



# HOME PROJECTS CONNECTORS



## Projects for Your Home

### DECK PROJECT

A35Z – Framing Anchor .....	20
ABA44Z – Standoff Post Base .....	32
ABU44Z – Post Base .....	32
BC4Z – Post Cap .....	35
BC40Z – Half Post Base .....	35
BCS2-2/4Z – Post Cap .....	35
CBSQ44HDG – Column Base .....	33
DBT1Z – Deck Board Tie .....	26
DPT5Z – Deck Post Tie .....	26
DPT7Z – Deck Post Tie .....	26
DJT14Z – Deck Joist Tie .....	26
DPPC4BK – Decorative Post Cover .....	35
H1Z – Hurricane Tie .....	30
H2.5AZ – Hurricane Tie .....	30
LPC4Z – Post Cap .....	36
LUS26Z – Light Double Shear Joist Hanger .....	29
PB44Z – Post Base .....	34
TA9Z – Staircase Angle .....	27
TA10Z – Staircase Angle .....	27

### PATIO COVER PROJECT

AC4Z – Post Cap .....	35
ABU44Z – Post Base .....	32
BC4Z – Post Cap .....	35
CBSQ44HDG – Column Base .....	33
H1Z – Hurricane Tie .....	30
H2.5AZ – Hurricane Tie .....	30
HS24Z – Hurricane Tie .....	21
LCE4Z – Post Cap .....	36
LUS28Z – Light Double Shear Joist Hanger .....	29
PBS44HDG – Post Base .....	34

### FENCE PROJECT

FB24Z – Fence Bracket .....	27
FB26 – Fence Bracket .....	27
PGT – Pipe Grip Tie .....	27
PGTIC – Pipe Grip Tie .....	27

### GARAGE ORGANIZATION PROJECT

RTA – Rigid Tie™ Angle .....	24
RTC24 – Rigid Tie™ Corner Connector .....	25
RTF2Z – Rigid Tie™ Flat Connector .....	25

**(800) 999-5099**  
**www.strongtie.com**

## What's a Connector?

If you've never used connectors before, this catalog will surprise you with our many products that make wood frame construction easier for both the weekend carpenter and the professional builder.

Connectors add greater strength and safety to your project. They require fewer nails for installation, and often eliminate the need for toenailing or more complicated traditional construction methods.

Even if you've used joist hangers, angles, or strap ties before, you may not know about all the other connectors we make for specific applications like post bases and caps, seismic and hurricane anchors, framing anchors and shelf or fence brackets. Fill all nail holes with specified fasteners before loading.

Your local building-supply dealer or home improvement center can help you select the connectors best suited to your project.

***Check your local building codes before you begin a project.***

*Cover photo: Custom deck design and construction in Lafayette, California by John Montgomery, Garden Architecture, Alamo, California.*

## ARCHITECTURAL PRODUCTS GROUP .....17

### FASTENERS & ADHESIVES

<b>AT</b> – Acrylic-Tie Adhesive System .....	18
<b>Crack-Pac</b> – For Concrete Repair .....	19
<b>N</b> – Nails .....	15
<b>Fastening Identification</b> .....	16
<b>SD &amp; SDS Strong-Drive® Screws</b> – For Wood .....	14
<b>SDSD</b> – SDS Screw Driver .....	14
<b>SET</b> – Epoxy-Tie® Adhesive .....	18
<b>Titen Screws</b> – For Masonry .....	14
<b>RFB</b> – Retrofit Bolt .....	18

### ANGLES, CLIPS & STRAPS

<b>A</b> – Angle .....	20
<b>A34</b> – Framing Anchor .....	20
<b>A35</b> – Framing Anchor .....	20
<b>CS/CS-R</b> – Coiled Straps .....	21
<b>HS24</b> – Hurricane Tie .....	21
<b>HH</b> – Header Hanger .....	22
<b>HSS</b> – Stud Shoe .....	23
<b>IS</b> – Insulation Support .....	23
<b>L</b> – Reinforcing Angle .....	20
<b>LS</b> – Skewable Angle .....	20
<b>LSTA</b> – Strap Tie .....	21
<b>LTS</b> – Twist Strap .....	21
<b>MP</b> – Mending Plate .....	23
<b>MST</b> – Strap Tie .....	22
<b>MSTA</b> – Strap Tie .....	22
<b>MTS</b> – Twist Strap .....	21
<b>NS</b> – Nail Stopper .....	23
<b>SS</b> – Stud Shoe .....	23
<b>ST</b> – Strap Tie .....	22
<b>T&amp;L</b> – Strap Ties .....	22
<b>TP</b> – Tie Plate .....	23

### RIGID TIE CONNECTORS

<b>KWB1</b> – Bench/Shelving Hardware Kit .....	24
<b>RTA</b> – Rigid Tie™ Angle .....	24
<b>RTB</b> – Rigid Tie™ Bracket .....	24
<b>RTC</b> – Rigid Tie™ Corner Connector .....	25
<b>RTF2Z</b> – Rigid Tie™ Flat Connector .....	25
<b>RTR</b> – Rigid Tie™ Bracket .....	24
<b>RTT</b> – Rigid Tie™ “T” Connector .....	25
<b>RTU</b> – Rigid Tie™ Bracket .....	24

### DECKING & FENCING

<b>DBT1Z</b> – Deck Board Tie .....	26
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### DECKING & FENCING *Continued*

<b>DJT14Z</b> – Deck Joist Tie .....	26
<b>DPT5Z</b> – Deck Post Tie .....	26
<b>DPT7Z</b> – Deck Post Tie .....	26
<b>FB</b> – Fence Bracket .....	27
<b>PGT/PGTIC</b> – Pipe Grip Tie .....	27
<b>TAZ</b> – Staircase Angle .....	27

### JOIST HANGERS

<b>HUC</b> – Concealed Flange Joist Hanger .....	28
<b>LB</b> – Joist Hanger .....	28
<b>LSSU</b> – Light Sloped/Skewed U Hanger .....	28
<b>LSU</b> – Light Sloped/Skewed U Hanger .....	28
<b>LUS</b> – Double Shear Joist Hanger .....	29
<b>PF</b> – Post Frame Hanger .....	29
<b>RR</b> – Ridge Rafter Connector .....	29
<b>SUR/SUL</b> – Skewed 45° Hanger .....	29

### EARTHQUAKE/HIGH WIND

<b>FHA</b> – Strap Tie .....	30
<b>H</b> – Hurricane Ties .....	30
<b>HDA</b> – Holdown .....	30
<b>LMA</b> – Mudsill Anchor .....	31
<b>MAB</b> – Mudsill Anchor .....	31
<b>MAS</b> – Mudsill Anchor .....	31
<b>PHD</b> – Predeflected Holdown .....	30
<b>SP</b> – Stud Plate Tie .....	31

### POST CAPS & BASES

<b>AB</b> – Adjustable Post Base .....	32
<b>ABA</b> – Standoff Post Base .....	32
<b>ABU</b> – Standoff Post Base .....	32
<b>AC</b> – Retrofit Post Cap .....	35
<b>ACE</b> – Retrofit End Post Cap .....	35
<b>BC</b> – Post Base/Cap .....	35
<b>CBQ</b> – Column Base .....	33
<b>CBSQ</b> – Column Base .....	33
<b>CPS</b> – Composite Plastic Standoff .....	33
<b>DPPC4BK</b> – Decorative Post Cover .....	35
<b>EPB44</b> – Elevated Post Base .....	33
<b>EPB44T</b> – Elevated Post Base .....	34
<b>EPC</b> – End Post Cap .....	36
<b>LCE4</b> – End Post Cap .....	36
<b>LPC</b> – Adjustable Post Cap .....	36
<b>PB</b> – Post Base .....	34
<b>PBS</b> – Standoff Post Base .....	34
<b>PC</b> – Post Cap .....	36

### SHELF BRACKETS

<b>CF-R</b> – Shelf Bracket/Concrete Form Angle .....	37
<b>SBV</b> – Shelf Bracket .....	37

## General Notes

Please see the *Wood Construction Connectors* catalog for allowable loads and a complete list of Simpson Strong-Tie products. These notes are provided to ensure proper installation of Simpson Strong-Tie Company Inc. products and must be followed fully.

- a. Simpson Strong-Tie Company Inc. reserves the right to change specifications, designs, and models without notice or liability for such changes.
- b. Unless otherwise noted, bolts and nails cannot be combined. 8d, 10d, and 16d specify common nails. When a shorter nail is specified, it will be noted (for example 8dx1½).
- c. All references to bolts or machine bolts (MBs) are for structural quality through bolts (not lag screws) equal to or better than American Society of Testing and Materials ASTM Standard A307, Grade A. RFB is A307, Grade C.
- d. Unless otherwise noted, bending steel in the field may cause fractures at the bend line. Fractured steel will not carry load and must be replaced.
- e. Do Not Overload. Do not exceed catalog allowable loads, which would jeopardize the connection.
- f. Many post bases, post caps and joist hangers are available in rough lumber sizes. Check with your local building-supply dealer or home improvement center.

## We are ISO 9001-2000 Registered



Simpson Strong-Tie is an ISO 9001-2000 registered company. ISO 9001-2000 is an internationally-recognized quality assurance system which lets our domestic and international customers know that they can count on the consistent quality of Simpson Strong-Tie's products and services.

## Our Quality Policy

*We help people build safer structures economically.  
We do this by designing, engineering and manufacturing  
"No Equal" structural connectors and other related products that  
meet or exceed our customers' needs and expectations.*

*Everyone is responsible for product quality  
and is committed to ensuring the effectiveness  
of the Quality Management System.*

A handwritten signature in black ink, reading 'Tom Fitzmyers'.

**TOM FITZMYERS**  
Chief Executive Officer

A handwritten signature in black ink, reading 'Steve Lamson'.

**STEVE LAMSON**  
President

*Connectors are steel and will corrode and lose load-carrying capacity if exposed to ocean salt air, fertilizers, or other substances that adversely affect steel.*

## NEW PRESSURE-TREATED WOOD CHEMICALS ARE MORE CORROSIVE TO STEEL

Several new pressure-treated wood alternatives have been created to replace CCA-C. Many of the new preservatives are generally more corrosive to steel connectors, anchors and fasteners.

## SIMPSON STRONG-TIE CONNECTORS, ANCHORS AND FASTENERS

We have conducted testing to measure how our products react when used with the new pressure-treated woods. We found that many treated wood products require connectors, anchors and fasteners with greater resistance to corrosion than our standard G90 galvanized connectors and fasteners.

## SIMPSON STRONG-TIE SOLUTION

Stainless steel connectors provide the most resistance to corrosion and should be used whenever practical in corrosive environments. If stainless steel is not practical, we recommend our **ZMAX™ (G185)** galvanized products as a minimum standard to help protect against corrosion. ZMAX™ products are coated with a thicker layer of zinc than our standard products. This additional zinc coating improves the product's corrosion resistance.

## EXTERIOR APPLICATIONS AND CORROSION

The new pressure treated wood chemicals are not the only form of corrosion that can affect connectors. When connectors are used in exterior applications and are exposed to the elements (*rain, water, soil, fertilizers, etc.*), corrosion also occurs. In these cases, a minimum of **ZMAX™ (G185)** galvanized connectors should be used.

We have many products available in ZMAX. If a product is not available in our ZMAX galvanized finish it will be provided with an HDG (Hot Dip Galvanized) coating. There is no significant difference in corrosion resistance between ZMAX and HDG products. Either can be used to provide the minimum level of corrosion resistance for most pressure treated woods or in any outdoor condition.

### VERY IMPORTANT!

**Use ONLY stainless steel fasteners with stainless steel connectors.**  
**Use ONLY HDG fasteners with ZMAX™ and post HDG connectors.**

**PLEASE NOTE:** Many of the new pressure treated woods use chemicals that are corrosive to steel. By selecting connectors that offer greater corrosion resistance (stainless steel, Post Hot-Dip Galvanized, or ZMAX™) you can extend the service life of your connectors. However, corrosion will still occur. You should perform periodic inspection of your connectors and fasteners to ensure their strength is not being adversely affected by corrosion. In some cases, it may be necessary to have a local professional perform the inspections. Because of the many variables involved, Simpson Strong-Tie cannot provide estimates on service life of connectors, anchors or fasteners.

See [www.strongtie.com/info](http://www.strongtie.com/info) for additional critical information.



ZMAX products are manufactured with G185 galvanized steel in conformance with ASTM A653. HDG products are hot-dip galvanized after fabrication in conformance with ASTM 153. Test results show that both finishes provide a similar level of corrosion resistance. If a product is unavailable in ZMAX, often a HDG product can be substituted. These products require hot-dip galvanized fasteners.



Products 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.



# BUILD A BEAUTIFUL DECK



**DPPC4BK**  
**Decorative Post Cover**  
Provides moisture protection to a 4x4 post top.  
See page 35.

**TA9Z/TA10Z**  
**Staircase Angle**  
Ties stair tread to stringer.  
TA9ZKT provided with SDS HDG screws.  
See page 27.

**A35Z**  
**Framing Anchor**  
Ties rim joist at corners; ties stair stringer to rim joist.  
See page 20.

**DPT5Z**  
**Deck Post Tie**  
Ties 2x4 post to outside of rim joist.  
See page 26.

**DBT1Z**  
**Deck Board Tie**  
Fasten decking with hidden connection.  
See page 26.

**H2.5AZ**  
**Hurricane Tie**  
Ties joist to girder at mid-deck.  
See page 30.

**DJT14Z**  
**Deck Joist Tie**  
Ties 2x girder to post.  
See page 26.

**ABA44Z**  
**Standoff Post Base**  
Ties 4x4 post to concrete.  
See page 32.

**CBSQ44HDG**  
**Column Base**  
Ties 4x4 post to concrete. HDG screws are provided.  
See page 33.

**BSC2-2/4Z**  
**Post Cap**  
Ties 4x post to double 2x beam.  
See page 35.

**ABU44Z**  
**Post Base**  
Ties 4x4 post to concrete.  
See page 32.

**LPC4Z**  
**Post Cap**  
Ties double 2x girder to 4x post.  
See page 36.

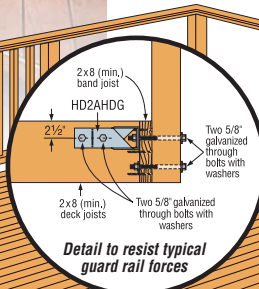
**LUS26-2Z**  
**Light Double Shear Joist Hanger**  
Ties girder to girder.  
See page 29.

**BC4Z**  
**Post Cap**  
Ties 4x post to 4x beam (girder).  
See page 35.

**H1Z**  
**Hurricane Tie**  
Ties joist to girder at mid-deck; ties deck cover rafter to beam.  
See page 30.

**LUS24Z**  
**Light Double Shear Joist Hanger**  
Ties rafter to ledger.  
See page 29.

**BC40Z**  
**Half Post Base**  
Ties 4x post to deck.  
See page 35.



## CORROSION INFORMATION

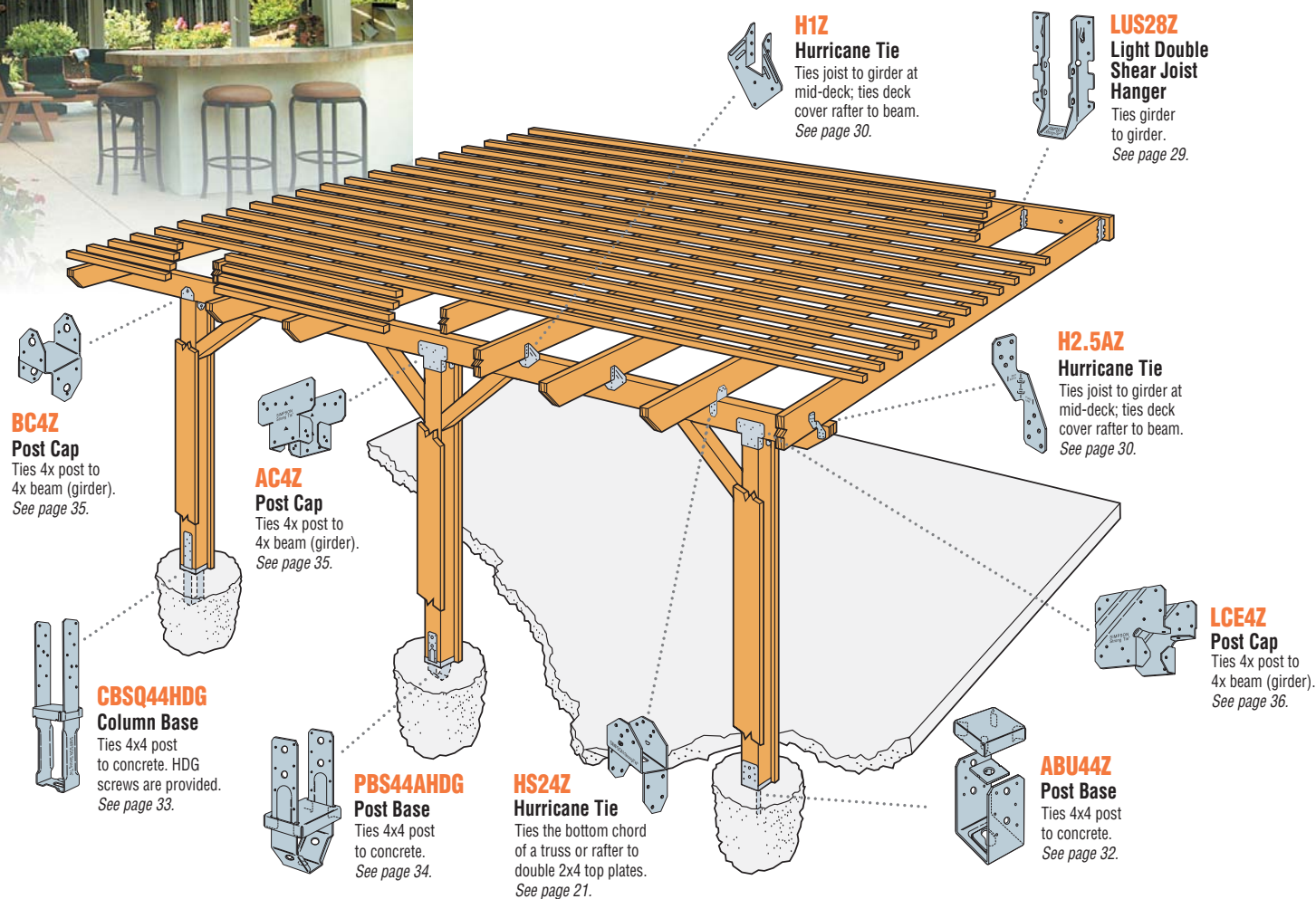
Use ZMAX™ or stainless steel connectors in outdoor environments and to protect against corrosion and from pressure-treated wood.  
**Use ONLY stainless steel fasteners with stainless steel connectors.**  
**Use ONLY HDG fasteners with ZMAX™ and post HDG connectors.**  
See page 5 for additional information, and visit [www.strongtie.com/info](http://www.strongtie.com/info) for critical information.

