



Deck Designer Specification Kit

# TimberTech Designer



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**Deck layout diagram**



Top view without planks

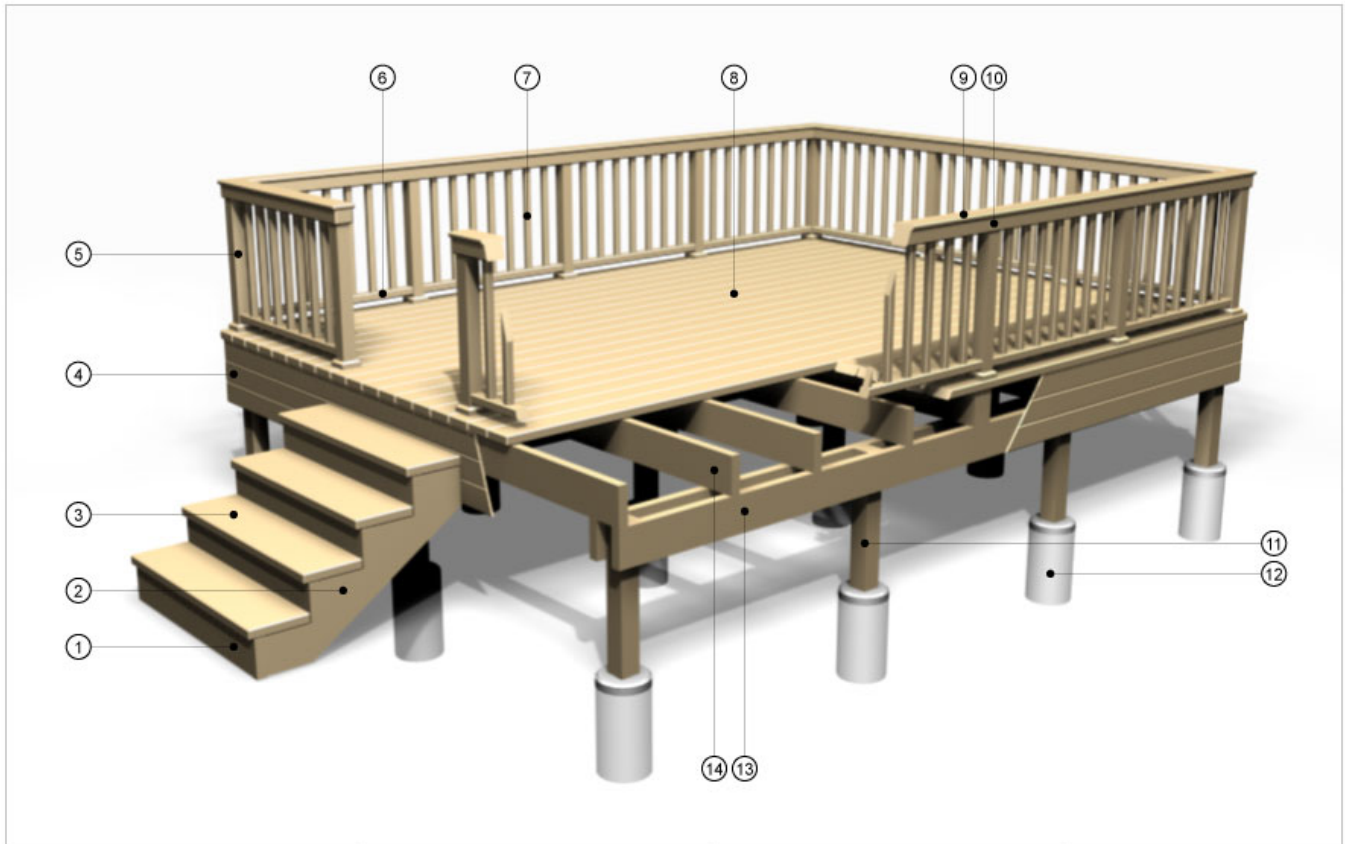


Bottom view with planks



Top view with planks

## Deck Part Identification

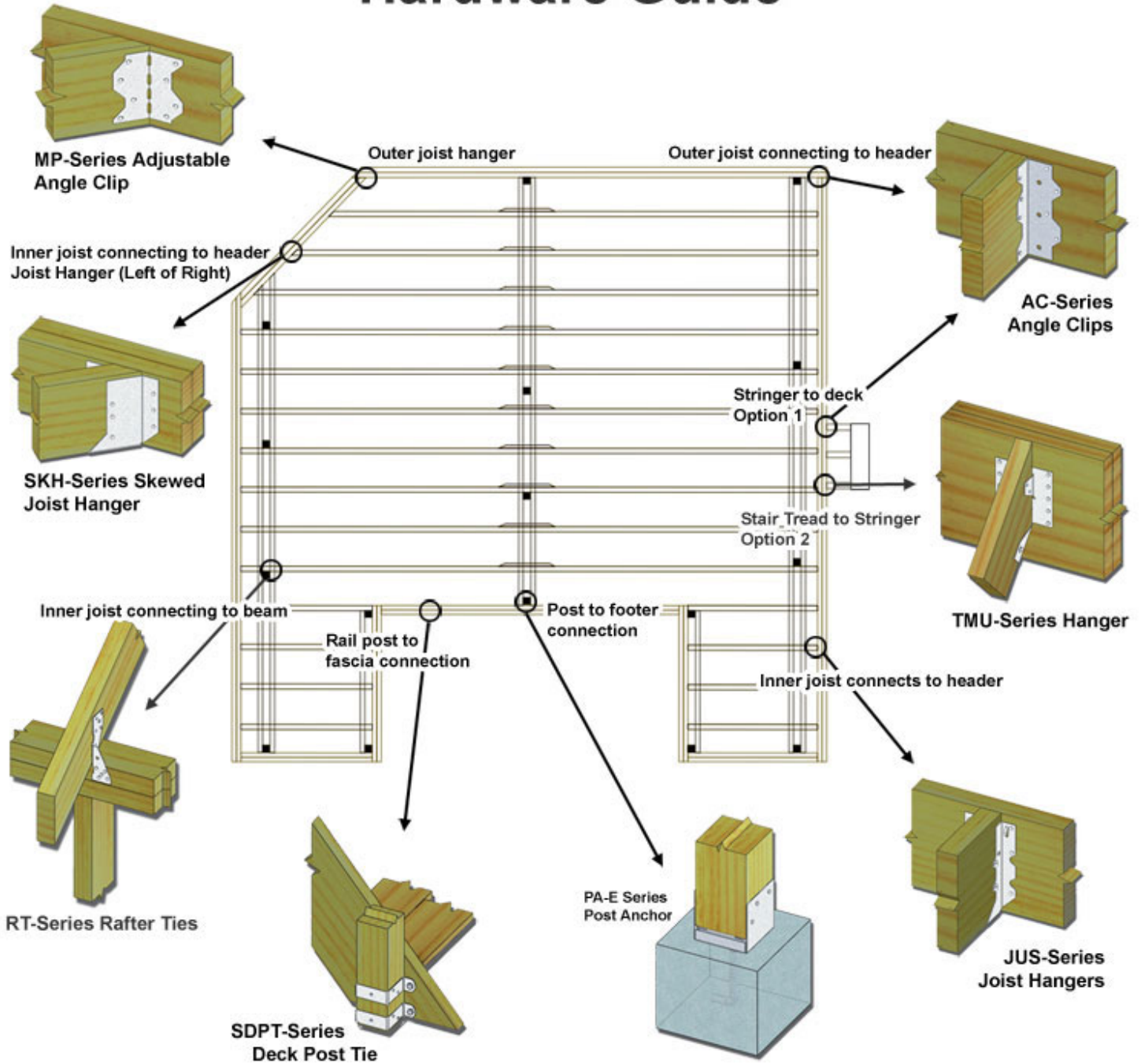


1. Riser	6. Bottom Rail	11. Post	<b>Major Deck Components</b> NOTE: Not to scale ©2007 DIYTechnologies
2. Stringer	7. Baluster	12. Post Footer	
3. Tread	8. Decking	13. Beam	
4. Fascia	9. Rail Cap	14. Joist	
5. Rail Post	10. Top Rail		

<b>Baluster</b>	The vertical pieces of a railing spaced at regular intervals between posts.
<b>Beam</b>	A horizontal framing piece, which rests on posts and supports joists.
<b>Decking</b>	The boards used to make the walking surface of the deck.
<b>Joist</b>	A horizontal frame piece that supports the decking and spreads the weight over the beams.
<b>Ledger</b>	A horizontal strip that connects the deck to the house.
<b>Post Footer</b>	Concrete filled hole that the post is attached to.
<b>Post</b>	A vertical framing piece, used to support a beam or a joist.
<b>Riser</b>	The board attached to the vertical cut surface of a stair stringer.
<b>Stringer</b>	The diagonal board used to support treads and risers on a stairway.
<b>Tread</b>	The horizontal surface of a stair.
<b>Bottom Rail</b>	The lower horizontal piece that connects rail posts and supports balusters.
<b>Top Rail</b>	The upper horizontal piece that connects rail posts and supports balusters.
<b>Rail Cap</b>	The top horizontal trim on railing.
<b>Rail Post</b>	The vertical post connected to the deck framing that supports the railing.



