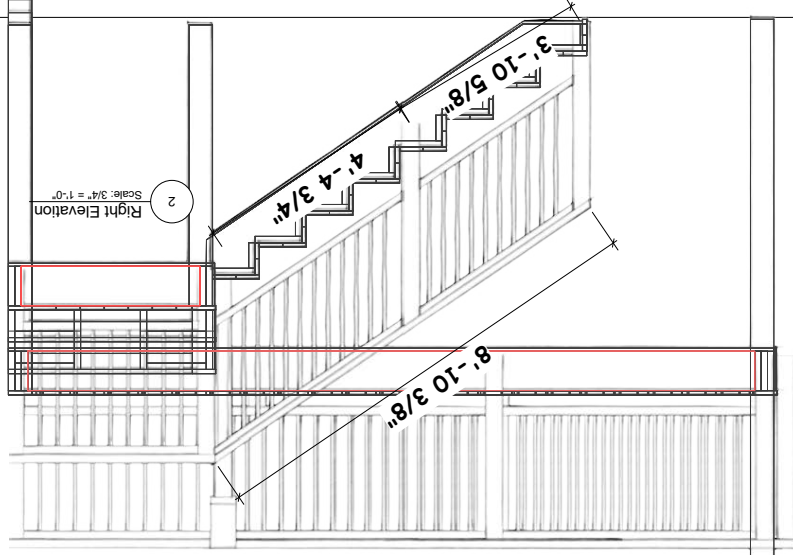
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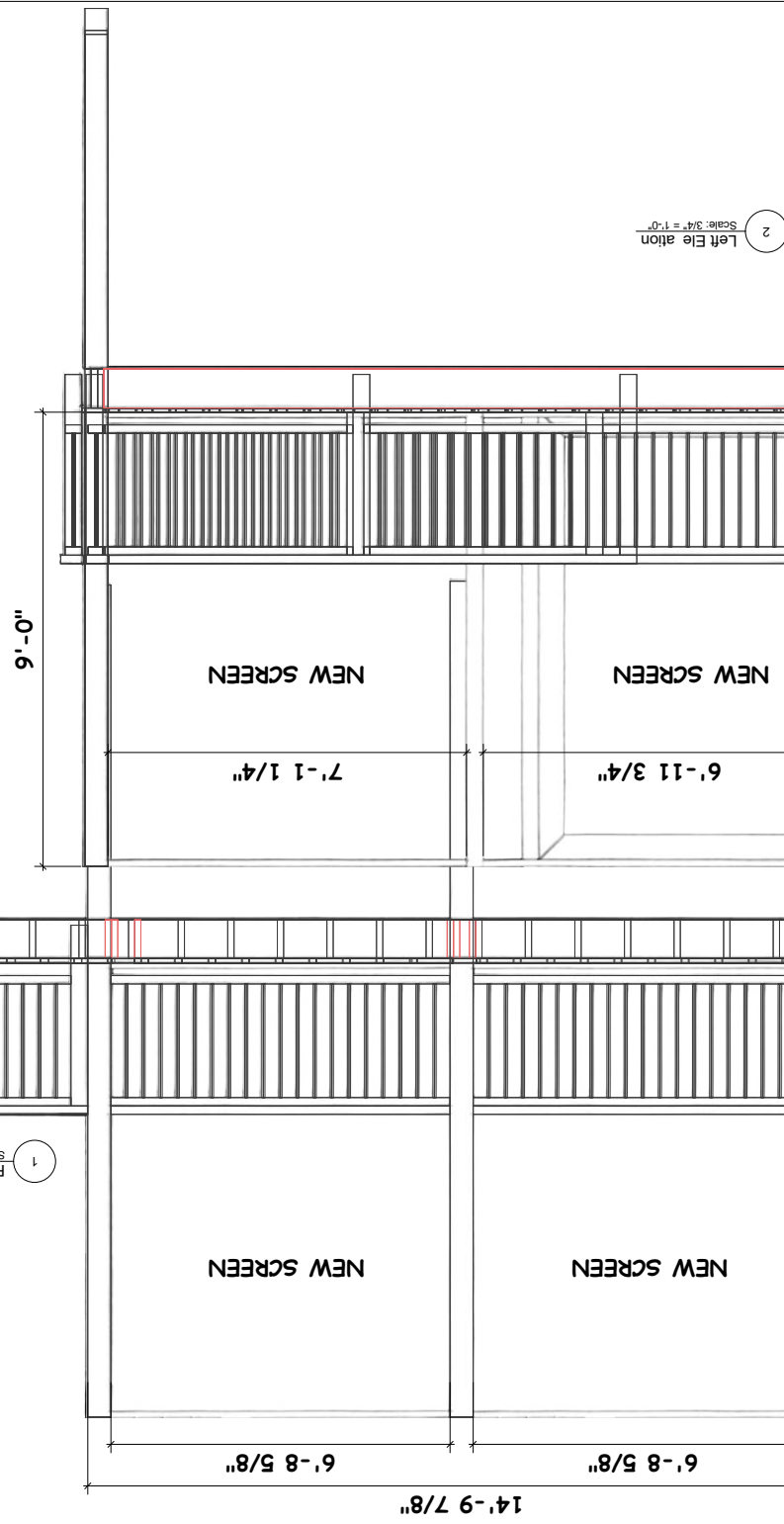
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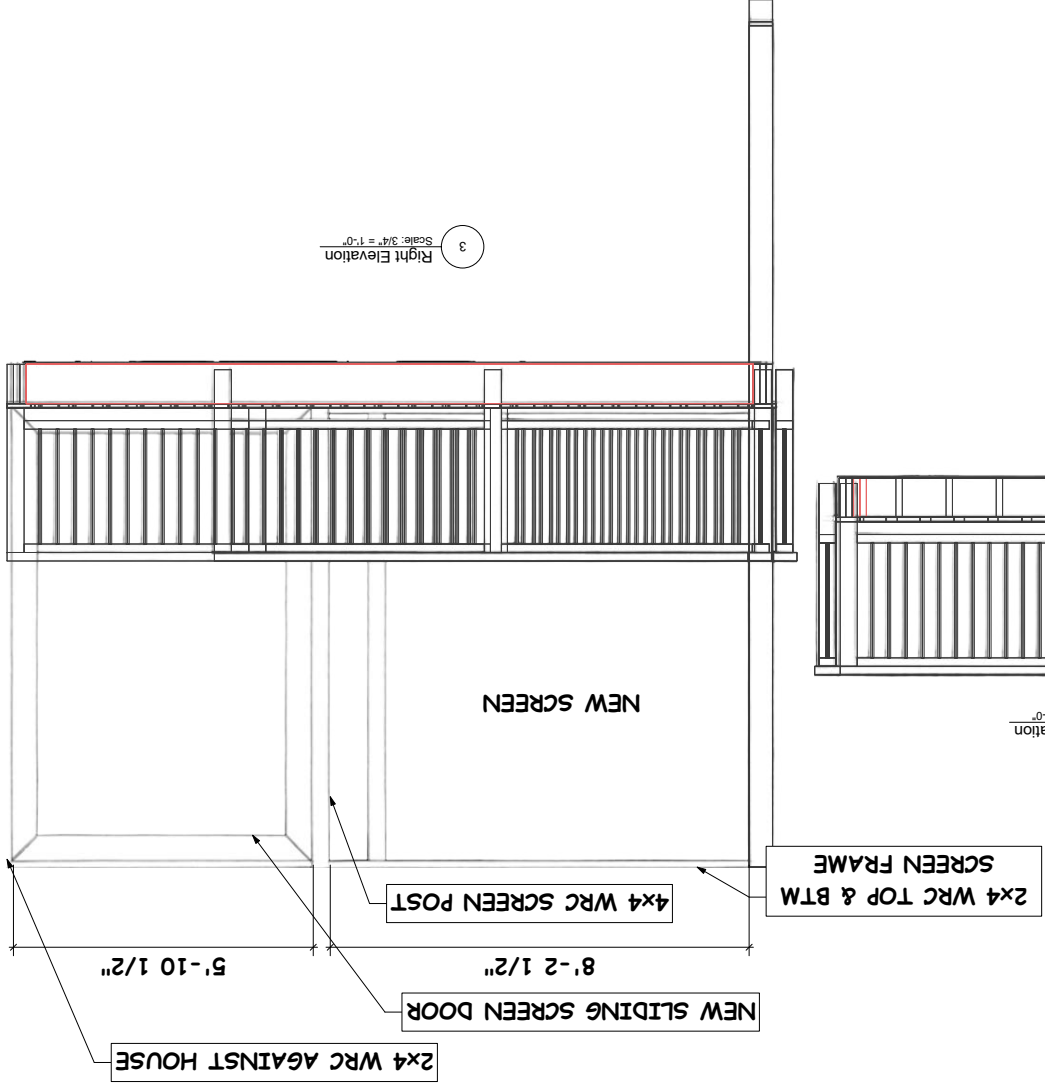
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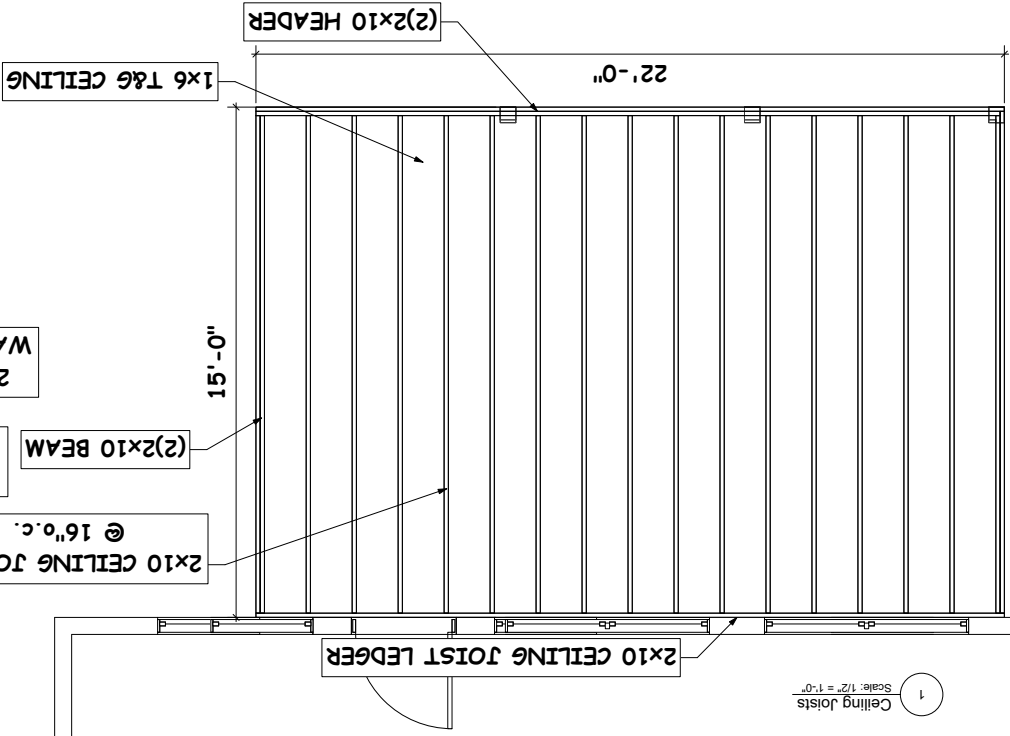