# ADD A PATIO COVER FOR SUMMER SHADE



## CORROSION INFORMATION

Use ZMAX™ or stainless steel connectors in outdoor environments and to protect against corrosion and from pressure-treated wood.  
**Use ONLY stainless steel fasteners with stainless steel connectors.**  
**Use ONLY HDG fasteners with ZMAX™ and post HDG connectors.**  
See page 5 for additional information, and visit [www.strongtie.com/info](http://www.strongtie.com/info) for critical information.





# FENCES FOR PRIVACY AND SECURITY

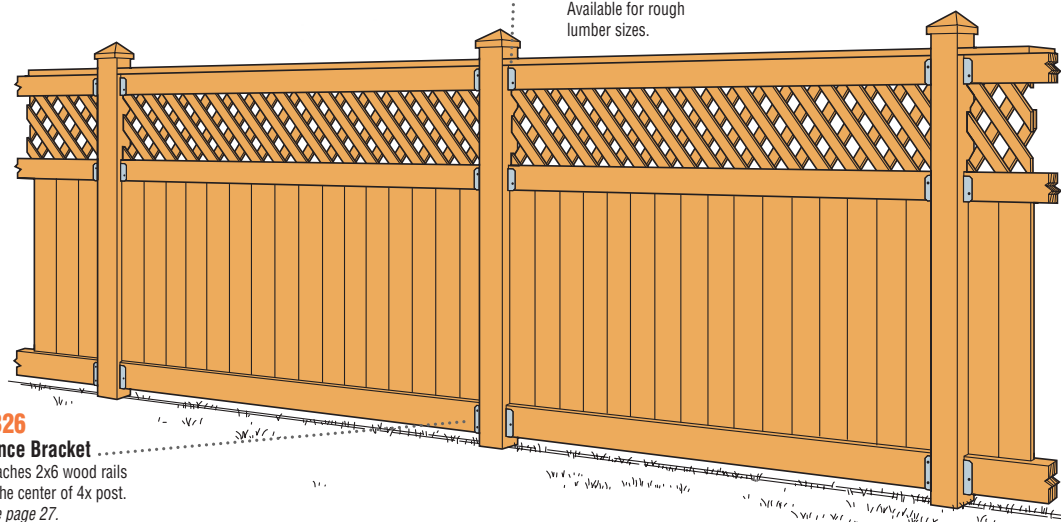


**FB24Z**  
**Fence Bracket**  
Attaches 2x4 wood rails  
to the center of 4x post.  
See page 27.

**FBR24Z**  
Available for rough  
lumber sizes.



**FB26**  
**Fence Bracket**  
Attaches 2x6 wood rails  
to the center of 4x post.  
See page 27.



## CORROSION INFORMATION

Use ZMAX™ or stainless steel connectors in outdoor environments and to protect against corrosion and from pressure-treated wood.

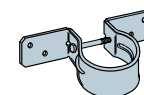
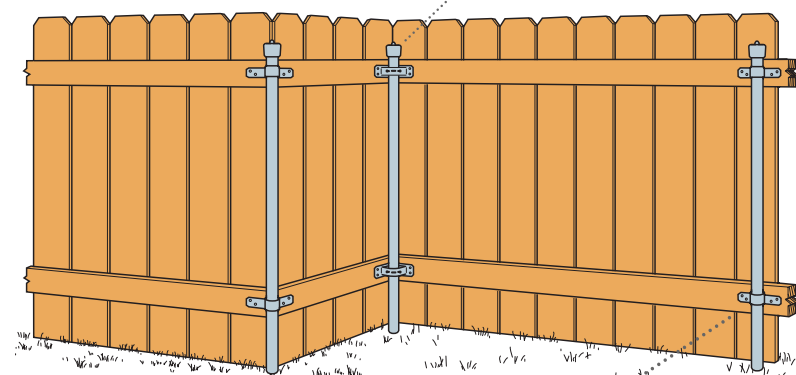
**Use ONLY stainless steel fasteners with stainless steel connectors.**

**Use ONLY HDG fasteners with ZMAX™ and post HDG connectors.**

See page 5 for additional information, and visit [www.strongtie.com/info](http://www.strongtie.com/info) for critical information.



**PGTIC2-R**  
**Corner Pipe Grip Tie**  
Attaches 2x4 or 2x6 wood  
rails to the center of the pipe  
(2 3/8" outside diameter)  
See page 27.



**PGT2-R**  
**Pipe Grip Tie**  
Attaches 2x4 or 2x6  
wood rails to the  
center of the pipe.  
(2 3/8" outside diameter)  
See page 27.

**PGT2Z-R**  
Also available  
in ZMAX.



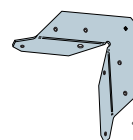
# GET ORGANIZED!



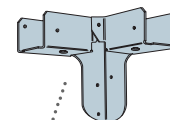
Organize your garage, basement, office or playroom. Whether you have a large area to organize, or a small space, our Rigid-Tie connectors allow you to build a solution that works for you. You decide what width, height and length your project will be – then use our connectors to create strong, secure attachments.

You can build shelves, workbenches, a logholder or a picnic bench – the possibilities are endless.

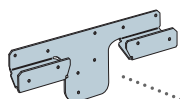
Our connectors are easy to install and can be finished with paint to match the decor of your home.



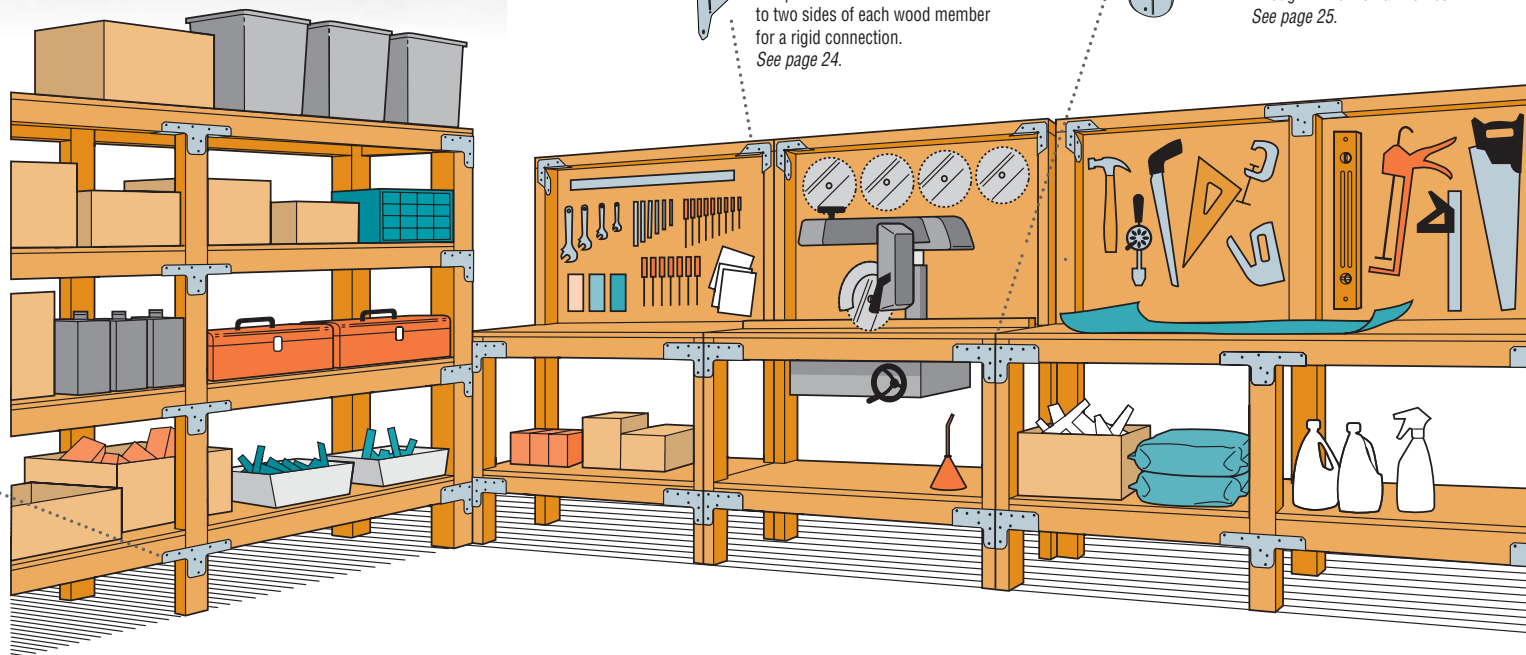
**RTA**  
**Rigid Tie™ Angle**  
Makes the corner connection of two pieces of wood. Attaches to two sides of each wood member for a rigid connection.  
*See page 24.*



**RTC**  
**Rigid Tie™ Corner Connector**  
Ties 2x4 vertical member through 2x horizontal member.  
*See page 25.*



**RTF22**  
**Rigid Tie™ Flat Connector**  
Ties 2x4 vertical member through 2x horizontal member.  
*See page 25.*



## SCREWS

The Simpson Strong-Drive® wood screw (SDS series) has a hex washer head for easy driving with a  $\frac{3}{8}$ " hex head socket and a low speed drill. The built-in reamer and type 17 tip cuts a hole to allow installation without predrilling. Predrilling may be necessary depending on the type and moisture content of wood. Use  $\frac{5}{32}$ " drill bit.

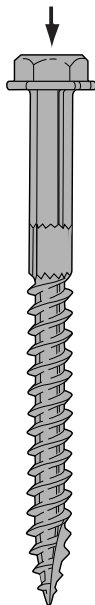
Available in varying lengths from 1½" to 6". All sizes available in zinc dichromate, which is not to be used with some types of pressure-treated lumber. Some sizes are available hot-dip galvanized, which is appropriate for outdoor use.

The SDS Screw Driver has a deep socket and magnetic tip to help provide a positive installation for the SDS Screws.

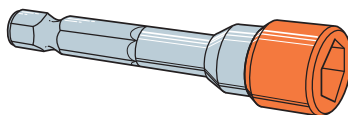
The Simpson Strong-Drive screw (SD model) features a needle point that ensures fast starts, a double thread shank that reduces installation time, a #2 deep Phillips drive that reduces stripping, and a wafer head with a low profile. Available in 1¼" length, with an electro-galvanized finish.

Titen Screws are  $\frac{3}{16}$ " and  $\frac{1}{4}$ " diameter masonry screws for attaching to concrete and masonry. See the Simpson Anchor Systems Catalog for full Titen Screw details.

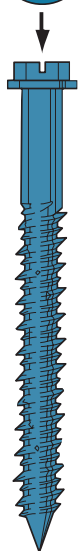
### Identification on all SDS screw heads (SDS½x3 shown)



SDS½x3HDG  
US Patent  
6,109,850



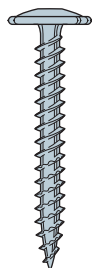
SDSD½-RB  
(Driver)



Titen  
Hex Head

### VERY IMPORTANT!

*Use ONLY stainless steel fasteners with stainless steel connectors. Use ONLY HDG fasteners with ZMAX and post HDG connectors.*



SD8x1.25



### WARNING:

Industry studies show that hardened fasteners can experience performance problems in wet environments. Accordingly, use **Titen and SD8 screws** in dry, interior applications only.

## DO YOU HAVE THE RIGHT NAIL FOR THE JOB?

There are many types of nails available: common box, sinker, etc. For each type, the penny weight designation (i.e. 8d or 8 penny) indicates a different diameter and length.

Nearly all of our products require common nails. So, we do not state "common" every time the nail size is given, it is understood.

8d common has a 0.131" diameter

10d common has a 0.148" diameter

16d common has a 0.162" diameter

Simpson sells the following nails:

### Stainless Steel Finish:

**SS16D** = 16d common

**SS10D** = 10d common

**SSN10** = 8d common x 1½" length

**SSN8** = 8d common x 1½" length

**SS8D** = 8d common

### Hot Dip Galvanized Finish:

**16DHDG** = 16d common

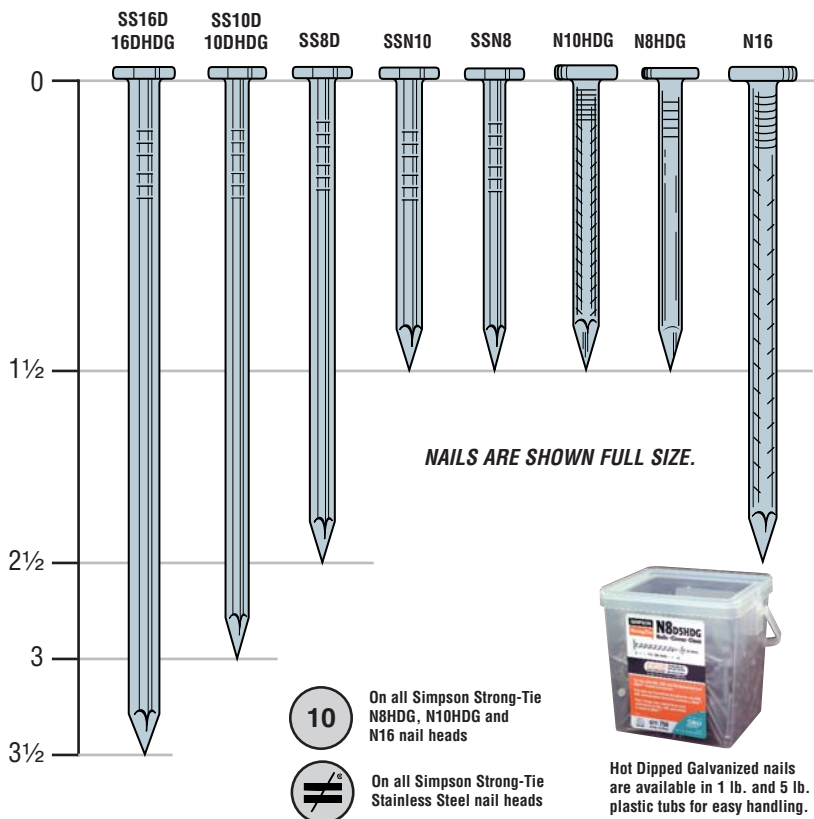
**10DHDG** = 10d common

**N10HDG** = 10d common x 1½" length

**N8HDG** = 8d common x 1½" length

### Bright Finish:

**N16** = 16d common x 2½" length

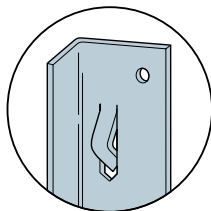


## INSTALLATION SAFETY NOTE

Always follow the fastener manufacturer's instructions and use recommended safety equipment. Eye protection should be used whenever you are installing connectors.

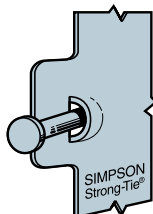


## FASTENING IDENTIFICATION



### Speed Prongs

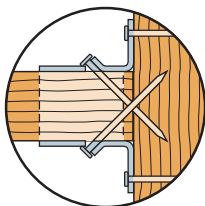
Used to temporarily position and secure the connector for easier and faster installation.



### Dome Nailing

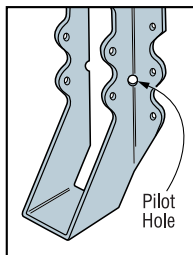
This feature guides the nail into the joist and header at a 45° angle.

U.S. Patent 5,603,580



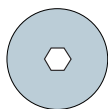
### Double Shear Nailing

The nail is installed into the joist and header, distributing the load through two points on each joist nail for greater strength.



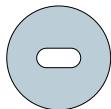
### Pilot Holes

Tooling holes for manufacturing purposes. No fasteners required.



### Hexagonal Holes

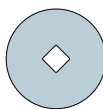
Used for concrete or masonry screw applications.



### Obround Holes

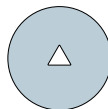
Used to provide easier nailing access in tight locations.