# Structural Connector Hardware Guide







## Installation Checklist

### Building code and zoning requirements

Check deed restrictions, building codes and/or zoning laws to make sure your deck complies.  
Check with local utility companies to make sure deck construction will not disturb piping or wiring.

### Deck function

While planning your deck, determine how it will be used.

### Your climate

While planning your deck, consider local weather.  
Take advantage of good views.

### Install ledger

Install ledger to anchor deck to house.  
Ledger placement determines the deck floor level, normally 2-4" below floor line.  
If unsure about attaching a ledger board, consult a professional.  
Use batterboards and mason's string to mark off deck area and locate footing.

### Square with string

Attach string to ledger and/or batterboards.  
Batterboards go just outside perimeter corners of the deck.  
Use the 3-4-5 method to get a 90 degree angle in one corner.

### Site Preparation

Weed the area where the deck will be built.  
Remove sod 4"-6" from staked area; replace with gravel and level.

### Install posts

Locate posts by measuring in from batterboards.  
Postholes can be 24" deep and up to 4' deep depending on height of column and depth of frost line.  
Check the frost line in your area.  
Determine method of setting post.



## Installation Checklist

### Post bracing

Perimeter posts over 5' high from ground to deck need bracing.

### Attach beams to posts

Determine the desired deck floor height on the posts.

Determine height for securing the top of the beam to the post.

### Attach joists

Space joists 16" on center or 24" on center for tongue and groove planks.

Joists are attached to ledger board with joist hangers or by toenailing.

Determine where blocking will go and snap a chalk line, but make sure to stagger pieces for ease of nailing.

### Lay decking

Attach boards brushed surface up.

Do not butt boards together, ensure a gap of 1/8" minimum on all buttjoints.

The deck boards can be trimmed after they are installed.

Refer to the written Installation Guide for further installation requirements.

### Railings

Railings must be firmly attached to the framing members of the deck.

Check for local code restrictions on railings.

### Stairs

Stairs should be at least 3' wide.

Check local codes on stair restrictions.

Measure the rise and run of the stairs.

### Multi-level decks

When planning a multi-level deck, for aesthetics make one deck larger than the other.



## Tools Required & Tips for Success

### Tools Required:

Carpenter's level	Hearing protection	Safety glasses
Carpenter's square	Hammer	Screwdrivers
Chalk line	Hand saw	Shims or spacers
Chisel	Hoe and hose (to mix concrete)	Shovel
Circular saw	Ladder	Socket wrench
Claw hammer	Line	Stakes or batter boards
Combination square	Mallet	String
Crescent wrench	Nail set	Tamper
Drills and bits	Pencils	Tape measure
Dust mask	Pick	Transit
Extension cord	Plumb bob	Tool belt
Framing square	Post hole digger	Two foot level
Gloves	Rafter square	Wheelbarrow
Goggles	Ruler	

### Tips for success:

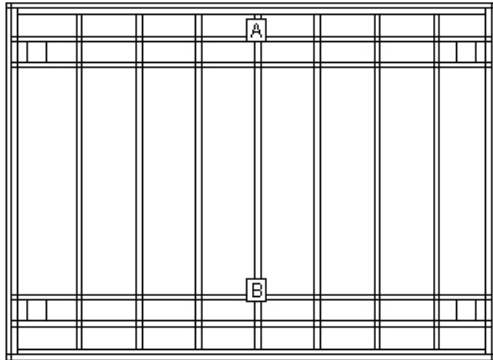
1. When cutting or drilling wood, always wear eye protection to prevent injury from flying wood particles
2. If cutting pressure treated material, a fabric breathing mask will help to avoid ingestion of the dust because the material contains a pesticide. Wear gloves as the surface is rough and can cause splinters.
3. For outdoor projects, nails and other hardware should be hot-dipped zinc-coated or equally well-protected material to keep them from rusting.
4. To help prevent splitting, drill pilot holes in each piece of lumber before nailing or screwing.
5. Invest in a pair of kneepads if you are doing floor jobs or working on a deck. It will help prevent future injuries
6. Dispose of scraps in the regular trash or take to a landfill - never burn.