GENERAL NOTES

- 1) CONSTRUCT NEW SCREEN ROOM FROM ROUGH SAWN WESTERN RED CEDAR
- 2) INSTALL SCREEN EZE SCREEN RAIL SYSTEM
- 3) RAILINGS TO BE ON FRONT & YARD SIDE ONLY, DECK SIDE WILL NOT HAVE RAILINGS
- 4) CONTRUCT NEW 6/0 SLIDING SCREEN DOOR, INSTALLED WITH BARN DOOR HARDWARE



1
Ceiling Joists
Scale: 1/2" = 1'-0"



1) CONSTRUCT NEW SINGLE SLOPED ROOF WITH FLAT CEILING

2) CEILING JOIST LEDGER & RAFTER LEDGER SHALL BE 2x10

3) BEAMS SHALL BE (2)2x10

4) HEADER SHALL BE (2)2x10

5) CEILING JOISTS SHALL BE 2x10 @ 16"o.c., INSTALLED W/ LUS210Z

6) RAFTERS SHALL BE 2x8 @ 16"o.c., INSTALLED W/ LRU28Z & SDWC15600 @ HEADER

7) INSTALL 2x6 BLOCKING FOR OVERHANG

8) FASCIA SHALL BE 1x8 & COIL WRAPPED

9) FLAT CEILING SHALL BE 1x6 T&G

10) CEILING HEIGHT SHALL BE 9' FROM DECK HEIGHT

11) INSTALL ROOF SHEATHING, WITH STAGGERD SEAMS ON TOP OF RAFTERS

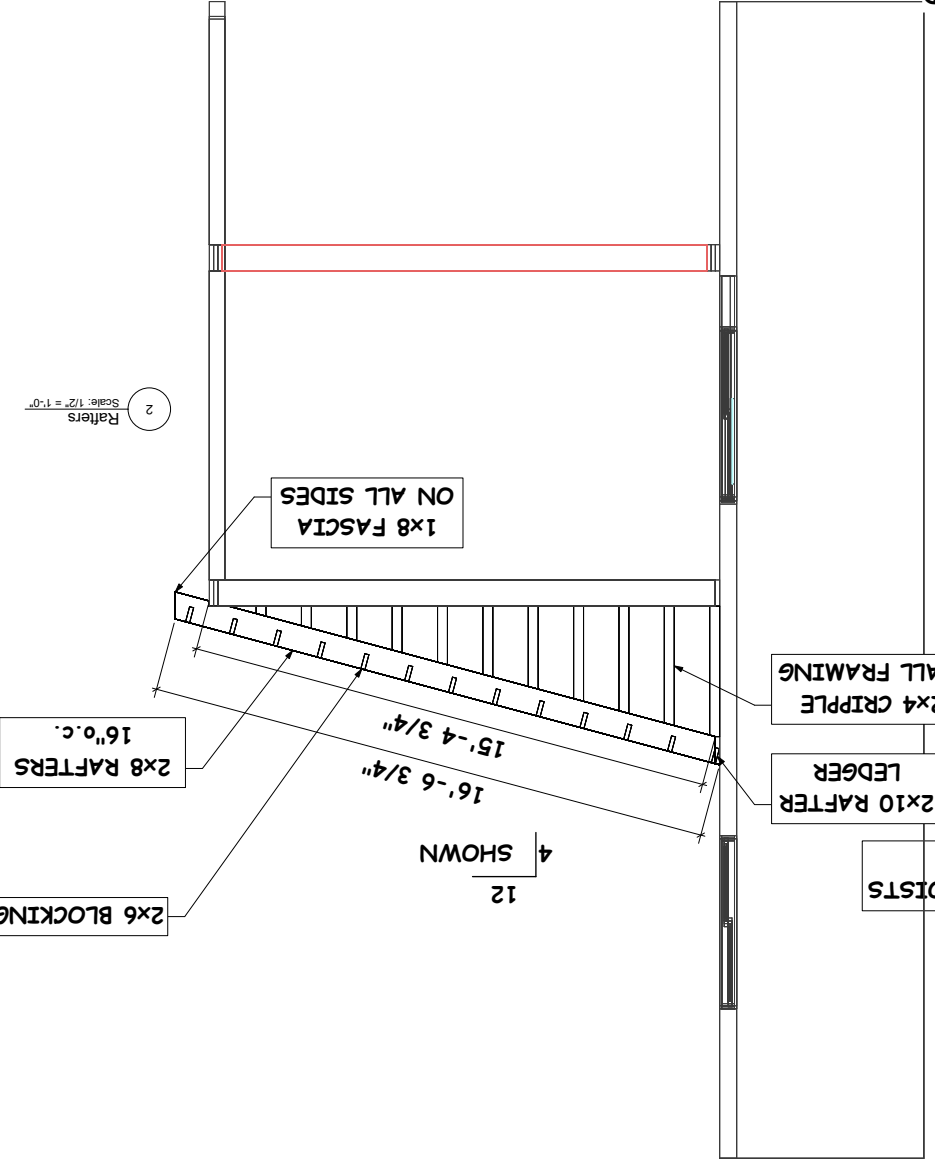
12) INSTALL SYNTH ROOF FELT OVER SHEATHING, SECURE WITH STAINLESS STAPLES

13) (8) INSTALL SHINGLES, MATCH EXISTING HOME

14) (1) INSTALL CRIPPLE WALL FRAMING, 2x4, & CEDAR LAP SIDING OVER FRAMING

ROOF NOTES

2
Rafters
Scale: 1/2" = 1'-0"



2x6 BLOCKING FOR 12" O.C.

2x8 RAFTERS
16"o.c.

12
4
SHOWN

16'-6 3/4"

15'-4 3/4"

1x8 FASCIA
ON ALL SIDES

2x4 CRIPPLE
WALL FRAMING

2x10 RAFTER
LEDGER

2x10 CEILING JOISTS
@ 16"o.c.

1x6 T&G CEILING

(2)2x10 HEADER

15'-0"

(2)2x10 BEAM

2x6 BLOCKING FOR 12" O.C.

2x8 RAFTERS
16"o.c.

12
4
SHOWN

16'-6 3/4"

15'-4 3/4"

1x8 FASCIA
ON ALL SIDES

2x4 CRIPPLE
WALL FRAMING

2x10 RAFTER
LEDGER

2x10 CEILING JOISTS
@ 16"o.c.

1x6 T&G CEILING

(2)2x10 HEADER

15'-0"

(2)2x10 BEAM

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2x6 BLOCKING FOR 12" O.C.

2
Rafters
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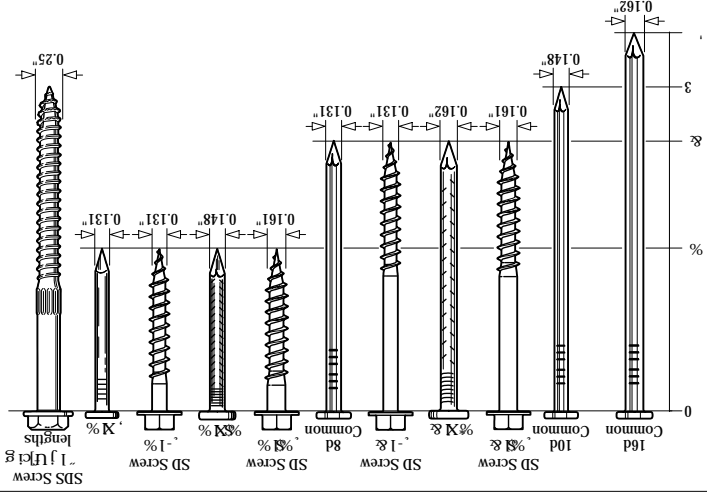
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General Notes:

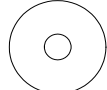

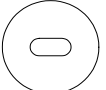
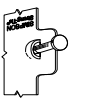

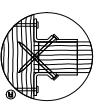

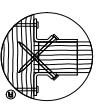
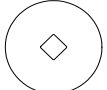
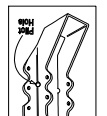
- 1. Outdoor environments are generally more corrosive to steel. If you choose to use ZMAX® or HDG finish or stainless steel material on an outdoor project, you should periodically inspect your connectors and fasteners or have a professional inspection performed. Regular maintenance, including water-proofing of the wood used in your outdoor project is also a good practice.
- 2. Coatings Available:
 - 2.1. ZMAX: Galvanized (G185) 1.85 oz. of zinc per square foot of surface area. (hot-dip galvanized per ASTM A653 total both sides). These products require hot-dip galvanized fasteners
 - 2.2. HDG - Hot Dip Galvanized: Products are hot-dip galvanized after fabrication (14 ga. and thicker). The coating weight increases with material thickness. The minimum specified coating weight (fasteners which meet the specifications of ASTM A153).
 - 2.3. SS - Stainless Steel Connectors are manufactured from Type 316L stainless steel, and provide greater durability against corrosion. Stainless-steel nails are required with stainless-steel products, and are available from Simpson Strong-Tie.