Fasteners may be installed at an angle.



### Diamond Holes

Optional holes to temporarily secure connectors to the member during installation.



### Triangle Holes

Provided on some products in addition to round holes. Round and triangle holes must be filled to achieve the published **maximum load value**.



## INSTALLATION SAFETY NOTE

When using power tools to install connectors, always follow the manufacturer's instructions and use recommended safety equipment. Eye protection should be used whenever you are installing connectors.

# ARCHITECTURAL PRODUCT GROUP

The **Architectural Products Group** consists of aesthetically pleasing, pre-finished connectors and innovative concealed joist ties designed for exposed wood applications. These connectors provide structural performance and, at the same time, add a unique appearance feature to a project.

- **ARCHITECTURAL FINISHES**

Eliminate time consuming prep work and costly field painting. Available finishes include textured powder-coated flat black paint, gray primer paint and hot dipped galvanized coating.

- **OFF-THE-SHELF AVAILABILITY**

Minimizes fabrication and ordering lead time since most products are pre-finished and in stock.

- **PRE-ENGINEERED AND TESTED**

Load-rated products are verified to perform to design loads, unlike custom designed and fabricated connectors.

- **QUALITY ASSURANCE**

No-Equal quality-controlled manufacturing ensures product consistency and high quality.



## The Classic Collection

The smooth edges and clean lines of the connectors in our Classic Collection have a timeless quality that spans design classifications. Though they're used in conjunction with a historically-based construction style, these connectors are just as perfectly integrated in a refined, contemporary loft as they would be in a century-old warehouse. Created to serve both the form and function of urban-modern design, this collection is a substantial addition to the architect's palette.

## The Rustic Collection

It's amazing what a simple notch can communicate. In a connector, notched detailing creates the look and feel of a rugged cabin or backcountry ski lodge. Used with heavy timbers and beams, these connectors have an antique quality that's immediately reminiscent of the simplicity and strength historically associated with the American Frontier.



## The Specialty Collection

Designed to stand alone or to complement other architectural connectors, the Specialty Collection works with any classic or rustic design. This collection encompasses bearing plates, specialty joist hangers, stand-off bases, custom plates and concealed connectors.

# FASTENERS & ADHESIVES

Simpson Strong-Tie Anchor Systems has a full line of adhesives for your anchoring projects in concrete or masonry.

## SET® Epoxy-Tie Adhesive System

- Ideal for use with threaded rod to anchor hardware, fixtures and equipment to concrete.
- High strength: Forms a high strength bond with the base material without expansion forces. In some cases, stronger than the steel rod.
- Easy to use: The gel consistency makes it simple to use in horizontal or vertical applications.
- Moisture resistant: May be installed in damp environments. The bond will not break down in the presence of moisture.
- Low odor: No offensive odor or harmful fumes.
- May be installed in concrete, brick and concrete block. Adhesive screen required for hollow applications.
- Cures in 24 hours at 65°F.
- Available in 1.7, 10 and 22 ounce cartridges.



The 10 oz. Set-Pac and 5 oz. Acrylic-Tie Fast-Pac dispense with a standard caulk gun tool.



## AT® Acrylic-Tie Adhesive System

- Ideal for cold weather applications. Will cure in temperatures down to 0° F.
- Fast cure in temperatures at and above 60°F (1 hour or less).
- Flows easily in cold temperatures. No need to warm the cartridge.
- High strength: Forms a high strength bond with the base material without expansion forces. In some cases, stronger than the steel rod.
- Easy to use: The gel consistency makes it simple to use in horizontal or vertical applications.
- Moisture resistant: May be installed in damp environments. The bond will not break down in the presence of moisture.
- May be installed in concrete, brick and concrete block. Adhesive screen required for hollow applications.
- Available in 5, 8, 13 and 30 ounce cartridges.



The 1.7 oz. SET1.7KTA can be dispensed by hand or with a standard caulk gun tool.

Larger dual cartridges are available for larger projects (dedicated dispensing tool required).



### RETROFIT BOLTS

RFBs are pre-cut threaded rod, supplied with nut and washer. Use with Epoxy-Tie to anchor post bases in existing concrete and masonry. Offers a complete engineered anchoring system when used with the Epoxy-Tie. Inspection is easy, as the bolt head is stamped with the rod length and "No Equal" symbol for identification after installation.

**FINISH:** Zinc Plated. Some sizes available in HDG.



RFB Retrofit Bolt





# FASTENERS & ADHESIVES

Simpson Strong-Tie Anchor Systems has a full line of adhesives for your repair projects in concrete or masonry.

## **CRACK-PAC®** *Repair Cracks in Concrete with Epoxy*

**Epoxy injection is a proven method for repairing concrete cracks.**

- Chemically bonds with the concrete to restore strength: not just a crack filler.
- Seals the crack against moisture.
- Simple in-the-cartridge mixing: No worries about mixing ratios or extra tools.
- Totally portable: no external power source or expensive equipment needed.
- All accessories are disposable: no equipment to clean.

Crack-Pac is also available in the Crack-Pac Injection Kit (Model ETIPAC10KT). The kit includes everything needed to pressure inject approximately 8 lineal feet of cracks. All of the material and accessories needed are included complete with detailed crack injection instructions.

**Use Crack-Pac to repair all types of concrete columns, slabs, beams and walls:**

- Basement walls
- Residential and commercial foundations and slabs
- Swimming pools

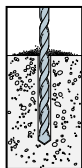


Use Crack-Pac in horizontal or vertical applications.



Contents of the Crack-Pac Kit

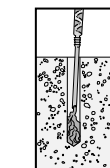
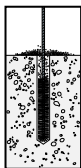
### How to Install Adhesive Anchors in Solid Base Material



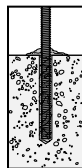
- 1. Drill**—Drill hole to specified diameter and depth.



- 2. Clean**—Remove dust from hole with oil-free compressed air. Clean with nylon brush and blow out remaining dust. **Note: Dust left in hole can reduce the adhesive's holding capacity.**



- 3. Fill**—Fill hole  $\frac{1}{2}$  -  $\frac{3}{4}$  full, starting from bottom of hole to prevent air pockets. Withdraw nozzle as hole fills up.



- 4. Insert**—Anchors must be clean and oil free. Insert anchor, turning slowly until the anchor contacts the bottom of the hole. Do not disturb during cure time.

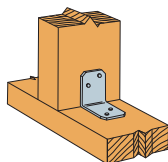
Simpson Strong-Tie offers a full assortment of dispensing tools and other accessories. Please see our full line catalog or visit [www.simpsonanchors.com](http://www.simpsonanchors.com).

# ANGLES, CLIPS & STRAPS

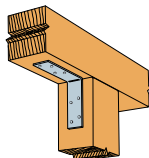
## A Angles

Utility reinforcing angles for corners, post and concrete applications.

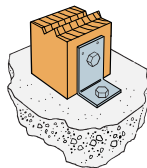
**FINISH:** G90 galvanized. Some products available in Z-MAX galvanized. The A24 is available in HDG. Use HDG fasteners for ZMAX models.



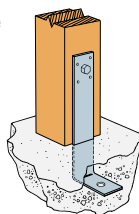
**Typical A21 Installation**  
(use 10d x 1 1/2" nails)



**Typical A44 Installation**  
(use 10d nails)



**Typical A24 Installation**  
(use 10d nails or 1/2" bolts)

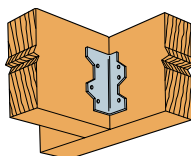


**Typical A311 Installation**  
(use 10d nails or 1/2" bolt)

## L Reinforcing Angles

General purpose reinforcing angles. Staggered nail pattern reduces the possibility for wood splitting and allows installation on both sides of a member.

**FINISH:** G90 or Z-MAX galvanized. Use HDG fasteners for ZMAX models.



**Typical L50 Installation**  
(use 10d nails)

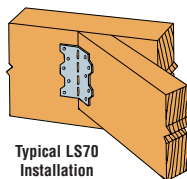
## LS Skewable Angles

General purpose field-adjustable angle attaches members intersecting at angles.

**FINISH:** G90 or Z-MAX galvanized. Use HDG fasteners for ZMAX models.

### 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.



**Typical LS70 Installation**  
(use 10d nails)

## A34 & A35 Framing Anchors

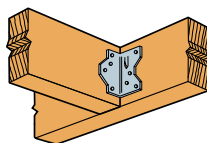
The A34 is designed for use on 2x3 and 2x4 framing projects. Speed prong makes installation easier and faster.

The A35 anchor's bending slot allows instant, accurate field bends for all two-way ties. Bend only one time to prevent metal fatigue. Balanced, completely reversible design permits the A35 to secure a great variety of connections.

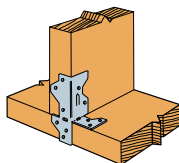
**FINISH:** G90 or Z-MAX galvanized. Also available in stainless steel. Use HDG fasteners for ZMAX models and stainless steel fasteners for stainless steel models.

### INSTALLATION:

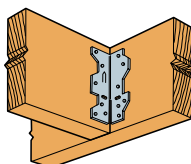
- A35—Bend one time only



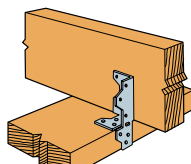
**1 Typical A34 Installation**  
(use 8d x 1 1/2" nails)



**2 Typical A35 Installation**  
(use 8d x 1 1/2" nails)



**3 Typical A35 Installation**  
(use 8d x 1 1/2" nails)



**4 Typical A35 Installation**  
(use 8d x 1 1/2" nails)

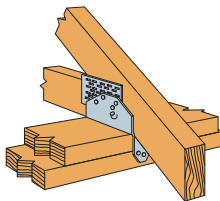
## HS24 *Hurricane Ties*

Attaches the bottom chord of a truss or rafter at pitches from 0:12 to 4:12 to double 2x4 top plates. Double shear nailing allows for lateral resistance.

**FINISH:** G90 or Z-MAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- Slant nailing is required only when the bottom chord of the truss or rafter has no slope.



**Typical HS24 Installation**  
(use 8dx1½" nails into rafter or truss, and 8d nails into plates.  
Use additional 8d nails slanted into a non-sloped rafter or truss)

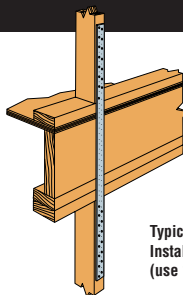
## CS/CS-R *Coiled Straps*

CS are continuous utility straps which can be cut to length on the job site. Available in a 25' length convenient 10" square carton and in longer lengths.

**FINISH:** G90 or Z-MAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- Wood shrinkage after strap installation across horizontal wood members may cause strap to buckle.



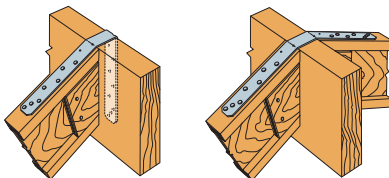
**Typical CS16 Installation**  
(use 10d nails)

Use 10d nails for all models

## LSTA *Strap Ties*

Install strap ties where plates or soles are cut, at wall intersections, and as ridge ties. LSTA straps are engineered for use on 1½" members. The 3" center-to-center nail spacing reduces the possibility of wood splitting.

**FINISH:** G90 galvanized.

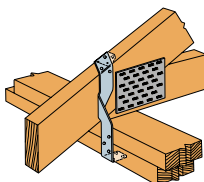


**Typical LSTA Installation (Hanger not shown)**  
(use 10d nails)

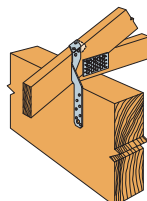
## LTS & MTS *Twist Straps*

Twist straps provide a tension connection between two wood members. These 1¼" wide straps are an economical way to resist uplift at the heel of a truss. The 3" bend section eliminates interference at the transition points between wood members.

**FINISH:** G90 galvanized. MTS also available in ZMAX. Use HDG fasteners for ZMAX models.



**Typical LTS12 Installation**  
(use 10dx1½" or 10d nails)



**Typical MTS12 Installation**  
(use 10dx1½" or 10d nails)

### LOOKING FOR A PARTICULAR FINISH?

Most Simpson products are available in G90, the industry standard. Where greater corrosion protection is required, we offer the same product in ZMAX or HDG, or stainless steel. We are constantly modifying our product offering in response to our customers' needs. Contact us at (800) 999-5099 or [www.strongtie.com](http://www.strongtie.com) for a current list of products offered in ZMAX, HDG or stainless steel. See pg 5 for Corrosion information.

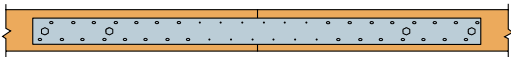


# ANGLES, CLIPS & STRAPS

## MST *Strap Ties*

Install strap ties where plates or soles are cut, at wall intersections, and as ridge ties.

**FINISH:** G90 galvanized and HDG.  
Use HDG fasteners for HDG models.

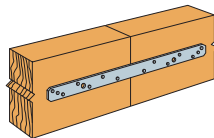


Typical MST27 Installation (use 16d nails)

## MSTA *Strap Ties*

Install strap ties where plates or soles are cut, at wall intersections, and as ridge ties. MSTAs are engineered for use on 1½" members. The 3" center-to-center nail spacing reduces the possibility of wood splitting.

**FINISH:** G90 or Z-MAX galvanized. Use HDG fasteners for ZMAX models.

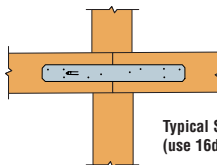


Typical MSTA18 Installation  
(use 10d nails for all sizes)

## ST *Strap Ties*

Install strap ties where plates or soles are cut, at wall intersections, and as ridge ties.

**FINISH:** G90 galvanized.

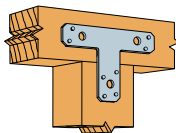


Typical ST12 Installation  
(use 16d nails for all sizes)

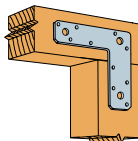
## T&L *Strap Ties*

General reinforcement angles for "T" and "L" intersections.

**FINISH:** G90 galvanized.



Typical T Installation  
(use 16d nails for all sizes)

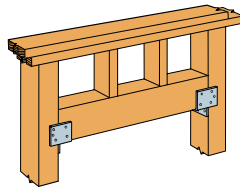
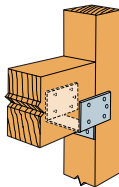


Typical L Installation  
(use 10d nails for 55L, 16d nails for all others)

## HH *Header Hangers*

For fast, accurate installation of door and window headers and other cross members details. HH header hangers speed up the job, strengthen the frame, and eliminate the need for trimmers.

**FINISH:** G90 galvanized.



Typical HH Installation (use 16d nails for all sizes)

### LOOKING FOR A PARTICULAR FINISH?

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## IS Insulation Supports

Easy one-hand installation to hold insulation in place. Mitered edges ensure a tight fit when installed between joists.

### INSTALLATION:

- Install Insulation Supports between joists. IS16 (15½" long) for 16" on center spacing; IS24 (23½" long) for 24" on center spacing.
- Wear safety glasses, gloves and other appropriate safety equipment.



Typical IS Installation  
(no fasteners required)

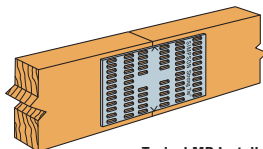
## MP Mending Plates

Plates for connecting two wood members or for general fix-up.

**FINISH:** G90 galvanized.

### INSTALLATION:

- Place plate over two pieces of wood with arrows aligned at joint. Hammer to embed prongs. **Not for trusses or structural use.**
- Place block over MP and install.

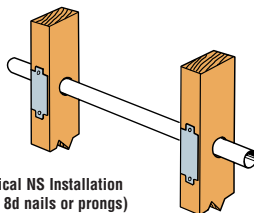


Typical MP Installation  
(no fasteners required)

## NS Nail Stoppers

Help prevent nails from piercing water pipes and electrical lines. The NS provides a warning and allows repositioning of the nails. 16 gauge steel conforms to the National Electric Code and IRC and IBC. Request F-PLUMBING flier for more information on International Residential and Building Codes.

**FINISH:** G90 galvanized.



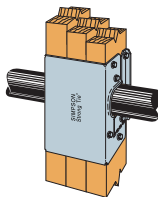
Typical NS Installation  
(use 8d nails or prongs)

## HSS/SS Stud Shoes

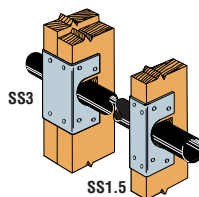
Reinforce joists, studs, and rafters notched during construction. HSS/SS stud shoes are not a total replacement of removed material.

**FINISH:** G90 galvanized.

16 gauge steel conforms to the requirements of the International Residential Code and International Building Code.



Typical HSS2-3-SDS3 Installation



Typical SS Installation

Use 10d x 1½" nails for SS1.5, SS2.5.

Use 10d nails for SS3 and SS4.5

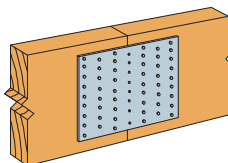
Use SDS ¼ x 1½" screws for HSS2-SDS1.5

Use SDS ¼ x 3" screws for all other HSS models.

## TP Tie Plates

Nail-on plates for connecting two wood members or for general fix-up.