### "How to Guide" Download Information

If you have not already downloaded the Deck "How to Guide", it is available. Go to [DIYonline.com](http://DIYonline.com), and log in. Then from the Library section, select the "How to Guide" section, and select the appropriate "How to Guide".



**Permit Page: Level 1**



**LOAD AND SUPPORT:**

Your deck will support a 88 PSF live load.  
Posts have 24" below ground support.

**DECK AND POST HEIGHT:**

You selected a height of 36" from the top of the decking to the ground level. The top of the deck support posts will therefore be 25.0" above ground level.

**Joists:**

Set joists on top of beams, 16"; center to center.

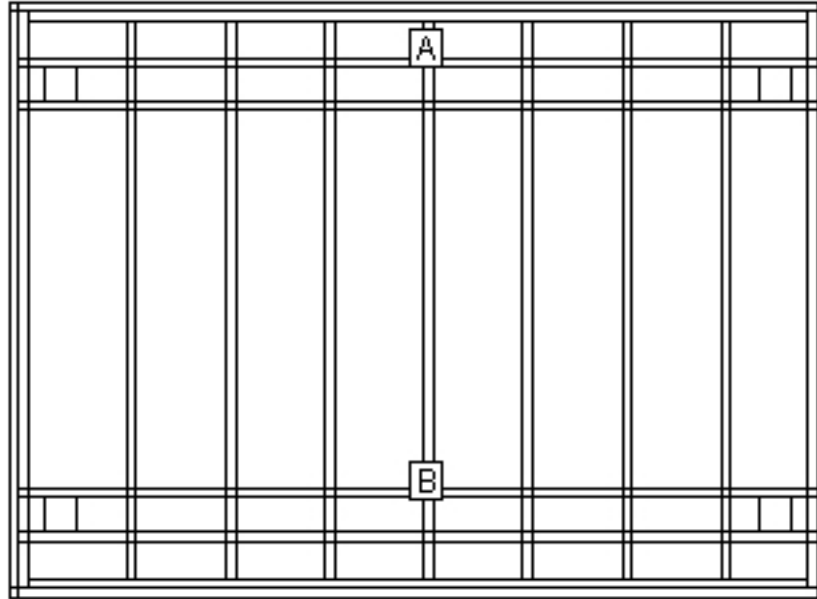
**Stress Analysis: Level 1**

<b>Component</b>	<b>PSF</b>
Joist Deflection	2222
Joist Bending	277
Joist Shear	237
Joist Compression	309
Beam Deflection	118
Beam Bending	118
Beam Shear	107
Bolt Shear	183
Post Stability	310





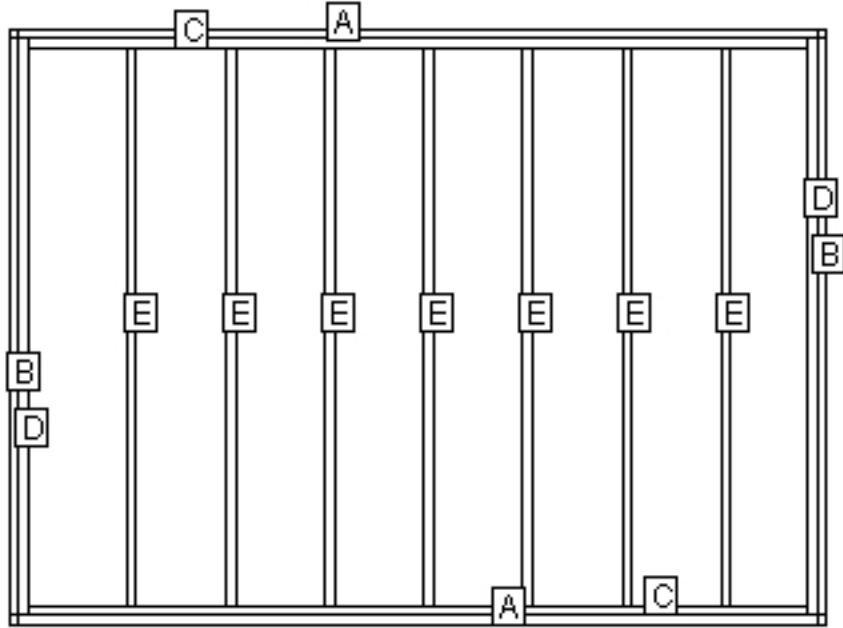
### Beam Layout Level 1



BEAM LABEL	BEAM LENGTH	POST COUNT	POST SPACING
A	10' 9"	2	9' 7 1/2"
B	10' 9"	2	9' 7 1/2"