- 3. When using stainless steel connectors, use stainless steel fasteners. When applications allow the use of ZMAX/HDG galvanized connectors, use HDG fasteners that meet the specifications of ASTM A153 or equivalent coating offered on Simpson Strong-Tie fasteners.
- 4. Due to many variables involved with outdoor construction, Simpson Strong-Tie cannot provide estimates on service life of connectors, anchors or fasteners.
- 5. To obtain optimal performance from Simpson Strong-Tie products, the products must be installed properly and used in accordance with the installation instructions and design limits provided by Simpson Strong-Tie.
- 6. All installation notes and guidelines within the current *Wood Construction Connectors* catalog shall apply for the connectors, anchors, and fasteners shown.
- 7. Simpson Strong-Tie reserves the right to change the specifications, design and models shown without notice or liability for such changes.
- 8. Simpson Strong-Tie does not guarantee the performance or safety of products that are modified, improperly installed or not used in accordance with the design.
- 9. All references to bolts or machine bolts (MB) are structural quality through bolts (not lag screws or carriage bolts) equal to or better than ASTM A307, grade A. Bolt holes shall be at least a minimum 1/32" and no more than a maximum of 1/16" larger than the bolt diameter per 2005 NDS Section 11.1.2.
- 10. Unless noted otherwise, all references to standard cut washers refer to Type A plain washers (W) conforming to the dimensions shown in ASME B18.22.1 for the appropriate rod sizes.
- 11. Unless stated otherwise, Simpson Strong-Tie cannot and does not make any representation regarding the suitability of use or load-carrying capacities of connectors installed with improper fasteners.

D01 General Notes



- Fastener Notes:**
- 1. The specified quantity, type and size of fastener must be installed in the correct holes on the connector to achieve published loads. Incorrect fastener selection or installation can compromise connector performance and could lead to failure.
 - 2. Nail diameter assumes no coating. See technical bulletin *T-NAILGUIDE* for more information.
 - 3. The Simpson Strong-Tie® SD structural-connector screw is the only screw approved for use with our connectors.
 - 4. NAIL reference in tables: 16d = 16d common, 10d = 10d common

D02 Fasteners

	Round Holes Purpose: to fasten a connector. Fill requirements: always fill, unless noted otherwise.		Speed Prongs Used to temporarily position and secure the connector for easier and faster installation.
	Oval Holes Purpose: to make fastening a connector in a tight location easier. Fill requirements: always fill.		Dome Nailing This feature guides the nail into the joist and header at a 45° angle.
	Hexagonal Holes Purpose: to fasten a connector to concrete or masonry. Fill requirements: Fill requirements: fasteners fill when fastening a connector to concrete or masonry.		Double Shear Nailing The nail is installed in through two points on each joist nail for greater strength.
	Triangular Holes Purpose: to increase a connector's strength or to achieve Max. Fill requirements: make installing easier.		Pilot Holes Tooling holes for manufacturing purposes. No fasteners required.
	Diamond Holes Purpose: to temporarily fasten a connector to make installing easier. Fill requirements: none.		