**FINISH:** G90 galvanized.



Typical TP Installation  
(use 8d commons or 8d x 1½" nails)

# RIGID TIE™ CONNECTORS

## KWB1 Hardware Kit

The KWB1 Hardware Kit contains complete hardware, fasteners and plans to build a workbench or shelving unit. The kit features the Simpson Strong-Tie Rigid Tie™ corner connector which makes it easier to make strong and durable corner connections with 2x4 lumber using no angle cuts or bolts. Each kit contains enough RTC24 connectors to construct one workbench. Two kits are necessary to build a four shelf unit. With the Simpson Strong-Tie KWB1, a couple of hours is all it takes to achieve professional results.

### Each KWB includes:

- Eight RTC24 connectors
- Plans for workbench and shelving unit
- Lumber cut list
- 200 Strong-Drive® self-drilling screws



KWB1 Workbench



KWB1 Hardware Kit

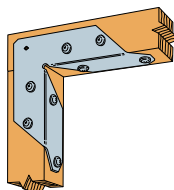
## RTA Rigid Tie™ Angles

Rigid Tie Angle connectors wrap around the wood members from two directions – eliminating the need for angle bracing, gussets and plywood stiffeners in many wood construction projects. The RTA is ideal for gate, rectangular frame construction or any other projects with right angles.

**FINISH:** G90 galvanized. Some products available in Z-MAX. Use HDG fasteners for ZMAX models.

### INSTALLATION:

- Install vertical members first, then attach horizontal members. Seat wood member in bracket with C-clamp before securing to aid accurate positioning and prevent skewing.



Typical RTA12 Installation  
(use SD8X1.25 screws,  
dry environments only)

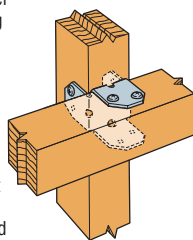
## RTB/RTR/RTU Rigid Tie™ Connectors

Use these rigid single-piece steel connectors between intersecting wood members. Ideal for lattice construction, utility furniture or any other project where a 2x member crosses another.

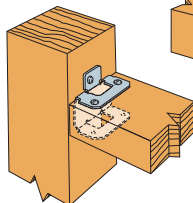
**FINISH:** G90 galvanized

### INSTALLATION:

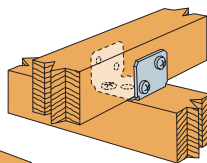
- Seat wood member in bracket with C-clamp before securing to aid accurate positioning and prevent skewing.



Typical RTB22  
Installation  
(use SD8X1.25 screws,  
dry environments only)



Typical RTR Installation  
(use SD8X1.25 screws,  
dry environments only)



Typical RTU2  
Installation  
(use SD8X1.25  
screws, dry  
environments only)

### LOOKING FOR A PARTICULAR FINISH?

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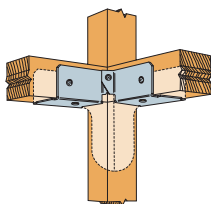
## RTC Rigid Tie™ Corner Connector

These products allow the do-it-yourselfer to build shelves, tables, workbenches and utility furniture. The RTC22 and RTC24's overlapping tabs ensure greater rigidity and easier alignment. The RTC series secure three wood members forming a 90° corner to a vertical post. The RTC42 and RTC44 are heavy-duty structural connectors.

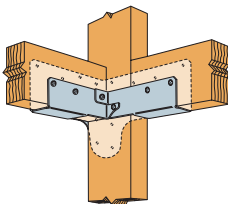
**FINISH:** G90 galvanized. Some products available in Z-MAX. Use HDG fasteners for ZMAX models.

### INSTALLATION:

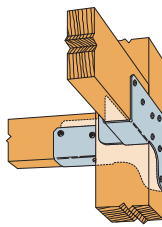
- Install vertical members first, then attach horizontal members for easier alignment.
- Seat wood members in bracket with a C-clamp before securing to aid accurate positioning and prevent skewing.



Typical RTC22 Installation  
(use SD8X1.25 screws,  
dry environments only)



Typical RTC24 Installation  
(use SD8X1.25 screws,  
dry environments only)



Typical RTC42 Installation  
(use SD8X1.25 screws,  
dry environments only)

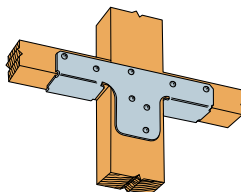
## RTF2Z Rigid Tie™ Flat Connectors

The Rigid Tie Flat allows for pass through of 2x4 vertical members through 2x horizontal members.

**FINISH:** Z-MAX galvanized. Use HDG fasteners for ZMAX models.

### INSTALLATION:

- Install vertical members first, then attach horizontal members.
- Seat wood member in bracket with C-clamp before securing to aid accurate positioning and prevent skewing.



Typical RTF2Z Installation  
(use HDG fasteners or SD8X1.25 screws)  
(SD8X1.25 screws in dry environments only)

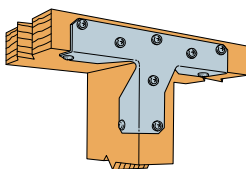
## RTT Rigid Tie™ "T" Connectors

The Rigid Tie "T" is a tee-shaped connector that attaches vertical and horizontal members from both the face and one side, wrapping around the side for extra strength.

**FINISH:** G90 or Z-MAX galvanized. Use HDG fasteners for ZMAX models.

### INSTALLATION:

- Install vertical members first, then attach horizontal members.
- Seat wood member in bracket with C-clamp before securing to aid accurate positioning and prevent skewing.



Typical RTT22 Installation  
(use SD8X1.25 screws,  
dry environments only)

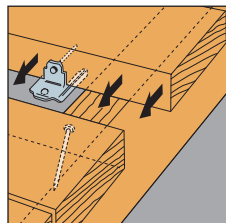
## DBT1Z Deck Board Tie® Connector

The DBT1Z deck board tie provides a nail-free surface fastening system for deck boards. Designed for use with 2x or ¾" thick decking lumber (**predrilling recommended for ¾" deck boards**). Eliminates countersinking, hammer dents, nail popping, ugly nail heads and rust stains on surface. Leaves an unbroken deck surface that is easy to sand and refinish when it's time for maintenance.

**FINISH:** Z-MAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- Position the DBT1Z with the locator prongs and install with a single 10d or 10dx1½" nail. Using dry lumber will minimize deck board movement after installation.



Typical DBT1Z Installation  
(use 10d or 10dx1½" nail)

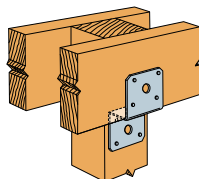
## DJT14Z Deck Joist Tie® Connector

The DJT14Z deck joist tie ties 2x joist to posts.

**FINISH:** Z-MAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- Recommended: install on post first.  
Minimum 2x4 joist, 4x4 post.



Typical DJT14Z Installation  
(use 16d nails and ¾" machine bolts)

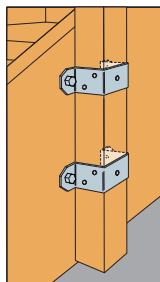
## DPT5Z Deck Post Tie® Connector

DPT meets the code minimum loads for a rail on a deck.

**FINISH:** Z-MAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- Install in pairs at a recommended minimum center-to-center spacing of 5". Use two ¾" through bolts and 5-10dx1½" nails.
- Recommended: install on post and then attach to deck.
- Post size: 2x4; check with local building officials for minimum post spacing.



Typical DPT5Z Installation  
(use 10dx1½" nails and ¾" machine bolts)

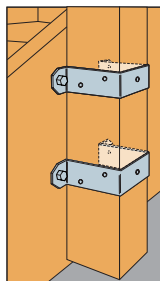
## DPT7Z Deck Post Tie® Connector

DPT meets the code minimum loads for a rail on a deck.

**FINISH:** Z-MAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- Install in pairs at a recommended minimum center-to-center spacing of 5". Use two ¾" through bolts and 5-10d common nails.
- Recommended: install on post and then attach to deck.
- Post Size: 4x4; check with local building officials for minimum post spacing.



Typical DPT7Z Installation  
(use 10d nails and ¾" machine bolts)

## FB Fence Brackets

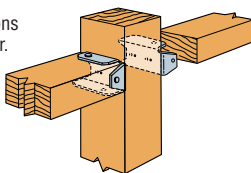
Quick connections allow easier building of fences and louvers.

**FINISH:** G90 or ZMAX galvanized. Use HDG fasteners for ZMAX models.

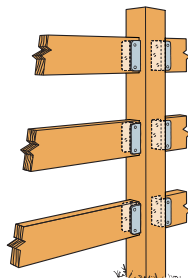
### INSTALLATION:

- Holes are sized for 8dx1½". Use 8d commons or #6 wood screws into supporting member.

All sizes:  
Use 8dx1½" nails into rails, and 8d nails or #6 wood screws into the post



Typical FB24 Installation



Typical FB26 Installation

## PGT/PGTIC Pipe Grip Tie®

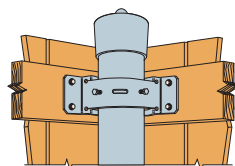
No more rotted and failed fence posts! The PGT gives you the beauty of a wood fence with the durability of metal fence posts. The PGT handles corners, splices and uneven terrain, replacing wood posts. The PGT1.5 is for 1½" pipe. (1½" outside diameter), and the PGT2-R for 2" pipe (2½" outside diameter). PGTIC2 is an interior corner pipe grip tie.

**FINISH:** G90 galvanized. The PGT2 is available in ZMAX; use HDG fasteners with this model.

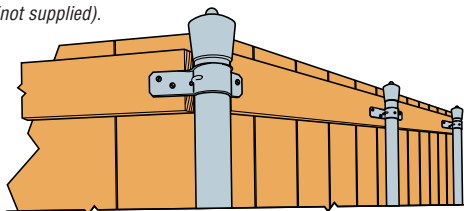
### INSTALLATION:

- HDG fasteners are required with this product.
- PGTIC2 to post – Install two set screws (supplied) with ¾ socket in predrilled holes.
- PGTIC2 to rails – Use SDS¼x1½ wood screws (not supplied).
- Install on vertical pipes, offsetting corners to allow for correct rail alignment.
- Use 3 to 4 PGTs per pipe depending on fence height; line up to stingerline.
- Fasten PGT with ¼" hex head bolt (supplied).
- PGT attached to post with four ¼" diameter screws.
- Nail fence boards to rails.

See Installation notes for fastener information.



Typical PGTIC2 Fence Installation



Typical PGT2-R Fence Installation

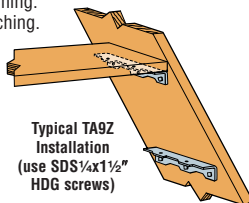
## TAZ Staircase Angles

For use in structurally sound staircase framing. The TA eliminates costly conventional notching.

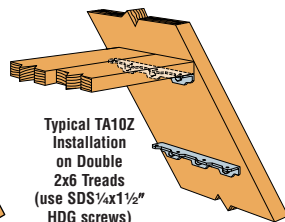
**FINISH:** ZMAX galvanized. Use HDG fasteners with ZMAX models.

### INSTALLATION:

- Install with SDS¼x1½ HDG screws.
- Available in kits, with the HDG SDS screws provided.



Typical TA9Z Installation  
(use SDS¼x1½" HDG screws)



Typical TA10Z Installation on Double 2x6 Treads  
(use SDS¼x1½" HDG screws)

### LOOKING FOR A PARTICULAR FINISH?

Most Simpson products are available in G90, the industry standard. Where greater corrosion protection is required, we offer the same product in ZMAX or HDG, or stainless steel. We are constantly modifying our product offering in response to our customers' needs. Contact us at (800) 999-5099 or [www.strongtie.com](http://www.strongtie.com) for a current list of products offered in ZMAX, HDG or stainless steel. See pg 5 for Corrosion information.

# JOIST HANGERS

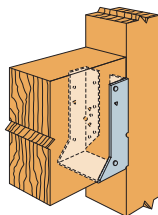
## HUC Concealed Flange Joist Hangers

Aesthetic or end applications where the hanger flanges need to be concealed. Most models have triangle and round holes, which give high loads when filled with common nails. These heavy duty connectors are designed for structures requiring additional strength, longevity and safety factors.

**FINISH:** G90 galvanized.

**INSTALLATION:**

- Can be installed filling round holes only, or filling round holes and triangle holes for maximum values.



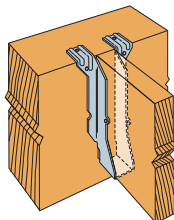
Typical  
HUC48  
Installation

Use 16d nails into the header, and 10d x 1½" nails into a single joist. (10d nails into double, triple and 4x joists. 16d nails into 6x joists).

## LB Joist Hangers

Top flange hanger for larger joist sizes.

**FINISH:** G90 galvanized.



Typical LB210  
Installation  
(use 16d nails into header and 10d x 1½" nails into joists for all sizes)

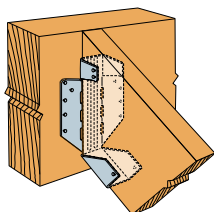
## LSSU Light Sloped/Skewed U Hangers

All models skew and slope adjustable on the job site! Attach joist or rafters to headers, sloped up or down, and skewed left or right, up to 45°.

**FINISH:** G90 galvanized.

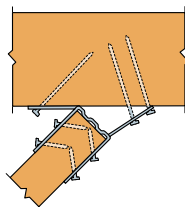
**INSTALLATION:**

- Attach the sloped joist at both ends so the horizontal force developed by the slope is fully supported by the supporting members.



Typical LSSU28 Installation

Use 10d nails into header and 10d x 1½" nails into joists for all sizes.



LSSU28 Top View

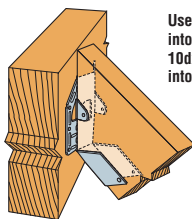
## LSU Light Sloped/Skewed U Hanger

Skew and slope adjustable on the job site! Attach joists or rafters to headers, sloped up or down, and skewed left or right, up to 45°.

**FINISH:** G90 or ZMAX galvanized. Use HDG fasteners for ZMAX models.

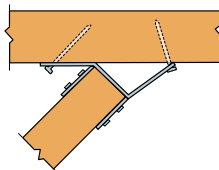
**INSTALLATION:**

- Attach the sloped joist at both ends so the horizontal force developed by the slope is fully supported by the supporting members.



Typical LSU26 Installation

Use 10d nails into header and 10d x 1½" nails into joist



LSU26 Top View

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# JOIST HANGERS

## LUS Double Shear Joist Hangers

This series has double shear nailing, which allows for 45° nailing through the joist into the header, resulting in greater strength with fewer nails to drive.

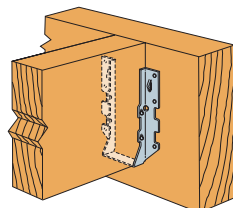
**FINISH:** G90 galvanized. Some models available in Z-MAX galvanized and stainless steel. Use HDG fasteners with ZMAX models and stainless steel fasteners with stainless steel models.

**INSTALLATION:**

- Nails must be driven at an angle through the joist into the header.

Use 10d nails into both header and single joists.

Use 16d nails into header and double and triple joists.



Typical LUS28 Installation

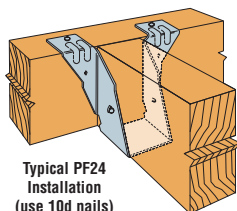
## PF Post Frame Hangers

Attaches to top of and one side of header. Precision forming with manufacturing quality provides dimensional accuracy and helps ensure proper bearing area and connection. These designs have the material section where it counts, resulting in maximum loads.

**FINISH:** G90 galvanized. Some products available in ZMAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- Double shear nailing ensures fast installation.
- Can be stacked and used as a double connector on vertical 2x members: line up header nail holes and drive two 10d commons into the header and two 10d commons into each joist.

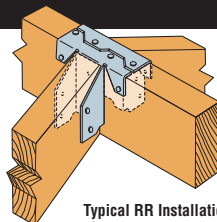


Typical PF24 Installation  
(use 10d nails)

## RR Ridge Rafter Connector

For rafter to face applications. An interlock provides alignment control and correct nailing locations. The RR may be used with any rafter sloped down to 30°.

**FINISH:** G90 galvanized.



Typical RR Installation  
(use 10dx1½" nails)

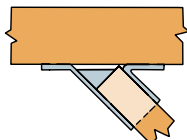
## SUR/SUL Skewed 45° Hangers

45 degree factory-skewed hangers. Angled slots direct nails to allow speedy and proper installation of ALL nails. Only a square butt cut at the end of the joist is needed.

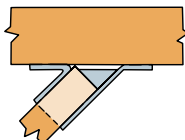
**FINISH:** G90 galvanized. Some products available in Z-MAX. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- These hangers will normally accommodate a 40° to 50° skew. Illustrations show left and right skews. (SUR=skewed right; SUL=skewed left).



SUR Top View



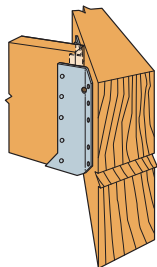
SUL Top View

Use 16d nails into the header on all sizes.

Use 10dx1½" nails for 2x and 3x joists.

Use 16dx2½" nails for double 2x joists.

Use 16d nails into 4x joists.



Typical SUL210 Installation



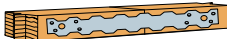
# EARTHQUAKE/HIGH WIND

Products on this page require a professional engineer to specify spacing, embedment and load requirements. Consult with your building department for local code requirements.

## FHA Strap Ties

All purpose, heavy-duty strap ties. Use where soles or plates are cut at wall intersections, and as ridge ties.