## Materials Cut List: Level 1



LABEL	NAME	QTY	LENGTH	BEVELS	LABEL	NAME	QTY	LENGTH	BEVELS
A	Fascia	2	11'	F45 S45	D	Outer Joist	2	7' 9"	
B	Fascia	2	8'	F45 S45	E	Joist	7	7' 6"	
C	Header	2	10' 6"						

Cut Angles: L=Left, R=Right, F=Front, S=Side



## Component Descriptions

### Lumber Materials

COMPONENT	QTY	DESCRIPTION	WOOD TYPE
Beam	4	2X12X12 CEDAR	CEDAR
Cladding	1	2X10X10 TOP CHOICE SPF facia_1	TREATED
Deck Planking	17	12' EARTHWOOD SOLID PLANKS (ROSEWOOD)	TIMBERTECH
Rim Joist	2	2X10X12 CEDAR	CEDAR
Rim Joist	9	2X10X8 CEDAR	CEDAR
Post	4	6X6X8 CEDAR	CEDAR
Railing Post	1	4X4X10 CEDAR	CEDAR
Railing Post	1	4X4X18 CEDAR	CEDAR
Top Rail	4	TIMBERTECH 6' RADIANCERAIL KIT (COASTAL WHITE)	TIMBERTECH
Top Rail	2	TIMBERTECH 8' RADIANCERAIL KIT (COASTAL WHITE)	TIMBERTECH



### Other Materials

Qty	Description
4	6x6 TRIPLE ZINC DECK POST ANCHOR PA66E-TZ
9	80 L.B. BASIC CONCRETE MIX
1	40 LB. BASIC CONCRETE MIX
2	10 LB. BASIC CONCRETE MIX
2	12" X 48" CONCRETE FORM TUBE
4	ANCHOR BOLT AB128
1	1LB. 16D GALVANIZED COMMON NAIL
16	1/2 X 10" GALVANIZED HEX LAG SCREW
32	1/2 GALVANIZED FLAT WASHER
1	1/2 GALVANIZED HEX NUT
28	TRIPLE ZINC RAFTER TIE RT7-TZ
2	1LB. 8D GALVANIZED COMMON NAIL
1	1 LB. 1-1/2" JOIST HANGER NAIL
8	TRIPLE ZINC RAFTER TIE RT7-TZ
14	2x10-12" TRIPLE ZINC JOIST HANGER JUS210-TZ
1	1 LB. 10D X1 1/2" NAIL
2	1 LB. 10D HOT-DIP GALVANIZED NAIL
4	7" TRIPLE ZINC ANGLE CLIP AC7-TZ
3	1 LB. 8X2 1/2" PHILIPS HEAD STAINLESS DECK SCREWS
24	3/8 GALVANIZED HEX NUT
48	3/8 GALVANIZED FLAT WASHER
24	3/8 X 8" GALVANIZED CARRIAGE BOLT
1	5 LB. 10D HOT-DIP GALVANIZED NAIL
12	4x4 TRIPLE ZINC DECK POST TIE SDPT7-TZ
1	1 LB. 8X3" PHILIPS HEAD STAINLESS DECK SCREWS
6	TIMBERTECH POST SKIRT (COASTAL WHITE)
6	TIMBERTECH POST COVER (COASTAL WHITE)
6	TIMBERTECH POST CAP (COASTAL WHITE)



**Disclaimer:** We want you to have fun using our software and building your deck however, we care about your safety. Carefully read the following **Disclaimer and Disclosure**. You may proceed only if you have read this information and agree to the terms.

The suggested design is a construction guide and is NOT a finished building plan. It is your responsibility to verify its accuracy, completeness, suitability for your particular site conditions, and compliance with local building codes and practices.

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Be sure to follow the deck construction and guidelines carefully. You are responsible ensuring that all measurements are correct. Due to size, shape, location or other considerations, your design may require supporting structures, such as knee braces and bridging between joists, that are not included on the materials list and other information provided. **YOU ARE RESPONSIBLE FOR ENSURING THAT YOUR DESIGN IS SAFE AND STRUCTURALLY SOUND FOR ITS SIZE, LOCATION AND ANTICIPATED USE.** You are also responsible for verifying that the design and any substitutions or modifications you make meet all local building codes and regulations.

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**You understand that it is your responsibility to check any and all codes associated with deck construction. It is also your responsibility to obtain any deck construction permits as required by city, county, or state agencies.**

**Note:** It is recommended that joist that meet on top of beams should be spliced with gussets.