Fastening Identification



SIMPSON STRONG-TIE COMPANY, INC.
NORTHEAST: 2800 International Street, Columbus, Ohio 43228
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7/04/2018

Installation Details for Simpson Strong-Tie® Connectors and Fasteners Used in the Construction of Wood Decks



Project Manager

Christian K

Revised

NO Date Note

Design Firm

Smoky Mountain
299 Fox
Kingsport, TN

Data

CAD File/Version

SCALE:

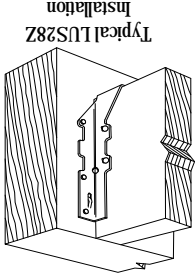
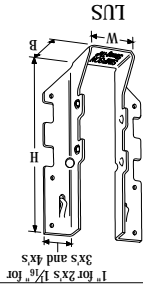
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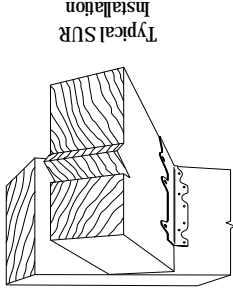
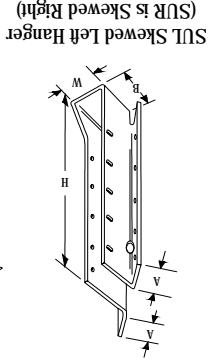


- Installation:**
- LUS hangers install with double shear nailing.
 - For installations into single 2x headers or ledgers, use the specified full length fasteners into the joist and the following fasteners into the header for reduced loads in accordance with www.strongtie.com.
 - 10K1 1/4" nails for installations with Nails
 - SD #9K1 1/4" for LUS28Z and LUS210Z installations with SD Screws
 - SD #10K1 1/4" for LUS26Z and LUS210Z installations with SD Screws

Model No.	Dimensions (in.)				Fasteners	
	W	H	B	Header	Joist	Header
LUS26Z	1 9/16	4 3/4	1 3/4	4-10d	4-10d	4-10d
LUS28Z	1 9/16	6 5/8	1 3/4	6-10d	4-10d	4SD #9K1 1/4
LUS210Z	1 9/16	7 13/16	1 3/4	8-10d	4-10d	8SD #9K1 1/4
LUS26-2Z	3 1/8	4 7/8	2	4-16d	4-16d	4SD #10K1 1/4
LUS210-2Z	3 1/8	9	2	8-16d	6-16d	8SD #10K1 1/4

1. ☐ indicates connector is available in stainless steel. Replace Z in model number with SS when ordering.
2. Refer to current *Wood Construction Connectors* catalog for additional information.

D03 LUS Joist Hangers

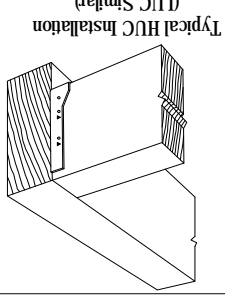


- Installation:**
- The joist may be square cut or bevel cut.
 - These hangers will normally accommodate a 40° to 50° skew.

Model No.	Joist Size	Dimensions (in.)						Fasteners
		W	H	B	A1	A2	Header	Joist
SUR/26Z	2x6, 8	1 9/16	5	2	1 1/8	1 5/16	6-16d	6-10K1 1/4
SUR/210Z	2x10, 12	1 9/16	8 1/8	2	1 1/8	1 5/16	10-16d	10-10K1 1/4
SUR/210-2Z (2)	2x10, 12	3 1/8	8 11/16	2 5/8	1 7/16	2 3/8	14-16d	6-10K1 1/4

1. ☐ indicates connector is available in stainless steel. Replace Z in model number with SS when ordering.
2. Refer to current *Wood Construction Connectors* catalog for additional information.

D05 SUR/SL 45° Skewed Joist Hangers



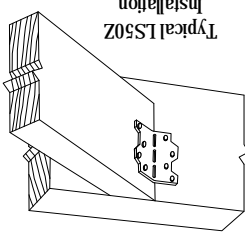
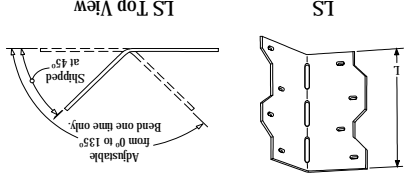
- Installation:**
- For HUC installations, models have triangle holes. To achieve maximum loads, fill both triangle holes (fastener quantities listed fill holes. To achieve maximum loads, fill both triangle holes (fastener quantities listed fill holes.
 - For installations into single 2x headers or the specified full length fasteners into the joist and the following fasteners into the header for reduced loads in accordance with www.strongtie.com.
 - 10K1 1/4" nails for installations with Nails
 - SD #9K1 1/4" for LUC3XZ and LUC210Z installations with SD Screws

Model No.	Dimensions (in.)				Fasteners	
	W	H	B	Header	Joist	Header
LUC26Z	1 9/16	4 3/4	1 3/4	6-10d	4-10K1 1/4	6SD #9K1 1/4
LUC210Z	1 9/16	7 3/4	1 3/4	10-10d	6-10K1 1/4	10SD #9K1 1/4
HUC26-2Z	3 1/8	5 3/8	2 1/2	12-16d	6-10d	-
HUC28-2Z	3 1/8	7	2 1/2	14-16d	6-10d	-
HUC210-2Z	3 1/8	8 13/16	2 1/2	18-16d	10-10d	-

1. ☐ indicates connector is available in stainless steel. Replace Z in model number with SS when ordering.
2. Refer to current *Wood Construction Connectors* catalog for additional information.

D04 LUC, HUC Joist Hangers

- Installation:**
- Field skewable: bend one time only.
 - Joist must be constrained against rotation (for example, with solid blocking) when using a single LS per connection.



1. ☐ indicates connector is available in stainless steel. Replace Z in model number with SS when ordering.
2. Refer to current *Wood Construction Connectors* catalog for additional information.

D06 LS Framing Angles

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NORTHEAST: 2800 International Street, Columbus, Ohio 43228
NORTHWEST: 5151 South Airport Way, Stockton, California 95210
SOUTHEAST: 2221 County Lane, McKinney, Texas 75069
SOUTHWEST: 12246 Holly Street, Riverside, California 92509



Installation Details for Simpson Strong-Tie® Connectors and Fasteners Used in the Construction of Wood Decks



Project Manager
Christian K

Revised
NO Date Note

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Design Firm
Smoky Mountain
299 Fox
Kingsston, TN

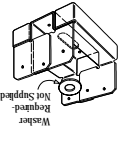
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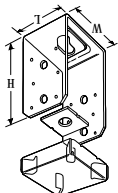
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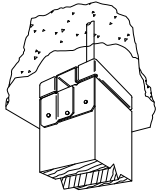
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AB444Z



ABU44Z



(ABU Similar)
Typical ABA Installation

- Installation:**
- ABA, ABU - for pre-pour installed anchors. For Simpson Strong-Tie epoxy or mechanical anchors, select and install in accordance with www.strongtie.com.
 - Products require washers between the nut and the base. Washers are supplied with the ABU but not the ABA, which requires a standard cut washer.