**FINISH:** G90 galvanized.



Typical FHA Installation  
(use 16d nails for all sizes)

## H Hurricane Ties

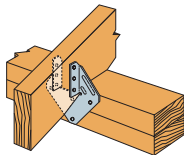
Provides wind and seismic ties for trusses and rafters. Use these connectors for general tie purposes, strongback attachments and as all-purpose ties where one member crosses another. The designs allow for installation on the inside of the member without interfering with the sheathing material.

**FINISH:** G90 or ZMAX galvanized. Some models available in stainless steel and require stainless steel fasteners. Use HDG fasteners for ZMAX.

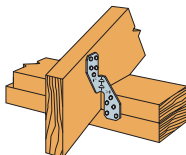
### INSTALLATION:

- H1 and H10 do not replace solid blocking.

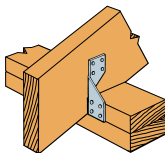
Use 8d nails for all sizes shown, except the H10, which requires 8dx1½"



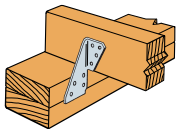
Typical H1 Installation



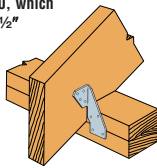
Typical H2.5A Installation



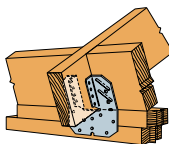
Typical H3 Installation



Typical H4 Installation



Typical H5 Installation



Typical H10 Installation

## HDA Holdowns

Holdowns are used to transfer tension loads between floors, to tie purlins to masonry or concrete, etc. Use HDAs for overturn requirements and other applications to transfer loads.

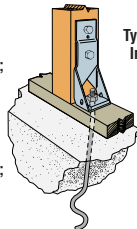
**FINISH:** G90 galvanized. Some models available in HDG, and required HDG fasteners.

### INSTALLATION:

- Bolt holes shall be a minimum of ¼" to a maximum of ⅜" larger than the bolt diameter.

**Anchor bolt:**  
¾" for HD2A, HD5A;  
7/8" for HD6A, HD8A, HD10A;  
1" for HD14A.

**Stud machine bolt:**  
¾" for HD2A,  
¾" for HD5A;  
7/8" for HD6A, HD8A, HD10A;  
1" for HD14A.



Typical HD5A Installation

Anchor bolt type, length and embedment must be specified by a qualified professional.

## PHD Holdowns

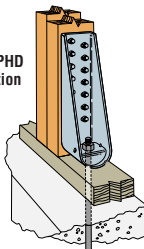
The predeflected holdown is a revolutionary development in holdown connections. Predeflected during manufacturing, the PHD virtually eliminates deflection from material stretch.

**FINISH:** G90 galvanized. HDG available for PHD2 and PHD5; these models require HDG fasteners.

### INSTALLATION:

- Place the PHD over the anchor bolt.
- Install Simpson's code-recognized SDS¼x3" wood screws, which are provided with the holdown. (Lag screws will not achieve the same load.)
- For an improved connection, use a steel nylon locking nut or a thread adhesive on the anchor bolt. (No washer required.)
- To tie double 2x members together, the designer must determine the fasteners required to bind members to act as one unit without splitting the wood.

Typical PHD Installation



**Anchor bolt:**  
¾" for PHD2-SDS3 and PHD5-SDS3;  
7/8" for PHD6-SDS3 and PHD8-SDS3.

**Stud screws:**  
SDS¼x3" for all sizes.

Anchor bolt type, length and embedment must be specified by a qualified professional.

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# EARTHQUAKE/HIGH WIND

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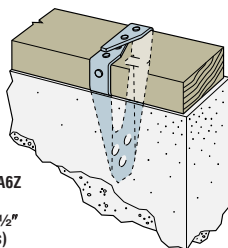
## LMA Mudsill Anchors

The LMA offers a higher lateral load capacity in a lighter gauge. Two sizes provide an economical replacement for sill plate bolts.

**FINISH:** G90 galvanized. LMA6Z available in ZMAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- Place anchors not more than 12" from the end of each sill.
- Refer to Simpson Strong-Tie's *Wood Construction Connectors* catalog for spacing requirements.



Typical LMA6Z  
Installation  
(use 10dx1½" nails  
for all sizes)

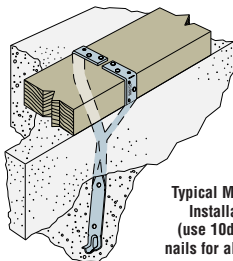
## MAB Mudsill Anchors

Anchor mudsill to concrete block and slab foundations.

**FINISH:** G90 or ZMAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- Prior to installation, spread the MAB legs to accommodate mudsill.
- Immediately after pouring and screeding, insert into the concrete or grout. Attach the mudsill to the anchor with 10dx1½" nails after the concrete cures.
- For a center hole installation, drill a ¾" hole through the mudsill. Wrap MAB straps around the mudsill and install nails. MAB legs are not spread in this installation.
- Refer to Simpson Strong-Tie's *Wood Construction Connectors* catalog for spacing requirements.



Typical MAB15Z  
Installation  
(use 10dx1½" nails for all sizes)

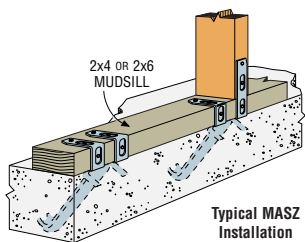
## MAS Mudsill Anchor

A fast, low installed cost mudsill anchor. Install before pouring concrete by nailing into form, or insert into concrete after pour. Finish up to edge of slab – no anchor bolts to hand-trowel around, no nuts or washers to lose. For slab or stemwall construction. Eliminates plate drilling and mislocated anchor bolts.

**FINISH:** G90 or ZMAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- Use a minimum of 2 MAS anchors per mudsill with one MAS located within 12" from each end of each mudsill.
- Refer to Simpson Strong-Tie's *Wood Construction Connectors* catalog for spacing requirements.



Typical MASZ  
Installation  
(use 10dx1½" nails)

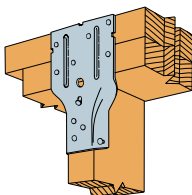
## SP Stud Plate Ties

Ties top plates to studs to resist wind or seismic activity. SP4Z and SP6Z wrap completely around double top plates.

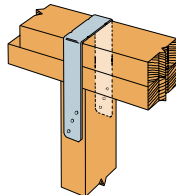
**FINISH:** G90. All sizes except SP2 also available in ZMAX galvanized. Use HDG fasteners for ZMAX models.

**INSTALLATION:**

- SP1, SP2, SP3 and SP5: drive one nail at a 45° angle through the stud into the plate.
- Install the rest of the nails straight.



Typical SP2 Installation  
(use 10d nails for SP1,  
SP2, SP3 and SP5)



Typical SP4 Installation  
(use 10dx1½" nails for  
SP4, SP6 and SP8)

# POST BASES & CAPS

Products on this page require a professional engineer to specify spacing, embedment and load requirements. Consult with your building department for local code requirements.

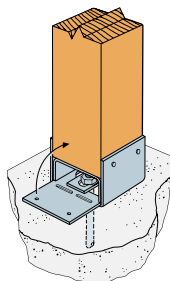
## AB Adjustable Post Bases

### FOR INSTALLATION INTO EXISTING CONCRETE SLABS

Fully adjustable post base offers moisture protection, structural download values, ease of installation, and finished hardware appearance. Standoff plate provides flat end bearing for post and keeps post end 1 1/8" above surface moisture.

**FINISH:** G90 or Z-MAX galvanized. Use HDG fasteners with ZMAX models.

- INSTALLATION:**
- Post nail holes are sized for 10d commons.
  - Rectangular adjustment plate assumes 1/2" diameter anchorage.
  - The AB is supplied as shown; position the post, secure the easy access nut, then bend up the fourth side.
  - Not recommended for non-top-supported installations such as fences.



Typical AB44 Installation (use 10d nails) 1/2" diameter anchor bolt.

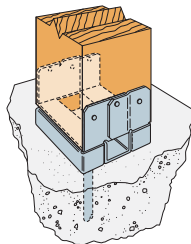
## ABA Standoff Post Bases

### FOR INSTALLATION INTO EXISTING CONCRETE SLABS

Features 1" standoff above concrete floors that are exposed to the weather or water splash, or in basements. Reduces the potential for decay at post and column ends. One-piece ABA provides uplift capacity, with no pieces to lose. For new or retrofit construction.

**FINISH:** G90 or Z-MAX galvanized. Use HDG fasteners with ZMAX models.

- INSTALLATION:**
- Not recommended for non-top-supported installations such as fences.
  - For pre-pour installed anchors, embed into concrete. For epoxy or wedge anchors, select and install according to the anchor manufacturer's recommendations. Install required washer – not included.



Typical ABA44 Installation  
U.S. Patent 5,333,435

#### Into Post:

10d nails for ABA44, ABA44R

16d nails for ABA46, ABA46R, ABA66

#### Anchor Diameter:

1/2" for ABA44, ABA44R

3/8" for ABA46, ABA46R, ABA66, ABA66R

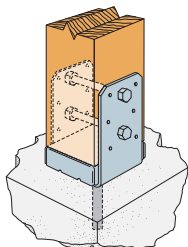
## ABU Standoff Post Bases

### FOR INSTALLATION INTO EXISTING CONCRETE SLABS

Features 1" standoff above concrete floors that are exposed to the weather or water splash, or in basements. Reduces the potential for decay at post and column ends. ABU's base design includes anchor bolt adjustment slot. Four sided standoff plate increases download support and provides attractive appearance.

**FINISH:** G90 or Z-MAX galvanized. Some models available in stainless steel and require stainless steel fasteners. Use HDG fasteners with ZMAX models.

- INSTALLATION:**
- Not recommended for non-top supported installations such as fences.
  - For pre-pour installed anchors, embed into concrete. For epoxy or wedge anchors, select and install according to the anchor manufacturer's recommendations. Install required washer.



Typical ABU44 Installation

#### Into Post:

16d nails for all sizes.

**Machine Bolts to Post:**  
1/2" for ABU44, ABU46, ABU66

#### Anchor Diameter:

3/8" for all sizes.

Install either nails or bolts into post.

### LOOKING FOR A PARTICULAR FINISH?

Most Simpson products are available in G90, the industry standard. Where greater corrosion protection is required, we offer the same product in ZMAX or HDG, or stainless steel. We are constantly modifying our product offering in response to our customers' needs. Contact us at (800) 999-5099 or [www.strongtie.com](http://www.strongtie.com) for a current list of products offered in ZMAX, HDG or stainless steel. See pg 5 for Corrosion information.

# POST BASES & CAPS

Products on this page require a professional engineer to specify spacing, embedment and load requirements. Consult with your building department for local code requirements.

## CBQ Column Bases

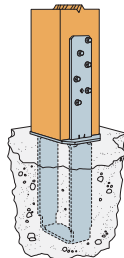
### FOR WET CONCRETE INSTALLATION

The CBQ is ideal for heavy-duty applications requiring high structural values and rugged performance.

**FINISH:** G90 galvanized or HDG. Supplied with appropriate screws.

#### INSTALLATION:

- To get full loads, minimum side cover required is 3" (3" from all edges of concrete).
- Not recommended for non-top-supported installations such as fences.



Typical  
CBQ44-SDS2HDG  
Installation  
(use SDS $\frac{1}{4}$ "x2"  
screws for all sizes)

## CBSQ Column Bases

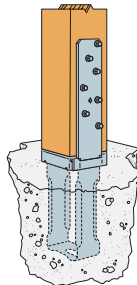
### FOR WET CONCRETE INSTALLATION

A non-welded, galvanized base provides 1" standoff height above concrete or masonry floors or decks. Reduces the potential for decay at column ends. Slot allows for free flow of concrete during installation.

**FINISH:** G90 galvanized or HDG. Supplied with appropriate screws.

#### INSTALLATION:

- Not recommended for non-top-supported installations such as fences.
- Embed into wet concrete up to the bottom of the 1" standoff base plate. A 3" minimum side cover is required to obtain the full load (3" from all edges of concrete).



Typical  
CBSQ44-SDS2HDG  
Installation  
(use SDS $\frac{1}{4}$ "x2"  
screws for all sizes)

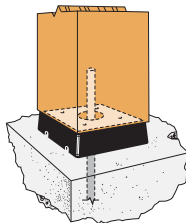
## CPS Composite Plastic Standoffs

The CPS is a Composite Plastic Standoff designed for increased concrete surface area.

**MATERIAL:** Engineered composite plastic.

#### INSTALLATION:

- Attach to post before installation using four 10d nails.
- Embed rod into concrete and extend into wood member.



Typical CPS4  
Installation  
(use 10d nails into  
post and  $\frac{3}{8}$ " anchor  
bolt for all sizes)

## EPB44HDG Elevated Post Base

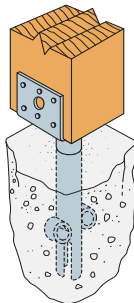
### FOR WET CONCRETE INSTALLATION

EPB44HDG is a single piece, non-welded post base with a 2" standoff. For decks, patio covers and porches - wherever moisture, sanitary, or other conditions make it advisable to elevate wood posts.

**FINISH:** HDG. Use HDG fasteners with this model.

#### INSTALLATION:

- Install with 8-16d HDG nails.
- Allows 2" clearance above concrete. Height above concrete is adjustable from 0-2".
- Not recommended for non-top-supported installations such as fences.
- A 2" minimum side cover (2" from all edges of concrete) is required to obtain the full load.



Typical EPB44HDG  
Installation  
(use 16d nails for  
all sizes)

# POST BASES & CAPS

Products on this page require a professional engineer to specify spacing, embedment and load requirements. Consult with your building department for local code requirements.

## EPB44T *Elevated Post Base*

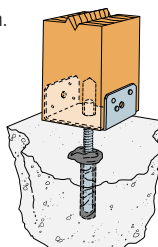
### FOR INSTALLATION INTO EXISTING CONCRETE

The EPB44T fits 4x posts and beams. Adjustable up and down.

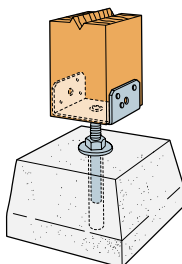
**FINISH:** Base – G90 galvanized, threaded rod – Zinc plate

#### INSTALLATION:

- **Secured with Epoxy:** Drill a  $\frac{3}{4}$ " hole  $2\frac{1}{2}$ " deep minimum into the concrete. Half fill the hole with epoxy. Insert the EPB44T and adjust to the desired height. To adjust after the epoxy cures, drill a hole in the center of the post and turn the post base up or down to the desired height.
- **Supported by a Nut:** Drill  $\frac{3}{4}$ " hole  $2\frac{1}{2}$ " deep minimum into concrete. Install a  $\frac{5}{8}$ -11 NC (national coarse) nut and cut washer on the threaded rod. (Nut and washer not supplied). Insert the EPB44T into the hole and adjust to the desired height.
- **Embedded in Wet Concrete:** Embed  $2\frac{1}{2}$ " maximum from bottom of the base.
- Minimum sidecover is 3" from the center of the threaded rod.
- Fully engage at least three threads in the base.
- Not recommended for non-top-supported installations such as fences.



Typical EPB44T  
Installation  
with epoxy



Nut and Washer  
Installation

Into Post:  
Use 16d nails.  
Threaded Rod:  $\frac{5}{8}$ "

## PB *Post Bases*

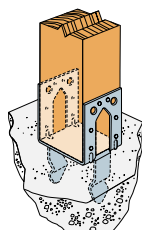
### FOR WET CONCRETE INSTALLATION

Locking prongs eliminate bolts or inserts in concrete. One piece design assures maximum strength.

**FINISH:** G90 galvanized, ZMAX and HDG. HDG fasteners are required with ZMAX and HDG products.

#### INSTALLATION:

- A 2" minimum sidecover (2" from all edges of concrete) is required to obtain the full load.
- Not recommended for non-top-supported installations such as fences.



Typical PB44 Installation

Into Post:  
Use 16d nails or  $\frac{1}{2}$ "  
bolts for PB66 and  
PB66R.  
Use 16d nails for  
all other sizes.

## PBS *Standoff Post Bases*

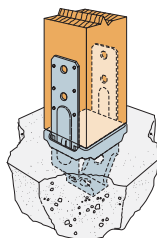
### FOR WET CONCRETE INSTALLATION

Features 1" standoff height above concrete floors; code-required when supporting permanent structures that are exposed to weather or water splash, or in basements. Reduces the potential for decay at post and column ends.

**FINISH:** G90 galvanized or HDG. HDG fasteners are required with HDG products.

#### INSTALLATION:

- Not recommended for non-top-supported installations such as fences.
- Embed PBS into wet concrete up to the bottom of the 1" standoff base plate. A 2" minimum side cover is required to obtain full load. Holes in the bottom straps allow for free concrete flow.



Typical PBS44AHDG  
Installation

Into Post:  
Use 16d HDG nails  
and  $\frac{1}{2}$ " diameter  
machine bolts  
for all sizes.



# POST BASES & CAPS

## AC & ACE *Retrofit Post Caps*

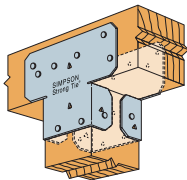
Twin design allows easy installation.  
Must be installed in pairs.

**FINISH:** G90 or ZMAX galvanized.

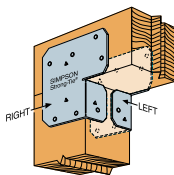
Some models available in stainless steel.