Model No.	Post	Size	W	L	H	Anchor Dia.	Nails	Dimensions (in.)		Machine Bolts	Qty.	Dia.
								SD Screws	SD Screws			
AB444Z	4x4	3 9/16	3 1/8	3 1/16	-	-	1/2	6-10d	6SD #10x1 1/2	-	-	-
ABU44Z	4x4	3 9/16	3	5 1/2	1 3/4	5/8	12-16d	12SD #10x1 1/2	2	1/2	-	-
ABA46Z	4x6	3 9/16	5 3/16	3 1/8	5/8	8-16d	8SD #10x1 1/2	-	-	-	-	-
ABU46Z	4x6	3 9/16	5	7	2 5/8	5/8	12-16d	8SD #10x1 1/2	2	1/2	-	-
ABA66Z	6x6	5 1/2	5 1/4	3 1/8	5/8	8-16d	8SD #10x1 1/2	-	-	-	-	-
ABU66Z	6x6	5 1/2	5	6 1/16	1 3/4	5/8	12-16d	8SD #10x1 1/2	2	1/2	-	-
ABU88Z	8x8	7 1/2	7	7	-	2 - 5/8	18-16d	-	-	-	-	-

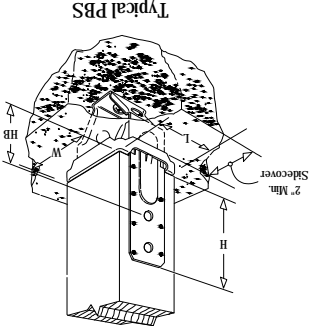
D08 ABA, ABU Post Bases

1. \square indicates connector is available in stainless steel. Replace Z in model number with SS when ordering.
2. Refer to current *Wood Construction Connectors* catalog for additional information.

Model No.	W	L	H	HB	Nails	SD Screws	Qty.	Dia.	Machine Bolts
PBS44AHDC	3 9/16	3 1/2	6 1/4	3 7/16	14-16d	14SD #10x1 1/2	2	1/2	-
PBS66HDC	5 1/2	5 3/8	6 1/2	3 11/16	14-16d	-	2	1/2	-

D09 PBS Post Bases

1. Refer to current *Wood Construction Connectors* catalog for additional information.



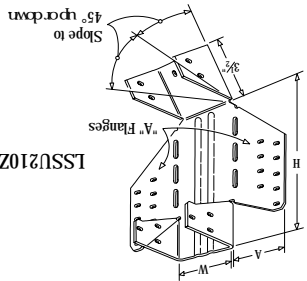
Typical PBS

- Installation:**
- Embed into wet concrete up to the bottom of the T standoff base plate. A 2" minimum side covers required to obtain the full load.
 - Allow for free concrete flow. Holes in the bottom of the straps installation of the post.

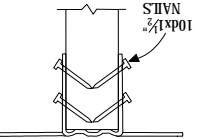
D07 LSU, LSSU Adjustable Joist Hangers

1. For skewed LSU, the inner most face fasteners on the acute angle side are not installed.
2. Refer to current *Wood Construction Connectors* catalog for additional information.

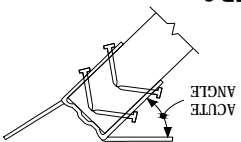
Model No.	Dimensions (in.)			Fasteners	
	W	H	A	Header	Joist
LSU26Z	1 9/16	4 7/8	1 1/2	6-10d	5-10dx1 1/2
LSSU210Z	1 9/16	8 1/2	1 5/8	10-10d	7-10dx1 1/2



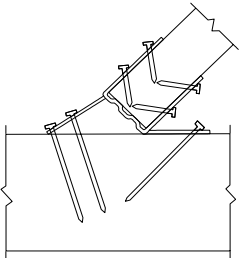
- Installation:**
- Follow 3-step installation sequence for skewed or sloped/skewed applications.
 - Do not substitute 10dx1 1/2 nails for face nails.
 - To see an installation video on this product, visit www.strongtie.com



STEP 1
Nail hanger to slope-cut carried member, installing seat nail first. No bevel necessary for skewed installation. Install joist nails at 45° angle.



STEP 2
Skew flange from 0-45°. Bend other flange back along centerline of slots until it meets the header. Bend one time only.



STEP 3
Attach hanger to the carrying member, acute angle side first (see footnote 1). Install nails at an angle.



SIMPSON STRONG-TIE COMPANY, INC.
NORTHEAST: 2800 International Street, Columbus, Ohio 43228
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SOUTHEAST: 2221 County Lane, McKinney, Texas 75069
SOUTHWEST: 12246 Holly Street, Riverside, California 92509

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Rev. 1
7/04/2018

Installation Details for Simpson Strong-Tie® Connectors and Fasteners Used in the Construction of Wood Decks

Design Firm
Smoky Mountain
299 Fox
Kingsston, T

NO Date Note

Project M
Christian K



JENS
412 E SCC
KNOXVILLE

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299 Fox
Kingsston, T

NO Date Note

Project M
Christian K

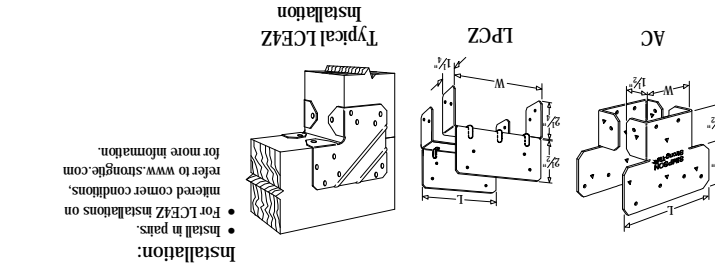


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Installation Details for Simpson Strong-Tie® Connectors and Fasteners Used in the Construction of Wood Decks

Model No.		Post Size		Dimensions (in.)		Number of	
Model No.	Post Size	W1	W2	D	H	SDS Screws	
						SDS Screws	
CBsq44-SDS2HDC	4x4	3 9/16	3 1/2	7 1/8	8 3/8	14SDS 1/2"x2"	14SDS 1/2"x2"
CBsq46-SDS2HDC	4x6	3 9/16	5 5/16	7 13/16	8 11/16	14SDS 1/2"x2"	14SDS 1/2"x2"
CBsq66-SDS2HDC	6x6	5 1/2	5 1/2	6 7/8	8 3/4	14SDS 1/2"x2"	14SDS 1/2"x2"
CBsq86-SDS2HDC	6x8	7 1/2	5 3/8	6 1/8	8 11/16	12SDS 1/2"x2"	12SDS 1/2"x2"
CBsq88-SDS2HDC	8x8	7 1/2	7 3/8	6 1/8	8 11/16	12SDS 1/2"x2"	12SDS 1/2"x2"

1. ☐ indicates connector is available in stainless steel. Replace Z in model number with SS when ordering.
2. Refer to current Wood Construction Connectors catalog for additional information.

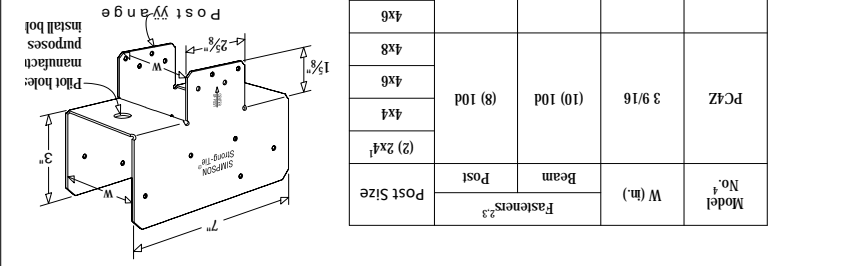


Model No.		Dimensions (in.)		Fasteners	
Model No.	W	L	Beam Post	Nails	SD Screws
AC4Z	3 9/16	6 1/2	14-16d	14SD #10x1 1/2	14SD #10x1 1/2
AC6Z	5 1/2	8 1/2	14-16d	14SD #10x1 1/2	14SD #10x1 1/2
LPC4Z	3 9/16	3 1/2	8-10d	8SD #9x1 1/2	8SD #9x1 1/2
LPC6Z	5 9/16	5 1/2	8-10d	8-10d	-
LCE4Z	-	-	5 3/8	14-16d	10-16d