Use HDG fasteners with ZMAX models  
and stainless steel fasteners with  
stainless steel models.

**Use 16d nails  
for all sizes.**



Typical AC4 Installation



Typical ACE4 Installation

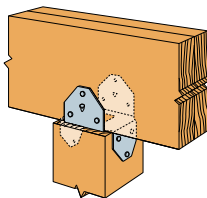
## BCS *Post Caps*

The BCS allows for the connection of 2-2x's to  
a 4x post or 3-2x's to a 6x post. Double shear  
nailing between beam and post gives added  
strength.

**FINISH:** G90 or ZMAX galvanized. Use HDG  
fasteners with ZMAX models.

**BCS2-2/4:**  
use 10d nails

**BCS2-3/6:**  
use 16d nails



Typical BCS2-2/4 Installation

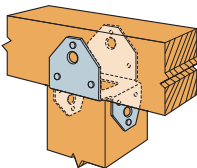
## BC *Post Bases/Caps*

Dual-purpose connector suitable for post  
cap or post base. Provides an easy and  
secure connection between post and beam.  
Reduces chance of post splitting, eliminates  
toenailing and provides uplift and lateral  
support.

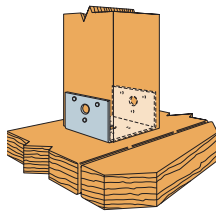
**FINISH:** G90 or ZMAX galvanized. Use HDG  
fasteners with ZMAX models.

### INSTALLATION:

- Not recommended for non-top-supported  
installations such as fences when used  
as a base.



Typical BC4 Installation  
(use 16d nails)

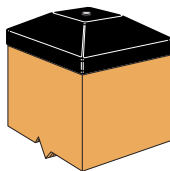


Typical BC40 Installation  
(use 16d nails)

## DPPC4BK *Decorative Post Covers*

The DPPC4BK provides moisture protection and  
a decorative appearance to a 4x4 post top.

**FINISH:** Black plastic



Typical  
DPPC4BK  
Installation  
(use an 8d  
or 10d nail)

### LOOKING FOR A PARTICULAR FINISH?

Most Simpson products are available in G90, the industry standard. Where greater corrosion protection is required, we offer the same product in ZMAX or HDG, or stainless steel. We are constantly modifying our product offering in response to our customers' needs. Contact us at (800) 999-5099 or [www.strongtie.com](http://www.strongtie.com) for a current list of products offered in ZMAX, HDG or stainless steel. See pg 5 for Corrosion information.

# POST BASES & CAPS

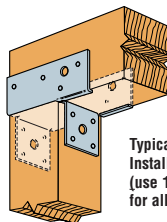
## EPC *End Post Caps*

An end condition connection for post-beam combinations at medium design loads.

**FINISH:** G90 galvanized. Some models available in ZMAX finish. Use HDG fasteners with ZMAX models.

**INSTALLATION:**

- $\frac{9}{16}$ " holes are provided for optional bolting. Loads do not apply to bolted connection.



Typical EPC44-16 Installation  
(use 16d nails for all sizes)

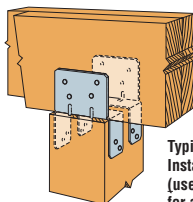
## LPC *Adjustable Post Caps*

Adjustable design allows greater connection versatility.

**FINISH:** G90 or ZMAX galvanized. Use HDG fasteners with ZMAX models.

**INSTALLATION:**

- LPC must be installed in pairs.  $2\frac{1}{2}$ " beams may be used if 10d $\times$ 1 $\frac{1}{2}$ " nails are substituted for 10d commons.



Typical LPC4 Installation  
(use 10d nails for all sizes)

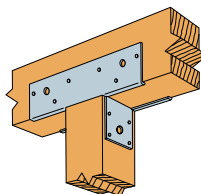
## PC *Post Caps*

A custom connection for post-beam combinations at medium design loads. The extension beam side plates function as tie straps where wood splices occur.

**FINISH:** G90 galvanized. Some models available in ZMAX finish. Use HDG fasteners with ZMAX models.

**INSTALLATION:**

- $\frac{9}{16}$ " holes are provided for optional bolting. Loads do not apply to bolted connection.



Typical PC44-16 Installation  
(use 16d nails for all sizes)

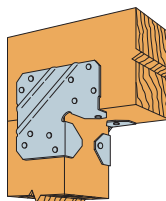
## LCE4 *End Post Caps*

The universal design provides high capacity while eliminating the need for rights and lefts. For use with 4x or 6x lumber.

**FINISH:** G90 or ZMAX galvanized. Use HDG fasteners with ZMAX models.

**INSTALLATION:**

- Install in pairs.



Typical LCE4 Installation  
(use 16d nails)

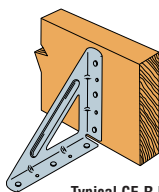
## CF-R Shelf Bracket or Concrete Form Angle

The CF-R is used where a moderate size shelf bracket or reinforced angle is needed.

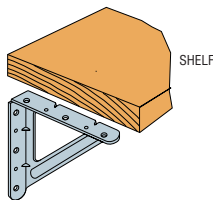
**FINISH:** G90 galvanized.

**INSTALLATION:**

- Reversible for nominal 6" or 8" depth shelves of any thickness.



Typical CF-R Installation  
(use 10d commons or SDS $\frac{1}{4}$ "x2" screws)



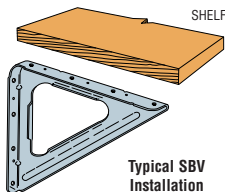
## SBV Shelf Bracket

Use the SBV for shelving, counter brackets and window ledge supports. High performance at a competitive price.

**FINISH:** G90 galvanized.

**INSTALLATION:**

- Reversible for nominal 10" or 12" shelves of any thickness.



Typical SBV  
Installation  
(use SDS $\frac{1}{4}$ "x2" screws)

### LOOKING FOR A PARTICULAR FINISH?

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# DECK BUILDING INSTRUCTIONS

## MULTI-LEVEL DECK

*These plans can be used to build either a single or split-level deck.  
They can also be used as a guide to design your own deck.*

### BEFORE YOU START

Before you start your deck, check with your utility companies to locate any underground utility or sewer lines.

Check with your local building department to determine code requirements and obtain a building permit. These plans are meant as a guide only. When constructing a deck, consult with a qualified contractor or structural engineer.

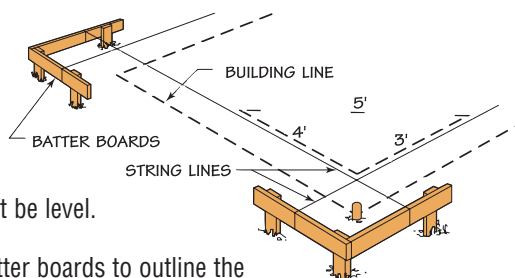
### SELECTING CONNECTORS

Please note: Many of the new Pressure Treated Woods use chemicals that are corrosive to steel. By selecting connectors that offer greater corrosion resistance (Stainless Steel, Post Hot-Dip Galvanized, or ZMAX™) you can extend the service life of your connectors. However, corrosion will still occur. You should perform periodic inspection of your connectors and fasteners to insure their strength is not being adversely affected by corrosion. In some cases, it may be necessary to have a local professional perform the inspections. Because of the many variables involved, Simpson Strong-Tie cannot provide estimates on service life of connectors, anchors or fasteners.

### LAYING OUT THE DECK

The first step is to mark the position of the lower deck on your house wall, following the deck framing plan.

Measure out from your house the depth of your deck and drive a stake to mark each corner. Construct batter boards 2' each way past the outer corners using 2x4 stakes as shown. The top of the batter boards must be level.



Extend string lines across the batter boards to outline the deck. Each string line should be taut and level.

To ensure that your deck will be square, form a right angle with the string lines:

- Mark the line 4' from where the lines cross.
- Mark the line 3' from where the lines cross.
- Measure the distance diagonally between the marks on both string lines. When the distance measures 5' exactly, your deck is square.
- Repeat the process at the other corner of the deck.

### LOCATING DECK POSTS

Now that you have your deck outlined with the string lines, you must mark the location for each post. Following the deck framing plan, locate the 4x4 posts and piers and place a stake in the ground to mark each location.

### DETERMINING HEIGHT OF DECK

To determine the height of your deck, you must first measure the height of your house floor above your grade line.

Once you have determined this height, you should allow for 2" - 4" step down from your house floor to the deck so that water won't enter the house. The remaining dimension will be the height of your post from the bottom girder to the top of the pier.

### INSTALLING THE LEDGER

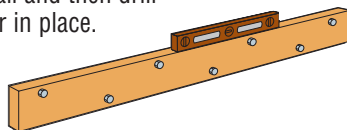
#### Wood Frame Construction

First, brace the ledger against the house wall at the desired height. Temporarily nail once at the board's center, then level the board with a carpenter's level, and temporarily nail both ends. Re-check for levelness.

Using washers and  $\frac{3}{8}$ " lag bolts that are 2" longer than the thickness of the ledger, secure the ledger to the existing interior floor framing box joist. Be sure to space the bolts no more than 2' apart.

#### Stucco, Masonry or Concrete Construction

Brace the ledger against the house wall at the desired height and level the board with a carpenter's level, using makeshift braces for support. For stucco, drill lag screw holes through the ledger into house floor frame header. For masonry or concrete, mark expansion shield holes on the wall and then drill using a masonry bit. Bolt or lag screw the ledger in place. Remove braces, if any, and re-check for levelness.



Using washers and  $\frac{3}{8}$ " lag bolts that are 2" longer than the thickness of the ledger, secure the ledger into expansion shields. Be sure to space bolts no more than 2' apart.

### INSTALLING PIERS AND POSTS

Dig post holes 10" in diameter for 4x4 posts. The depth of the holes should be half the height of the post above ground, but not less than 2'. *(Check your local building regulations. They may require that the pier extend 6" below your frost line.)* The top of each pier must be 8" above grade unless you use posts that are resistant to decay.



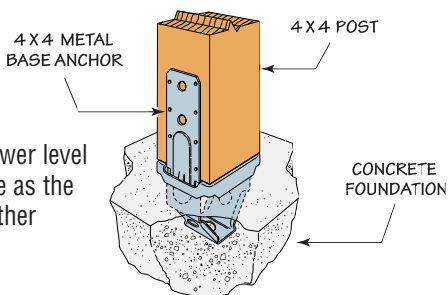
# DECK BUILDING INSTRUCTIONS

## MULTI-LEVEL DECK *(continued)*

### INSTALLING PIERS AND POSTS *(continued)*

Fill each pier hole with concrete. When concrete begins to set (*cure*), position the **Post Base Anchor PBS44AZ** as shown on the plan.

When setting the posts, start with the lower level post closest to the house. This will serve as the base post for setting the heights of all other posts.



**It is very important that you measure post heights accurately if you are to have a successful deck.**

Tie a string to a nail set flush with the top of the ledger board. Extend the other end of the string over the top of the base post and extend over the tops of the other posts as they are set. Attach a line level to the string and adjust the line at each post to the proper height. Saw off excess post height.

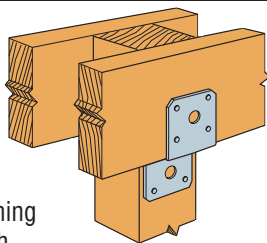
Plumb and square each post with a level. When posts are square and level, nail them to the post base anchors.

### INSTALLING THE GIRDER

Start with the lower deck.

Cut the 2x6's to be used for the girders to the proper lengths following the girder framing plan. All girders for both decks are 11' 9".

On the lower deck only, and as shown on the girder framing plan, nail **LUS26Z Joist Hangers** to the ledger board with galvanized nails (10d).



Join the 2x6 girders to the 4x4 posts using **DJT14Z Girder/Post Connectors** and 16d galvanized nails. Nail one girder per side.

### INSTALLING JOISTS AND RIM JOISTS

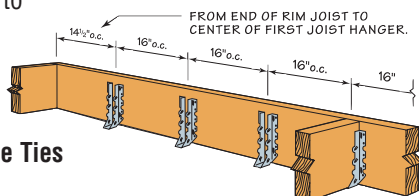
Cut the rim joists to their proper length (11' 9"). There are two rim joists for each deck.

Attach **LUS26Z Joist Hangers** to the rim joist at diagrammed points. This allows you to set your joists in place and hold them level with no other help.

### INSTALLING JOISTS AND RIM JOISTS *(continued)*

Cut the remaining joists, 10 for each deck, to their proper length (11'6").

Set each outside end joist on the girders, even with the end of the girders, and fasten to the girders with **H2.5AZ Hurricane Ties** and galvanized 8dx1½" nails.



Set rim joists in place and nail them to the two end joists.

Set the remaining joists in place and nail.

### INSTALLING THE DECKING

Nailing the decking in place should be done with the greatest care, since this is the most visible part of the deck.

Start with the first board perpendicular to the house wall. This board will serve as the guide for the rest of your decking, so place it as squarely as possible.

Place decking with the bark side up in order to minimize cupping of the boards.

The decking should be fastened using **DBT1Z Deck Board Ties**. Install per instructions on the product carton.

When the decking is in place, snap a chalk line along the outside face of the end joists. Saw the deck boards at the chalk line so they are flush with the end joists.

Attach fascia with galvanized 10d common nails.

### INSTALLING STAIRS

#### Step Support Method:

**TA10Z Staircase Angles** make it easier to build stairs when you want to adjust the angle of the stringers to span the distance from the deck to the ground.

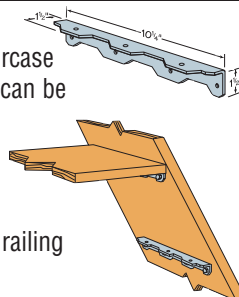
Measure the rise (*vertical height*) from grade top to the top of the deck. Divide the rise dimension by 7" or whatever stair rise you prefer (*8" is usually the maximum*). This will tell you how many stair risers are required. To determine the total run of the stairs, multiply the number of steps required by 11¼".

# DECK BUILDING INSTRUCTIONS

## MULTI-LEVEL DECK *(continued)*

### INSTALLING STAIRS *(continued)*

Cut the 2x10 stair stringer to size and fasten it to the deck framing with an **A35Z, 4½" Framing Anchor**. Mark the staircase angle support position on both stringers. Staircase angles can be installed either from below the tread or from above it. Use ¼"x1½" lag screws to fasten staircase angles to stringers and treads.



If there are more than three steps up to your deck, a hand railing should be added to each side of the stairs.

### INSTALLING A RAILING *(optional)*

If your deck is more than 24" above the ground, a railing will be required by most building codes. You may also wish to add a railing to a low deck to enhance its appearance.

### FINISHING

If you build your deck with pressure-treated lumber, you may want to let it weather naturally. If you prefer, you can apply a lightly pigmented stain that will offer protection without obscuring the grain of the wood. Whether you paint or stain your deck, follow the manufacturer's instructions provided on the label.

## MULTI-LEVEL DECK TABLES

1. Joist and girder spans will be defined by your desired post layout. After defining the post layout and the resulting post spacing, use the Joist and Girder Size Table to determine joist and girder sizes.
2. Then, use the Post Size Table to verify that your desired post size and height will work for the tributary area. The actual tributary area must be less than the Maximum Allowable Tributary Area. Increase the post size as needed.