1. ☐ indicates connector is available in stainless steel. Replace Z in model number with SS when ordering.
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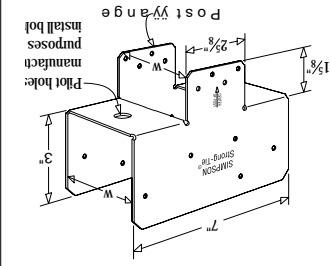
Model No.		Post Size		Dimensions (in.)		Fasteners	
Model No.	Post Size	W1	W2	L1	L2	H1	H2
BC4Z	3 9/16	3 9/16	2 7/8	2 7/8	3	6-16d	6-16d
BC6Z	5 1/2	4 3/8	4 3/8	3 3/8	3 3/8	12-16d	12-16d
BCS2-2/4Z	3 1/8	3 9/16	2 7/8	2 15/16	8-10d	6-10d	8SD #9x2 1/2
BCS2-3/6Z	4 5/8	5 9/16	4 3/8	2 7/8	3 5/16	12-16d	6-16d

1. ☐ indicates connector is available in stainless steel. Replace Z in model number with SS when ordering.
2. Refer to current Wood Construction Connectors catalog for additional information.



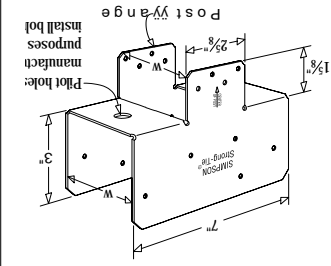
Model No.		Post Size		Dimensions (in.)		Fasteners	
Model No.	W (in.)	Beam Post	Fasteners	Post Size	(2) 2x4	4x4	4x6
PC4Z	3 9/16	(10) 10d	(8) 10d	4x6	4x8	4x8	4x8
PC6Z	5 1/2	(10) 10d	(8) 10d	6x6	6x8	6x8	6x8
PC8Z	7 1/2	(10) 10d	(8) 10d	6x8	8x8	8x8	8x8

1. Post and beam may consist of multiple members provided they are connected independently of the post cap fasteners.
2. 10d x 2 1/2" (0.148" dia. x 2 1/2" long) nails may be used with no load reduction for uplift and 0.85 of the table loads for lateral.
3. Strong Drive SD9 x 1 1/2" Connector screws may be substituted for table fasteners with no load reduction.
4. Models available for rough size lumber, specify RZ suffix. Ex. PC4RZ.



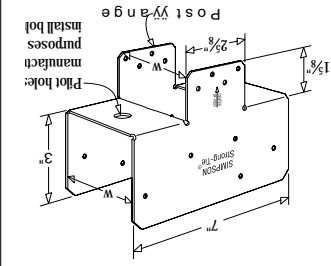
Model No.		Post Size		Dimensions (in.)		Fasteners	
Model No.	Post Size	W	H	D	H	SD Screws	Nails
PCZ	3 9/16	3 9/16	2 7/8	2 7/8	3	6-16d	6-16d
PC6Z	5 1/2	5 1/2	3 3/8	3 3/8	3 3/8	12-16d	12-16d
PC8Z	7 1/2	7 1/2	4 3/8	4 3/8	4 3/8	12-16d	12-16d

1. Post and beam may consist of multiple members provided they are connected independently of the post cap fasteners.
2. 10d x 2 1/2" (0.148" dia. x 2 1/2" long) nails may be used with no load reduction for uplift and 0.85 of the table loads for lateral.
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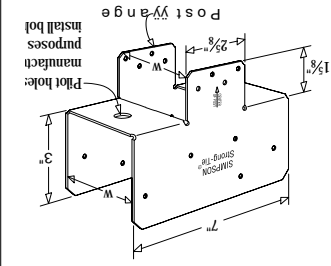
Model No.		Post Size		Dimensions (in.)		Fasteners	
Model No.	Post Size	W	H	D	H	SD Screws	Nails
PCZ	3 9/16	3 9/16	2 7/8	2 7/8	3	6-16d	6-16d
PC6Z	5 1/2	5 1/2	3 3/8	3 3/8	3 3/8	12-16d	12-16d
PC8Z	7 1/2	7 1/2	4 3/8	4 3/8	4 3/8	12-16d	12-16d

1. Post and beam may consist of multiple members provided they are connected independently of the post cap fasteners.
2. 10d x 2 1/2" (0.148" dia. x 2 1/2" long) nails may be used with no load reduction for uplift and 0.85 of the table loads for lateral.
3. Strong Drive SD9 x 1 1/2" Connector screws may be substituted for table fasteners with no load reduction.
4. Models available for rough size lumber, specify RZ suffix. Ex. PC4RZ.



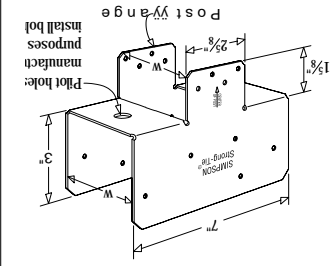
Model No.		Post Size		Dimensions (in.)		Fasteners	
Model No.	Post Size	W	H	D	H	SD Screws	Nails
PCZ	3 9/16	3 9/16	2 7/8	2 7/8	3	6-16d	6-16d
PC6Z	5 1/2	5 1/2	3 3/8	3 3/8	3 3/8	12-16d	12-16d
PC8Z	7 1/2	7 1/2	4 3/8	4 3/8	4 3/8	12-16d	12-16d

1. Post and beam may consist of multiple members provided they are connected independently of the post cap fasteners.
2. 10d x 2 1/2" (0.148" dia. x 2 1/2" long) nails may be used with no load reduction for uplift and 0.85 of the table loads for lateral.
3. Strong Drive SD9 x 1 1/2" Connector screws may be substituted for table fasteners with no load reduction.
4. Models available for rough size lumber, specify RZ suffix. Ex. PC4RZ.



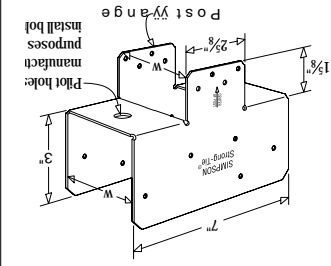
Model No.		Post Size		Dimensions (in.)		Fasteners	
Model No.	Post Size	W	H	D	H	SD Screws	Nails
PCZ	3 9/16	3 9/16	2 7/8	2 7/8	3	6-16d	6-16d
PC6Z	5 1/2	5 1/2	3 3/8	3 3/8	3 3/8	12-16d	12-16d
PC8Z	7 1/2	7 1/2	4 3/8	4 3/8	4 3/8	12-16d	12-16d

1. Post and beam may consist of multiple members provided they are connected independently of the post cap fasteners.
2. 10d x 2 1/2" (0.148" dia. x 2 1/2" long) nails may be used with no load reduction for uplift and 0.85 of the table loads for lateral.
3. Strong Drive SD9 x 1 1/2" Connector screws may be substituted for table fasteners with no load reduction.
4. Models available for rough size lumber, specify RZ suffix. Ex. PC4RZ.



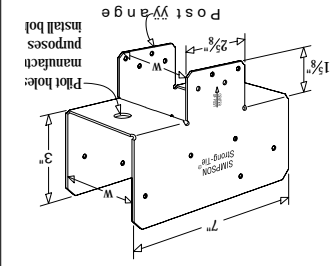
Model No.		Post Size		Dimensions (in.)		Fasteners	
Model No.	Post Size	W	H	D	H	SD Screws	Nails
PCZ	3 9/16	3 9/16	2 7/8	2 7/8	3	6-16d	6-16d
PC6Z	5 1/2	5 1/2	3 3/8	3 3/8	3 3/8	12-16d	12-16d
PC8Z	7 1/2	7 1/2	4 3/8	4 3/8	4 3/8	12-16d	12-16d

1. Post and beam may consist of multiple members provided they are connected independently of the post cap fasteners.
2. 10d x 2 1/2" (0.148" dia. x 2 1/2" long) nails may be used with no load reduction for uplift and 0.85 of the table loads for lateral.
3. Strong Drive SD9 x 1 1/2" Connector screws may be substituted for table fasteners with no load reduction.
4. Models available for rough size lumber, specify RZ suffix. Ex. PC4RZ.