**NOTE:** All sizes are based on 40 pounds per square foot **live load** and 10 pounds per square foot **dead load**.

*The tables serve as guides only; Simpson Strong-Tie claims no responsibility for the numbers presented.*

*When building a deck consult with a qualified contractor or structural engineer.*

# DECK BUILDING INSTRUCTIONS

## MULTI-LEVEL DECK TABLES *(continued)*

See page 58 for Material List

WOOD SPECIES GROUP: Douglas Fir – Southern Pine								
JOIST AND GIRDER SIZE TABLE (see letter definitions below)								
Joist Span (ft)	Girder Span (ft)							
	5	6	7	8	9	10	11	12
5	G1, J1	G1, J1	G1, J1	G2, J1	G2, J1	G3, J1	G3, J1	G3, J1
6	G1, J1	G1, J1	G2, J1	G2, J1	G2, J1	G3, J1	G3, J1	G4, J1
7	G1, J1	G1, J1	G2, J1	G2, J1	G3, J1	G3, J1	G4, J1	G4, J1
8	G1, J2	G2, J2	G2, J2	G3, J2	G3, J2	G4, J2	G4, J2	G4, J2
9	G1, J2	G2, J2	G2, J2	G3, J2	G3, J2	G4, J2	G4, J2	G6, J2
10	G1, J2	G2, J2	G2, J2	G3, J2	G3, J2	G4, J2	G6, J2	G7, J2
11	G1, J3	G2, J3	G3, J3	G3, J3	G4, J3	G4, J3	G6, J3	G7, J3
12	G2, J3	G2, J3	G3, J3	G3, J3	G4, J3	G6, J3	G7, J3	G7, J3
13	G6, J3	G6, J3	G6, J3	G7, J4	G7, J4	G7, J4	–	–
14	G7, J4	G7, J4	G7, J4	G7, J4	G7, J4	G7, J4	–	–

POST SIZE TABLE			
Post Height (ft)	Maximum Allowable Tributary Area per Post (sq-ft)		
	4x4 Post	4x6 Post	6x6 Post
4	140	221	249
6	121	190	242
8	92	145	230
10	67	105	213
12	49	77	190

WOOD SPECIES GROUP: Western Pines & Cedars – Redwoods & Spruces								
JOIST AND GIRDER SIZE TABLE (see letter definitions below)								
Joist Span (ft)	Girder Span (ft)							
	5	6	7	8	9	10	11	
5	G1, J1	G1, J1	G2, J1	G2, J1	G3 or G5, J1	G3 or G5, J1	G4 or G6, J1	G4 or G6, J1
6	G1, J1	G2, J1	G2, J1	G3 or G5, J1	G3 or G5, J1	G4 or G6, J1	G4 or G6, J1	G4 or G6, J1
7	G2, J2	G2, J2	G2, J2	G3 or G5, J2	G3 or G5, J2	G4 or G6, J2	G4 or G6, J2	G4 or G6, J2
8	G2, J2	G2, J2	G3 or G5, J2	G3 or G5, J2	G4 or G6, J2	G4 or G6, J2	G7, J2	
9	G3, J3	G3, J3	G3, J3	G3, J3	G4 or G6, J3	G6, J3	G7, J3	
10	G3, J3	G3, J3	G3, J3	G4 or G6, J3	G4 or G6, J3	G7, J3	G7, J3	
11	G4, J4	G4, J4	G4, J4	G4, J4	G7, J4	G7, J4	–	

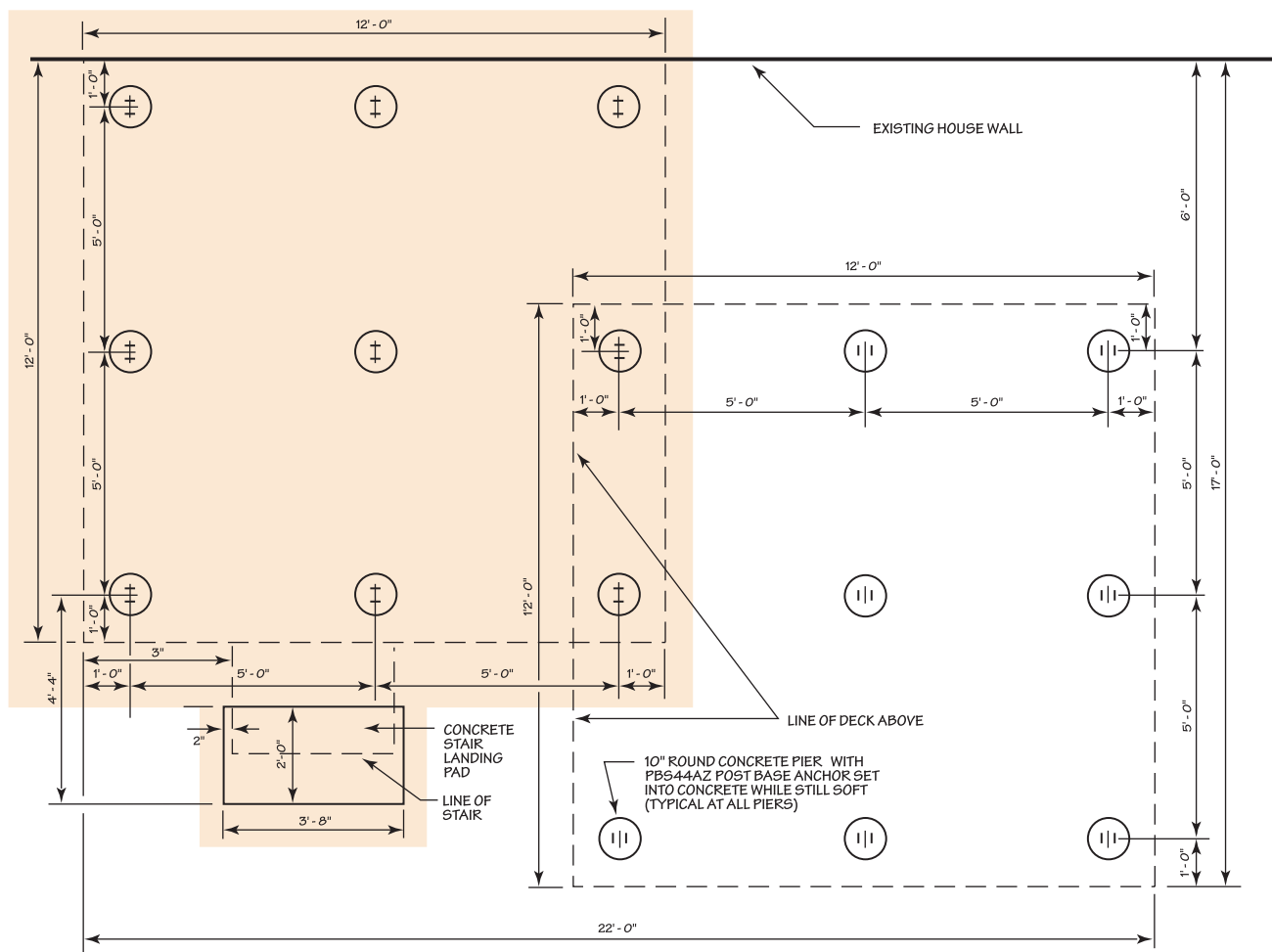
  

POST SIZE TABLE			
Post Height (ft)	Maximum Allowable Tributary Area per Post (sq-ft)		
	4x4 Post	4x6 Post	6x6 Post
4	69	109	201
6	62	98	193
8	51	80	181
10	39	61	163
12	29	46	141

1. Tributary area = girder span x joist span.

LETTER DEFINITIONS		
Girder Size		Joist Size
G1 = 4x6 or 2-2x6	G5 = 6x8 or 2-3x8	J1 = 2x6 @ 24" o.c. max
G2 = 4x8 or 2-2x8	G6 = 6x10 or 2-3x10	J2 = 2x8 @ 24" o.c. max
G3 = 4x10 or 2-2x10	G7 = 6x12 or 2-3x12	J3 = 2x10 @ 24" o.c. max
G4 = 4x12 or 2-2x12	–	J4 = 2x12 @ 24" o.c. max

- To build the split-level deck, use complete plans.
- To build the single level deck only, use the plan sections highlighted in the light tan color.

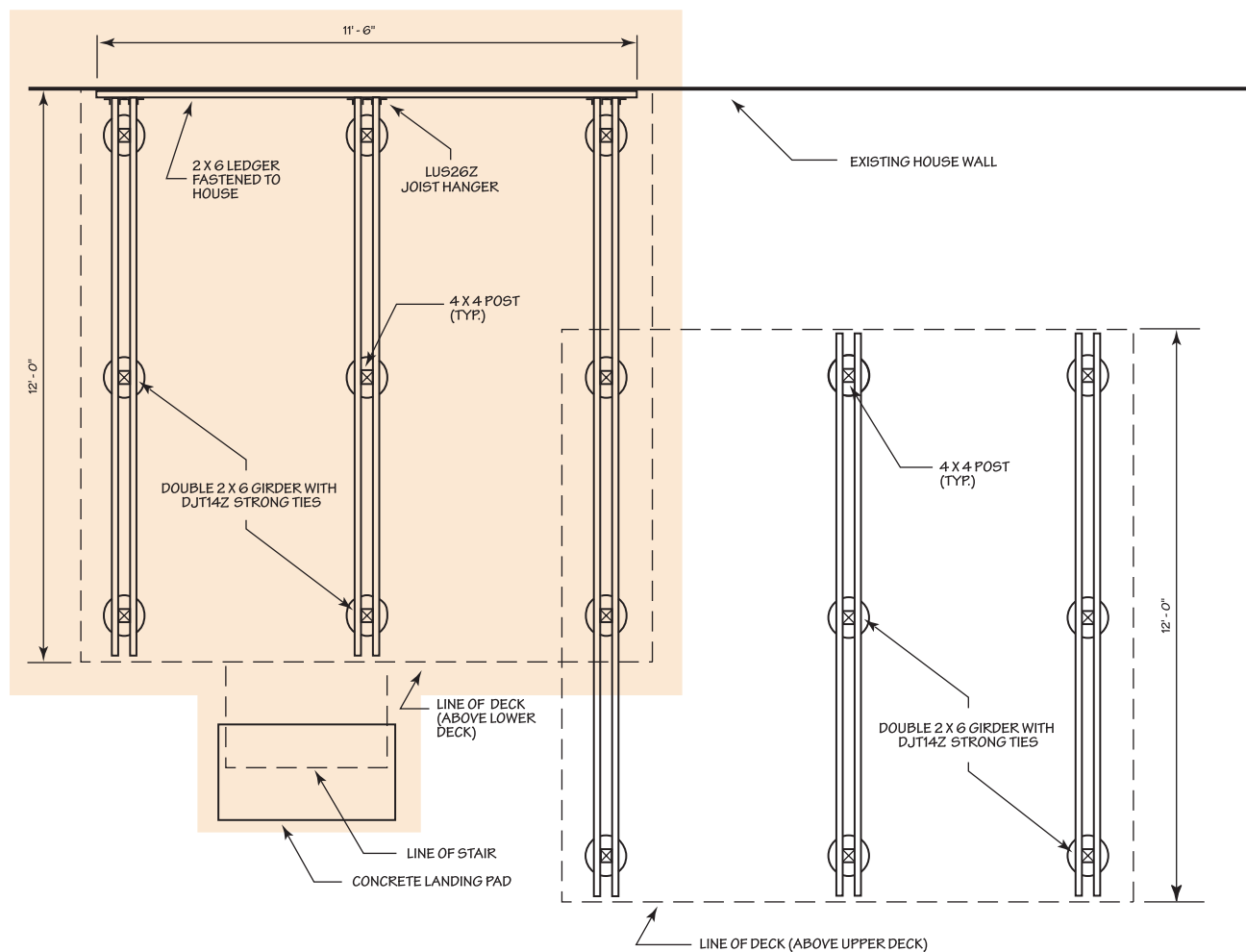


## FOUNDATION PIER LAYOUT PLAN



# MULTI-LEVEL DECK PLANS

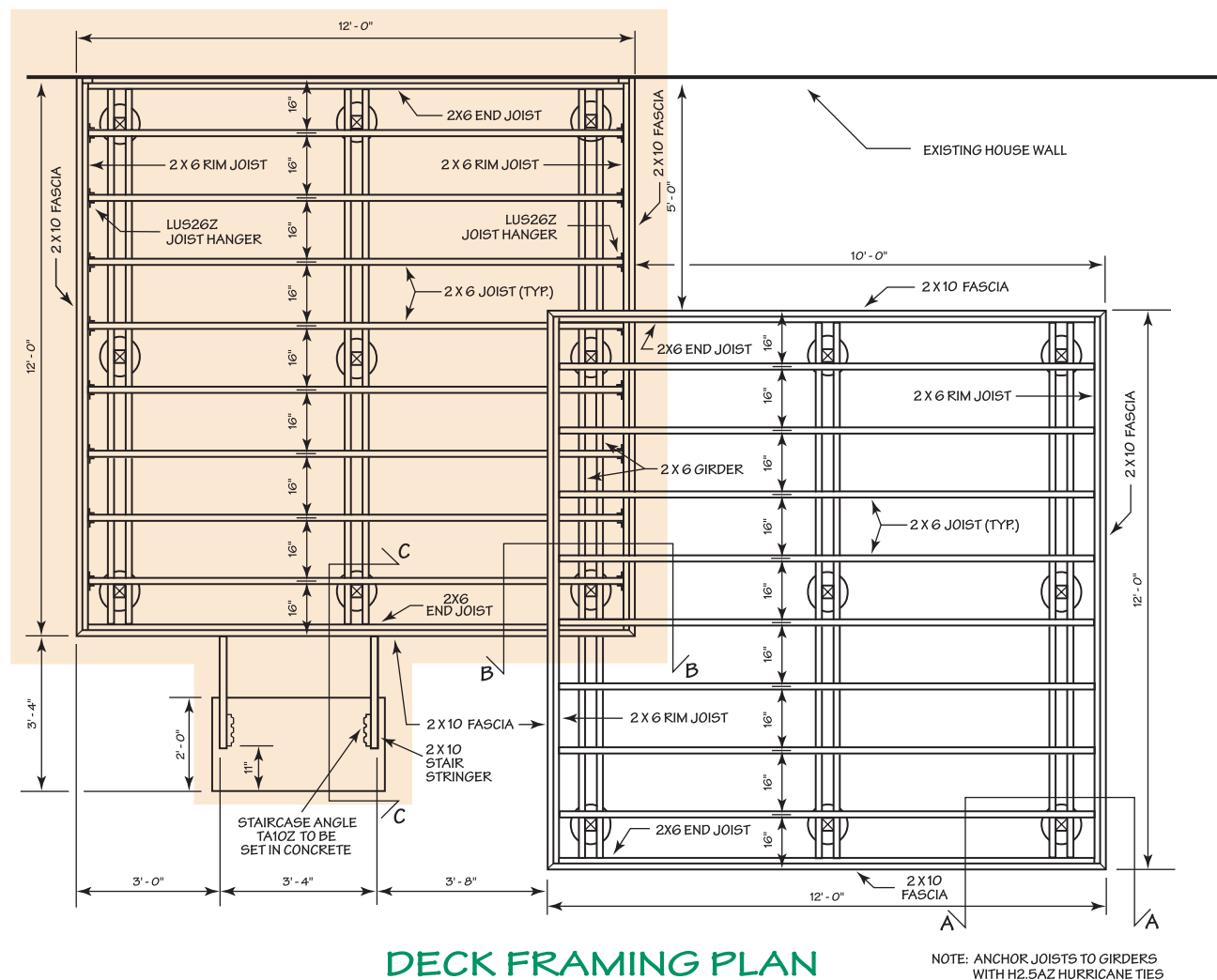
- To build the split-level deck, use complete plans.
- To build the single level deck only, use the plan sections highlighted in the light tan color.



**GIRDER FRAMING PLAN**

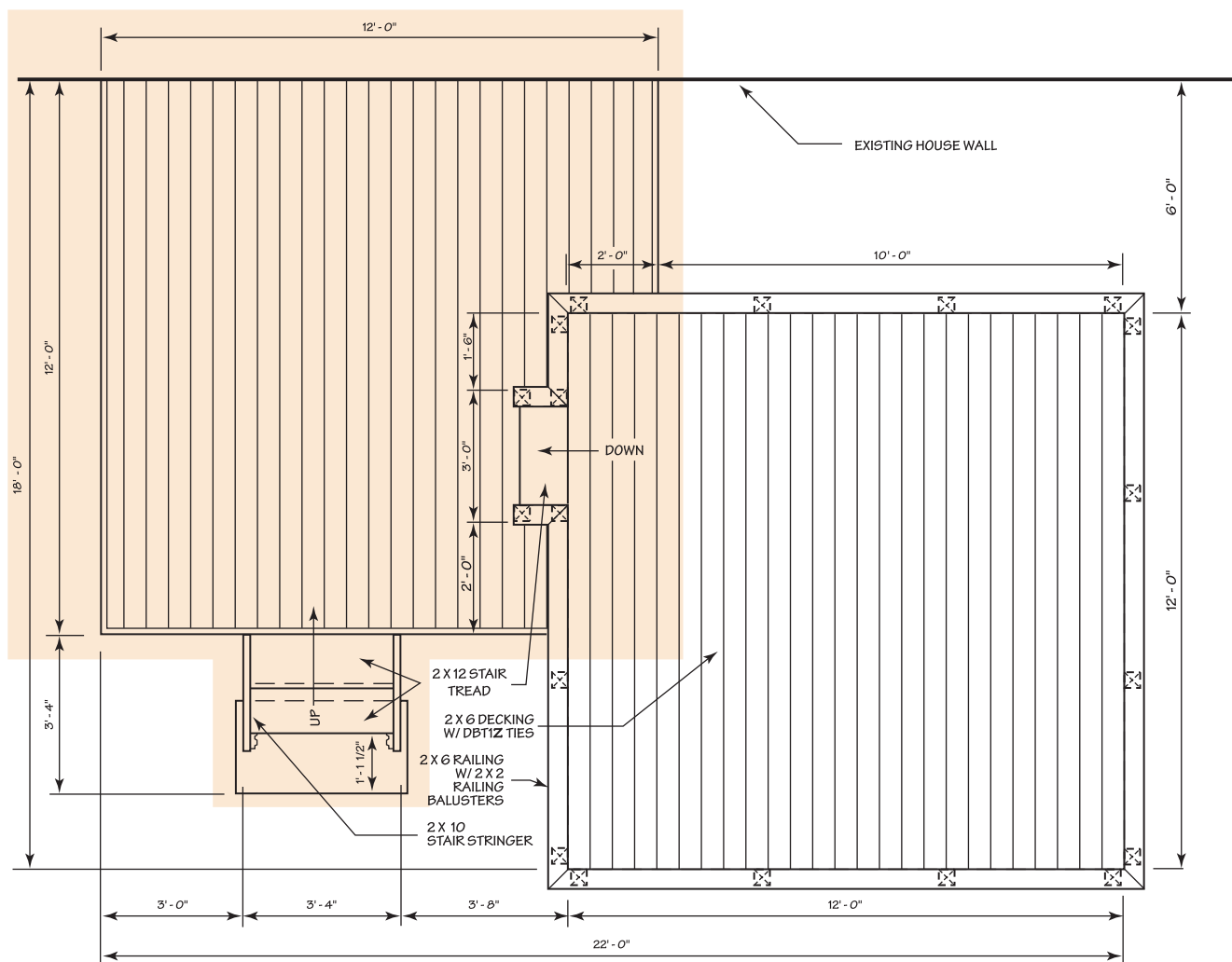
# MULTI-LEVEL DECK PLANS

- To build the split-level deck, use complete plans.
- To build the single level deck only, use the plan sections highlighted in the light tan color.



# MULTI-LEVEL DECK PLANS

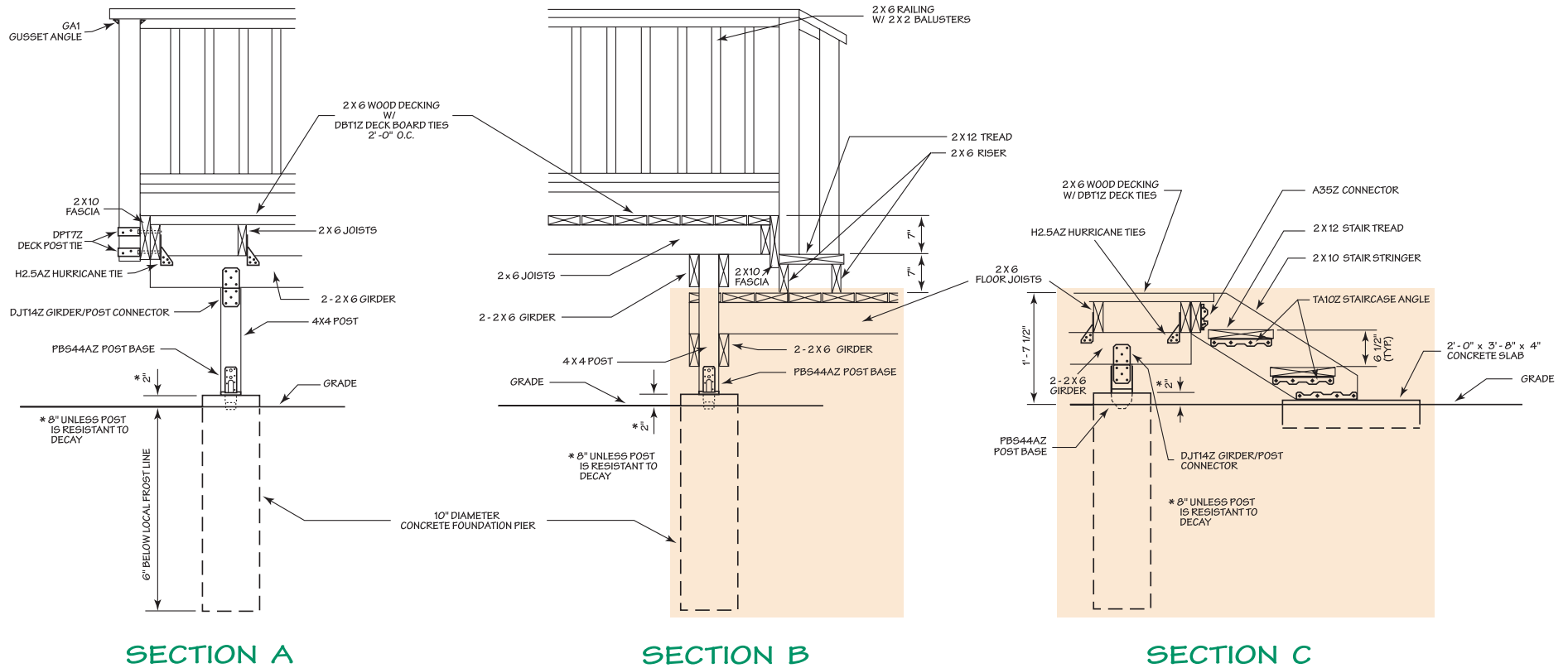
- To build the split-level deck, use complete plans.
- To build the single level deck only, use the plan sections highlighted in the light tan color.



DECK PLAN

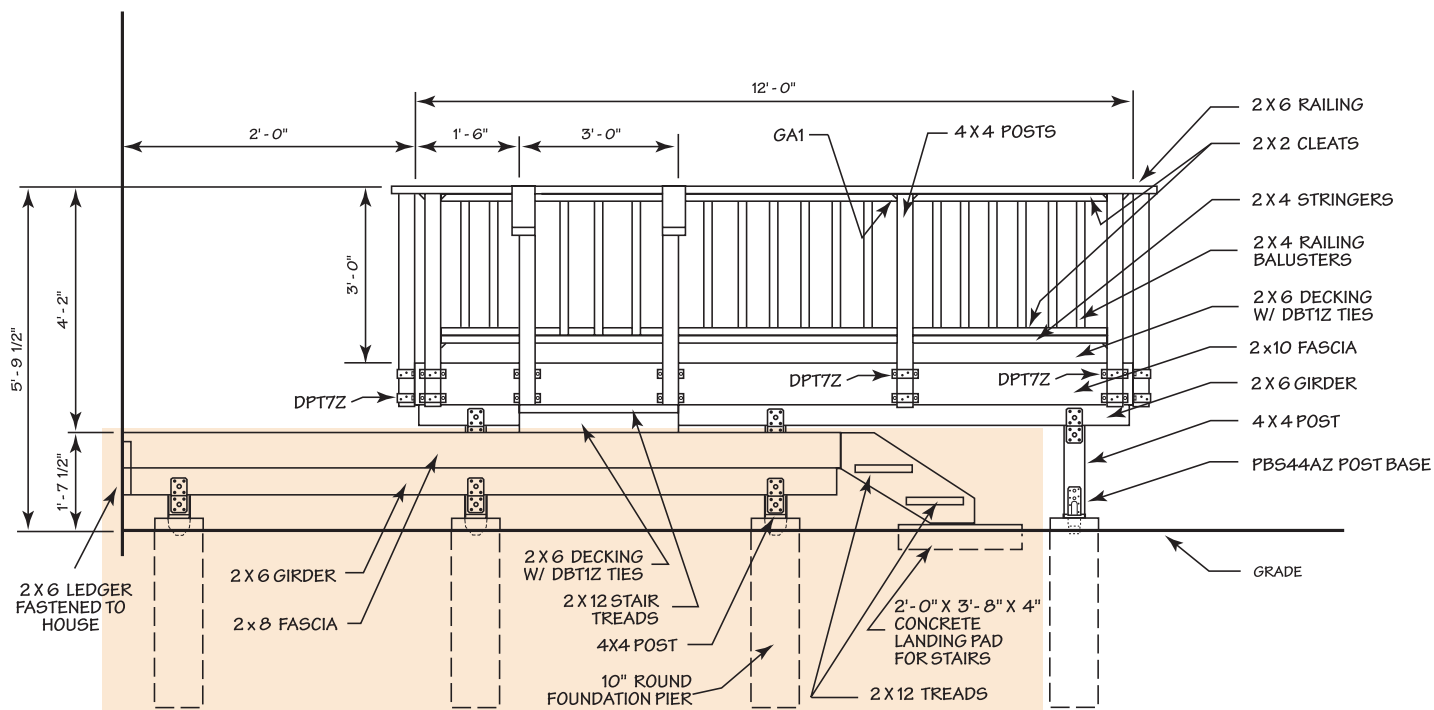
# MULTI-LEVEL DECK PLANS

- To build the split-level deck, use complete plans.
- To build the single level deck only, use the plan sections highlighted in the light tan color.



# MULTI-LEVEL DECK PLANS

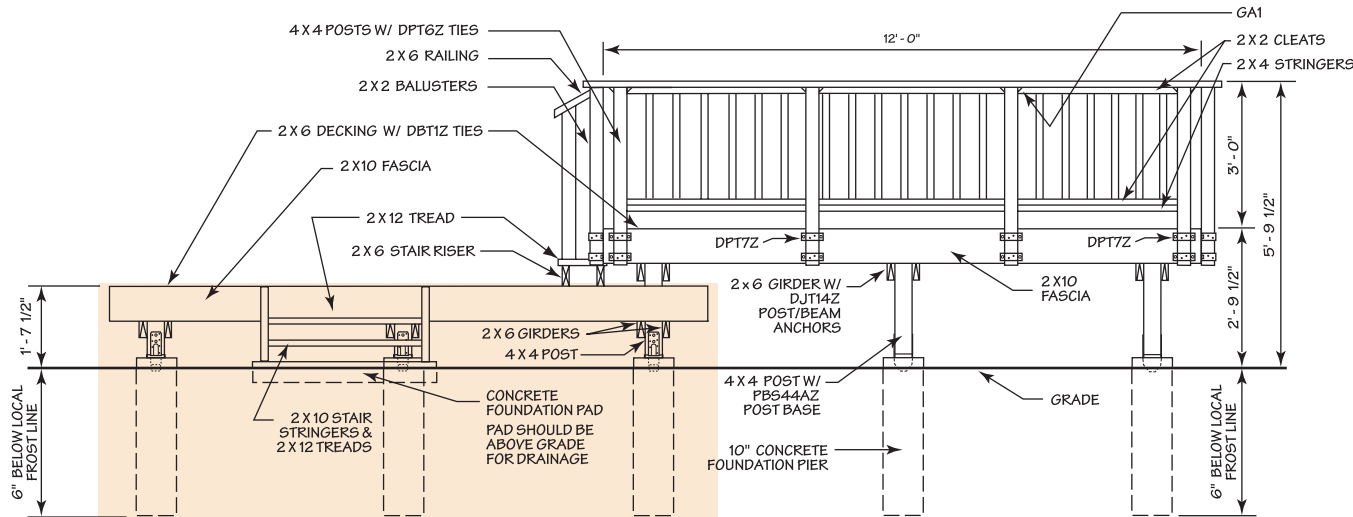
- To build the split-level deck, use complete plans.
- To build the single level deck only, use the plan sections highlighted in the light tan color.



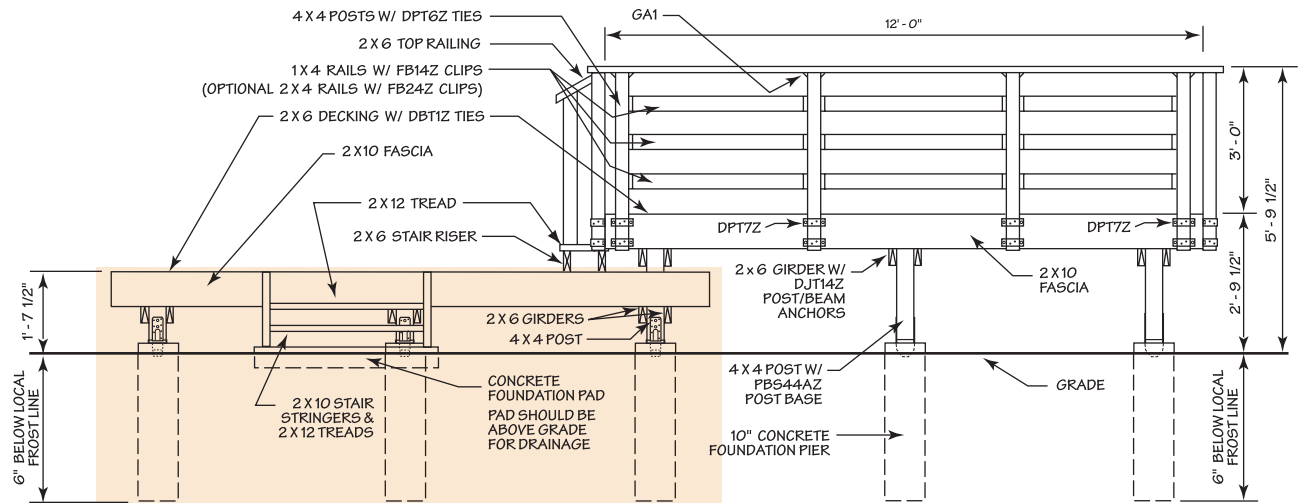
LEFT SIDE ELEVATION

# MULTI-LEVEL DECK PLANS

- To build the split-level deck, use complete plans.
- To build the single level deck only, use the plan sections highlighted in the light tan color.



FRONT ELEVATION



FRONT ELEVATION - ALTERNATE RAILING



# MATERIALS LIST

## LUMBER

QUANTITY		SIZE	DESCRIPTION
LOWER DECK	UPPER DECK		
1		4x4x10'	Posts cut for 9 posts*
	3	4x4x8'	Posts cut for 9 posts
6	6	2x6x12'	Girders
12	12	2x6x12'	Deck and Rim Joists
25	25	2x6x12'	Decking
1		2x10x8'	Stair Stringer
	1	2x6x8'	Stair Riser
1		2x12x8'	Stair Tread
	1	2x12x4'	Stair Tread
	4	2x6x14'	Railing Top
3	4	2x10x12'	Fascia
	13	2x2x14'	Balusters
	** 8	2x2x12'	Cleats
	7	4x4x12'	Posts, cut for 19 railing posts
	4	2x4x12'	Railing Stringers
	*** 12	1x4x12'	Rails - Alternate Railing
1		2x6x12'	Ledger

## CONNECTORS

QUANTITY		DESCRIPTION
LOWER DECK	UPPER DECK	
6		<b>LUS26Z</b> – Girder to Ledger
16	16	<b>LUS26Z</b> – Joist to Rim Joist
18	18	<b>DJT14Z</b> – Deck Joist Tie
60	60	<b>H2.5AZ</b> – Hurricane Ties
9	7	<b>PBS44AZ</b> – Post Base
6		<b>TA10Z</b> – Staircase Angle
6	4	<b>A35Z</b> – Staircase Riser & Rim Joist Corners
250	250	<b>DBT1Z</b> – Deck-Tie
	30	<b>DPT7Z</b> – Deck Post Tie
	** 32	<b>GA1</b> – Deck Railing Tie
	*** 72	<b>FB14Z</b> – Fence Bracket

## ALTERNATE RAILING

1. **SUBTRACT** \*\*Double starred items

2. **ADD** \*\*\*Triple starred items

# MATERIALS LIST

## FASTENERS

**10d** – Common galvanized nails for fascia and LUS26Z

**16d** – Common galvanized nails for DJT14Z, PBS44AZ and rim joist

**10dx1½"** – Common galvanized nails for DPT7Z

**8dx1½"** – Common galvanized nails for H2.5AZ

**(16) ⅜" Diameter** – Galvanized lag screws with washers for ledger

**(36) ¼x1½" Diameter** – Galvanized lag screws for TA10Z

**(500) 10dx1½"** – Common galvanized nails for DBT1Z

## MISCELLANEOUS

**Approx. 1+ Yd. for 36" holes** – Concrete for piers and step pad

**Approx. ¾ Yd. for 24" holes** – Concrete for piers and step pad

**2 Gallons** – Deck finishing (*optional*)

## Terms & Conditions of Sale

### PRODUCT USE

Products in this catalog are designed and manufactured for the specific purposes shown, and should not be used with other connectors not approved by a qualified designer. Modifications to products or changes in installation procedures should only be made by a qualified designer. The performance of such modified products or altered installation procedures is the sole responsibility of the designer.

### INDEMNITY

Customers or designers modifying products or installation procedures, or designing non-catalog products for fabrication by Simpson Strong-Tie Company Inc. shall, regardless of specific instructions to the user, indemnify, defend, and hold harmless Simpson Strong-Tie Co., Inc. for any and all claimed loss or damage occasioned in whole or in part by non-catalog or modified products.

### NON-CATALOG AND MODIFIED PRODUCTS

Consult Simpson Strong-Tie Company Inc. for applications for which there is no catalog product, or for connectors for use in hostile environments, with excessive wood shrinkage, or with abnormal loading or erection requirements.

Non-catalog products must be designed by the customer and will be fabricated by Simpson Strong-Tie in accordance with customer specifications.

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Simpson Strong-Tie Company Inc. warrants catalog products to be free from defects in material or manufacturing. Simpson Strong-Tie Company Inc. products are further warranted for adequacy of design when used in accordance with design limits in this catalog, and properly specified and installed. This warranty does not apply to uses not in compliance with specific applications and installation procedures set forth in this catalog, or to non-catalog or modified products, or to deterioration due to environmental conditions.

Simpson Strong-Tie connectors are designed to enable structures to resist the movement, stress, and loading that results from impact events such as earthquakes and high velocity winds. Other Simpson Strong-Tie products are designed to the load capacities and uses listed in this catalog. Properly-installed Simpson Strong-Tie products will perform in accordance with the specifications set forth in the applicable Simpson catalog. Additional performance limitations for specific products may be listed on the applicable catalog pages.

Due to the particular characteristics of potential impact events, the specific design and location of the structure, the building materials used, the quality of construction, and the condition of the soils involved, damage may nonetheless result to a structure and its contents even if the loads resulting from the impact event do not exceed Simpson catalog specifications and Simpson Strong-Tie connectors are properly installed in accordance with applicable building codes.

All warranty obligations of Simpson Strong-Tie Company Inc. shall be limited, at the discretion of Simpson Strong-Tie Company Inc., to repair or replacement of the defective part. These remedies shall constitute Simpson Strong-Tie Company Inc.'s sole obligation and sole remedy of purchaser under this warranty. In no event will Simpson Strong-Tie Company Inc. be responsible for incidental, consequential, or special loss or damage, however caused.

**This warranty is expressly in lieu of all other warranties, expressed or implied, including warranties of merchantability or fitness for a particular purpose, all such other warranties being hereby expressly excluded. This warranty may change periodically – consult our website [www.strongtie.com](http://www.strongtie.com) for current information.**







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