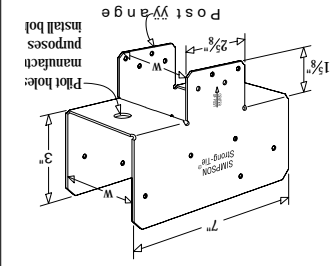
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PC8Z	7 1/2	7 1/2	4 3/8	4 3/8	4 3/8	12-16d	12-16d

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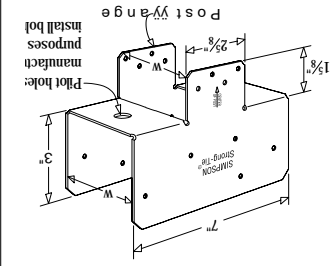
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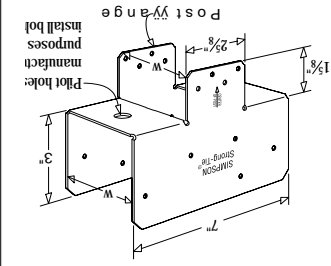
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PCZ

Typical EPCZ End Post Cap Installation

- For end c
- Installati
- Use all sp
- Fasteners
- Do not in
- Into pilot

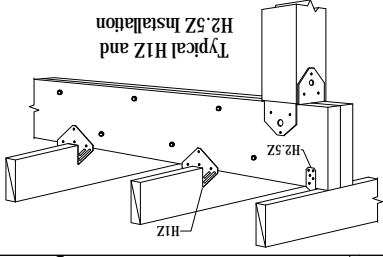
D16	H Hurricane Ties
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2. Refer to current *Wood Construction Connectors* catalog for additional information.

Model No.	To Joist	68d \times 1 $\frac{1}{2}$	48d \times 1 $\frac{1}{2}$	6SD #9 \times 1 $\frac{1}{2}$	4SD #9 \times 1 $\frac{1}{2}$
	To Beam	58d \times 1 $\frac{1}{2}$	58d \times 1 $\frac{1}{2}$	5SD #9 \times 1 $\frac{1}{2}$	5SD #9 \times 1 $\frac{1}{2}$
	To Joist	58d \times 1 $\frac{1}{2}$	58d \times 1 $\frac{1}{2}$	5SD #9 \times 1 $\frac{1}{2}$	5SD #9 \times 1 $\frac{1}{2}$
	To Beam	58d \times 1 $\frac{1}{2}$	58d \times 1 $\frac{1}{2}$	5SD #9 \times 1 $\frac{1}{2}$	5SD #9 \times 1 $\frac{1}{2}$
Fasteners	Nails	SD Screws			

Installation:

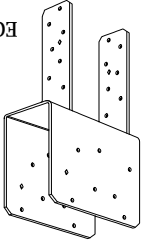
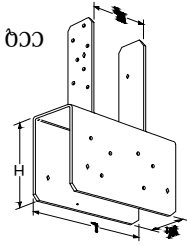
- Use all specified fasteners.



D14	CCQ, ECCQ Post Caps
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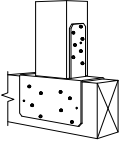
1. ☐ indicates connector is available in stainless steel. Replace *MS* in model number with *SS* when ordering.

Model No.	Beam Width	W1	W2	Dimensions (in.)				Beam & Cambs Bc 108C 1	Post
				LI		CCq	ECCq		
				H					
CCQ3-6HDC	3/8	3/4	5/2	11	8 1/2	7	16		
CCQ44HDC	4x	3/8	3/8	11	8 1/2	7	16	14	
CCQ46HDC	4x	3/8	5/2	11	8 1/2	7	16	14	
CCQ48HDC	4x	3/8	7/2	11	8 1/2	7	16	14	
CCQ66HDC	6x	5/2	5/2	11	8 1/2	7	16	14	
CCQ68HDC	6x	5/2	7/2	11	8 1/2	7	16	14	



Installation:

- For end conditions, specify ECCQ
- Install Simpson Strong-Tie SDS $\frac{1}{4}$ " x $2\frac{1}{2}$ " screws, which are provided with the column cap, with a $\frac{3}{8}$ " hex head driver. SDS screws install best with a low speed $\frac{1}{2}$ " drill.
- Beam depth must be a minimum 7"



Typical CCO
Installation

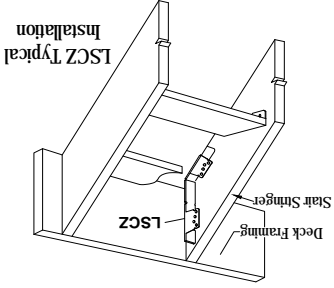
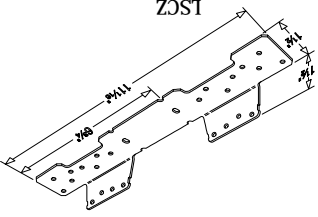
D17

MSC Stair Stringer Connector

Model No.	LSCZ					
	8-10k1½	8-10k1½	1-10k1½	8SD #9x1½	8SD #9x1½	1-SD #9x1½
	Rim Joist	Stringer Wide Face	Stringer Narrow Face	Rim Joist	Stringer Wide Face	Stringer Narrow Face
	Nails			SD Screws		
	Fasteners					

- Installation:**
- Before assembling, position the stair stringer with the LSCZ on the carrying member to verify where the bend should be located.
 - Tabs on the LSCZ must be positioned to the inside of the stairs.
 - The fastener that is installed into the bottom edge of the stringer must go into the second-to-last hole.
 - A minimum distance of 3/4" measured from the lowest rim-joint fastener to the edge of rim joist is required.

Installation:



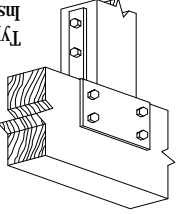
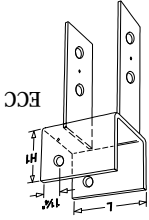
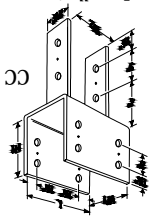
D15	CC, ECC Post Caps
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1. ☐ Indicates connector is available in stainless steel. Replace *msc* in model number with *ss* when ordering.

Model No.	Beam Width	W1	W2	Dimensions (in.)				Machine Bolts				
				L	ECC	H1	Dia.					
									Beam	CC	ECC	Post
CC3-1/4-4HDC	3 / 8	3 / 4	3 / 5/8	11	7 / 1/2	6 / 1/2	5/8	4	2	2		
CC3-1/4-6HDC	3 / 8	3 / 4	5 / 1/2	11	7 / 1/2	6 / 1/2	5/8	4	2	2		
CC44HDC	4x	3 / 5/8	3 / 5/8	7	5 / 1/2	4	5/8	2	1	2		
CC66HDC	6x	5 / 1/2	5 / 1/2	11	7 / 1/2	6 / 1/2	5/8	4	2	2		

- For end conditions, specify ECC
- Bolt holes shall be a minimum $\frac{7}{16}$ " to a maximum $\frac{9}{16}$ " larger than the bolt diameter.
- Contact engineered wood manufacturers for connections that are not through the wide face.
- Beam depth must be at least as tall as H1.

Installation:



Typical CC Installation



SIMPSON STRONG-TIE COMPANY INC.
NORTHEAST: 2600 International Street, Columbus, Ohio 43228
NORTHWEST: 5151 South Airport Way, Stockton, California 95288
SOUTHEAST: 2221 County Lane, McKinney, Texas 75069
SOUTHWEST: 12246 Holly Street, Riverside, California 92509

Page 5 of 7
Rev. 1
7/04/2018

Installation Details for Simpson Strong-Tie® Connectors and Fasteners Used in the Construction of Wood Decks

GAF Timberline**HDZ**[®]
High Definition[®] Lifetime Shingles



America's #1-selling shingle just got better — again

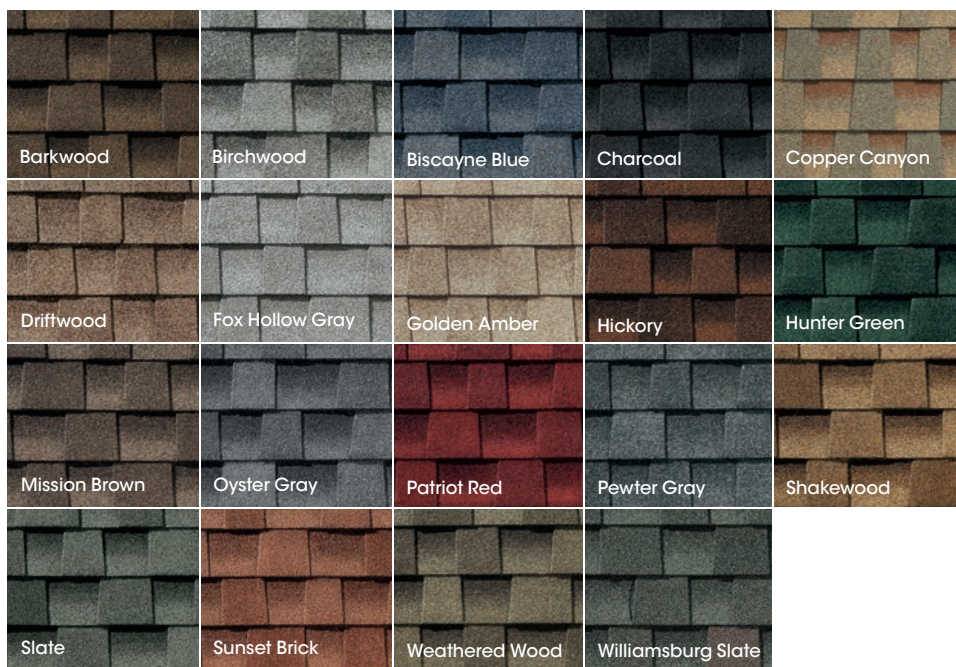
With GAF time-release algae-fighting technology and LayerLock[®] technology, Timberline HDZ[®] offers everything you can expect from an architectural shingle roof, and more.



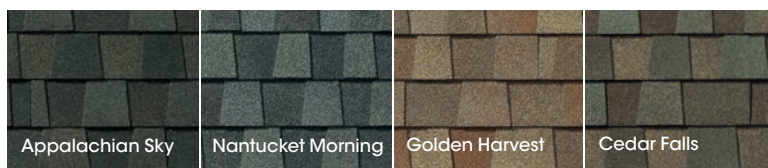
Benefits:

- **LayerLock® technology** — mechanically fuses the common bond between overlapping shingle layers
- **Up to 99.9% nailing accuracy** — the StrikeZone® nailing area is so easy to hit that a roofer placed 999 out of 1,000 nails correctly in our test¹
- **WindProven™ Limited Wind Warranty** — when installed with the required combination of GAF accessories, Timberline HDZ® shingles are eligible for a wind warranty with no maximum wind speed limitation²
- **Dura Grip™ sealant** pairs with the microgranule surface of the StrikeZone® nailing area, and an asphalt-to-asphalt monolithic bond cures for durability, strength, and exceptional wind-uplift performance
- **25-year StainGuard Plus™ Algae Protection Limited Warranty** against blue-green algae discoloration.³ Proprietary GAF time-release algae-fighting technology helps protect your shingles from unsightly stains.
- **For the best look** — use TimberTex® premium ridge cap shingles or TimberCrest® premium SBS-modified ridge cap shingles

Colors:



Harvest Blend Colors⁵



Product details:

Product/System Specifics

- Fiberglass asphalt construction
- **Dimensions (approx.):** 13 1/4" x 39 3/8" (337 mm x 1,000 mm)
- **Exposure:** 5 5/8" (143 mm)
- **Bundles/Square:** 3
- **Pieces/Square:** 64
- **StainGuard Plus™ Algae Protection Limited Warranty**³
- **Hip/Ridge:** TimberTex®; TimberCrest®; Seal-A-Ridge®; Z®Ridge; Ridglass®⁴
- **Starter:** Pro-Start®; QuickStart®; WeatherBlocker™

Applicable Standards & Protocols:

- Passes UL 2218 Impact-Resistance Test with Class 3 rating
- UL Listed to ANSI/UL 790 Class A
- State of Florida Approved
- Classified by UL in accordance with ICC-ES AC438
- Meets ASTM D7158, Class H
- Meets ASTM D3161, Class F
- Meets ASTM D3018 Type 1
- Meets ASTM D3462⁵
- Miami-Dade County Product Control Approved
- ICC-ES Evaluation Reports ESR-1475 and ESR-3267
- Meets Texas Department of Insurance Requirements
- Rated by the CRRC: Can be used to comply with Title 24 Cool Roof Requirements (some colors)

¹ Lifetime refers to the length of warranty coverage provided and means as long as the original individual owner(s) of a single-family detached residence [or eligible second owner(s)] owns the property where the qualifying GAF products are installed. For other owners/structures, Lifetime coverage is not applicable. Lifetime coverage on shingles requires the use of GAF Lifetime shingles only. See the *GAF Shingle & Accessory Limited Warranty* for complete coverage and restrictions. Visit gaf.com/LRS for qualifying GAF products. Lifetime coverage on shingles and accessories requires the use of any GAF Lifetime shingle and at least 3 qualifying GAF accessories. See the *GAF Roofing System Limited Warranty* for complete coverage and restrictions. For installations not eligible for the *GAF Roofing System Limited Warranty*, see the *GAF Shingle & Accessory Limited Warranty*. Visit gaf.com/LRS for qualifying GAF products.

² Results based on study conducted by Home Innovation Research Labs, an independent research lab, comparing installation of Timberline HDZ® Shingles to Timberline HDZ® Shingles on a 16-square roof deck using standard 4-nail nailing pattern under controlled laboratory conditions. Actual results may vary.

³ 25-year WindProven® Limited Wind Warranty on GAF shingles with LayerLock® technology requires the use of GAF starter strips, roof deck protection, ridge cap shingles, and leak barrier or attic ventilation. See *GAF Roofing System Limited Warranty* for complete coverage and restrictions. Visit gaf.com/LRS for qualifying GAF products. For installations not eligible for the *GAF WindProven™ Limited Warranty*, see the *GAF Shingle & Accessory Limited Warranty*.

⁴ 25-year StainGuard Plus™ Algae Protection Limited Warranty against blue-green algae discoloration is available only on products sold in packages bearing the StainGuard Plus™ logo. See *GAF Shingle & Accessory Limited Warranty* for complete coverage and restrictions and qualifying products.

⁵ Harvest Blend colors are only available on TimberTex® Ridge Cap Shingles, Seal-A-Ridge® Ridge Cap Shingles, and TimberCrest® Premium SBS-Modified Ridge Cap Shingles.

⁶ Periodically tested by independent and internal labs to ensure compliance with ASTM D3462 at time of manufacture.



Note: It is difficult to reproduce the color clarity and actual color blends of these products. Before selecting your color, please ask to see several full-size shingles.

We protect what matters most™

